# Crédit Agricole Multi-Asset FX Active USD Index

**Index Conditions** 

### Part A: Introduction

This document constitutes the "Index Conditions" in respect of the Crédit Agricole Multi-Asset FX Active USD Index (the "Index"). The Index has been developed by Crédit Agricole Life Insurance Company Japan Limited, the Index Sponsor, in conjunction with Citigroup Global Markets Limited in its capacity as the Index Administrator, for the sole use of the Index Sponsor.

These Index Conditions are made available by the Index Administrator on behalf of the Index Sponsor.

Full information in respect of any Index Linked Product is only available on the basis of a combination of these Index Conditions and the confirmation, prospectus or offering document (however described) in respect of such Index Linked Product. Particular attention is drawn to the important risk factors and disclaimers contained in these Index Conditions, and investors should be aware of the consequences set out in such confirmation, prospectus or offering document of such Index Linked Product of any discontinuation of the Index.

No use of the Index or these Index Conditions is permitted unless such use is authorised, whether (1) through buying, or otherwise entering into, an Index Linked Product from or with the Index Sponsor or one of its Affiliates; or (2) under the terms of a written licence granted by the Index Administrator.

These Index Conditions may be amended from time to time in the circumstances described in Part L (*Miscellaneous*). Copies of these Index Conditions are available from the Index Administrator.

These Index Conditions comprise the following Parts.

Part A Introduction

Part B Key Information

Part C Overview of the Index

Part D Calculation of the Index Level

Part E Data

Part F Valuation of Constituents

Part G Adjustment of dates

Part H Adjustments, disruption and cancellation

Part I Provisions relating to Constituents

Part J Definitions

Part K Risk Factors

Part L Miscellaneous

Part M Notices

## Part B: Key Information

Index:

Crédit Agricole Multi-Asset FX Active USD Index.

Index Sponsor:

Crédit Agricole Life Insurance Company Japan Limited.

Summary of strategy:

The Index combines the performance of the Multi-Asset RoRo VT 30% Index with the leveraged performance of the FX Active Strategy Sub-Index.

The respective weights of each of the Multi-Asset RoRo VT 30% Index and the FX Active Strategy Sub-Index in the Index are reset on a monthly basis (subject to adjustment for holidays and Disrupted Days).

#### Multi-Asset RoRo VT 30% Index

The Multi-Asset RoRo VT 30% Index (the "Leveraged RoRo Total Return Sub-Index") is a volatility-targeted index that tracks the performance (with an exposure of up to 500% but not less than 0%) of the RoRo Level and daily movements in the U.S. Federal Funds Effective Rate.

The RoRo Level represents a notional long position in:

- (a) the Core Asset, being a notional basket of two distinct asset classes: equities and commodities; and/or
- (b) the Reserve Asset, being a notional basket of fixed income assets; and
- (c) the FX-Adjusted JGB Index, being an FX-adjusted version of the Citi JGB Futures Active Strategy (Target Volatility 5%) XI Index, being a notional rules-based proprietary index developed by the Index Administrator that dynamically provides exposure to a notional rolling investment position in 10-year Japanese Government Bond futures contracts (the performance of which is converted into the Index Base Currency from Japanese Yen). Such notional investment assumes, depending on an algorithmic trading signal, either a long notional exposure, a short notional exposure, or no notional exposure to such futures contracts and targets an annualised volatility of 5%,

in each case, as further described in Part E (*Data*) below, and, in the cases of (a) and (b), depending on the weekly observation of the output of an algorithmic indicator or "signal".

The signal, which is used to determine the allocation of the RoRo Level to the Core Asset and/or the Reserve Asset, is based on (i) a Trend Indicator in respect of the Core Asset which aims to model the recent directional performance of the Core Asset over a specified Trend Look Back Period of up to 120 Index Business Days and (ii) a backward-looking indicator of macro-economic sentiment or risk, being the Citi Global Macro Risk Index.

A reallocation of the exposure of the RoRo Level between the Core Asset and the Reserve Asset may take place on a weekly basis (subject to a change in the signal).

All of the assets composing the Core Asset and the Reserve Asset are collectively referred to as the "Variable RoRo Constituents" or the "VR Constituents". The weighted performance of the VR Constituents is reflected in the performance of the Core Asset and the Reserve Asset, as the case may be.

The weights of the respective VR Constituents within the Core Asset and the Reserve Asset are returned to their respective fixed Base Percentage Weights (as specified in Part E (*Data*) below) monthly on each VR Constituent Weight Reset Date (as defined in Part E (*Data*) below).

The exposure of the Leveraged RoRo Total Return Sub-Index to the RoRo Level is adjusted, potentially on a daily basis, in accordance with a formula which targets an annualised volatility of the Leveraged RoRo Total Return Sub-Index of 30% (the "Volatility Target"), as determined by reference to the recent volatility of the RoRo Level, provided that the exposure of the Leveraged RoRo Total Return Sub-Index to the RoRo Level will not exceed 500% and may not be less than 0%.

#### FX Active Strategy Sub-Index

The "FX Active Strategy Sub-Index" is a net compounded version of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index, which is itself a notional rules-based proprietary index developed by the Index Administrator.

The FX Active Strategy Sub-Index tracks the return achieved by a notional portfolio of specified USDJPY foreign exchange contracts.

Such notional portfolio is constructed, maintained and rebalanced in accordance with algorithmic signals. These signals may be conceptualised as instructions notionally to trade a specified notional amount of the particular foreign exchange contracts in a specific notional amount, with certain directions and settlement days. Such signals are generated as a result of a rules-based methodology and observations of a series of factors on the assumption that such factors may indicate times of JPY appreciation against USD. These factors are (1) high macroeconomic risk aversion, as measured by the Citi Global Macro Risk Index (being a rules-based proprietary index that seeks to measure the level of risk aversion prevailing in global financial markets using a set of observable financial indicators computed across different asset classes) and (2) interest rate spread

contraction, as measured by observing interest rate spreads between USD and JPY for three different tenors: 2 years, 5 years and 10 years. These signals provide for the notional sale of USD in a specific notional amount (i.e. a short position) and the notional purchase of JPY in a specific notional amount (i.e. a long position), in each case using notional forward exchange contracts, in times of expected high risk aversion or interest rate contraction as measured by the factors specified above.

The Index has leveraged exposure of 250% to the FX Active Strategy Sub-Index.

Index Administrator: Citigroup Global Markets Limited.

Index Calculation Agent: Citigroup Global Markets Limited.

Index Base Currency: United States Dollars ("USD").

Index Launch Date: 22 July 2016.

Index Start Date: 13 February 1997.

Index Start Level: 0.0776254635354057.

Index Launch Date Level: 100.

RoRo Start Date: 13 January 1997.

Core Asset Start Date: 1 February 1996.

Core Asset Start Level: 1000.

Reserve Asset Start Date: 1 February 1996.

Reserve Asset Start Level: 1000.

JGB Start Date: 24 April 2001.

JGB Start Level 100.

FX-Adjusted JGB Start Date: 1 February 1996.

FX Active Start Date: 3 February 1997.

FX Active Start Level: 100.

Index Fees and Costs: The Index Level reflects deductions for fees and notional

transaction and replication costs associated with the various

elements of the Index.

#### Costs associated with resetting the weights of the Leveraged RoRo Total Return Sub-Index and the FX Active Strategy Sub-Index in the Index

These include notional transaction costs in respect of the monthly resetting of the weights of each of the Leveraged RoRo Total Return Sub-Index and the FX Active Strategy Sub-Index in the Index, as described in paragraph 1.4 (*Reset Cost*) of Part D (*Calculation of the Index Level*) below.

#### Costs associated with the Leveraged RoRo Total Return Sub-Index

These include a notional fee of 1.00% per annum in the calculation of the RoRo Level in addition to a notional replication cost of 0.50% per annum for the exposure of the Leveraged RoRo Total Return Sub-Index to the FX-Adjusted JGB Index (as described in paragraph 1.2.1.2 (RoRo Level and Gross RoRo Level) of Part D (Calculation of the Index Level) below) (each of which will be magnified or reduced in the Index depending on the exposure of the Leveraged RoRo Total Return Sub-Index to the RoRo Level). Additional costs included in the calculation of the level of the Leveraged RoRo Total Return Sub-Index include the notional costs associated with changes in the exposure of the Leveraged RoRo Total Return Sub-Index to the RoRo Level, the notional costs associated with a reallocation of the exposure of the RoRo Level between the Core Asset and the Reserve Asset as a result of a change in signal, and the notional transaction and replication costs associated with the individual VR Constituents' weights and levels and rolling of any position in VR Constituents that are ETD Contracts, as described in paragraphs 1.2.1.4 (VT Cost), 2.1.2 (Core Asset Unit Weights), 2.2.2 (Reserve Asset Unit Weights), 2.3 (Net Constituent Levels), 3.2 (RoRo Rebalancing Cost) and 3.3 (Transaction Costs), respectively, of Part D (Calculation of the Index Level).

Additionally, the level of the JGB Index from time to time reflects a fixed notional trading cost of 0.0002 (being the value of two "ticks" JPY 20,000 *divided by* the contract notional JPY 100,000,000 applied to the change in notional investment amount upon each weekly rebalancing of the JGB Index and on any notional rolling of maturing JGB futures contracts to new JGB futures contracts.

#### Costs associated with the FX Active Strategy Sub-Index

These include a notional fee of 0.20% per annum and certain notional transaction costs in respect of the monthly compounding of the FX Active Strategy Sub-Index, as described in paragraph 1.3 (FX Active Strategy Sub-Index Level) of Part D (Calculation of the Index Level) below.

Additionally, the level of the CitiFXSM Active Short Strategy

(USDJPY) Index from time to time reflects a notional fixed rebalancing spread of 0.02% and a notional fixed swap spread of 0.001%, each applied to the traded prices of the forward contracts that are constituents of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index on each monthly roll date and on any other day on which a rebalancing of such forward contracts occurs.

Frequency of calculation of the Index Level:

Daily, on each Index Business Day.

Frequency of rebalancing:

Rebalancings occur at different levels within the Index.

The respective weights of each of the Leveraged RoRo Total Return Sub-Index and the FX Active Strategy Sub-Index in the Index are reset monthly (subject to adjustment for holidays and Disrupted Days) on each Sub-Index Reset Date (as defined in Part E (*Data*) below), such that as of each such Sub-Index Reset Date the weight of the Leveraged RoRo Total Return Sub-Index in the Index is equal to 100% and the weight of the FX Active Strategy Sub-Index in the Index is equal to 250%.

The exposure of the Leveraged RoRo Total Return Sub-Index to the RoRo Level may be adjusted on each Index Business Day in accordance with a formula which seeks to maintain an overall annualised volatility level for the Leveraged RoRo Total Return Sub-Index equal to the Volatility Target, subject to a volatility buffer of 20%.

The allocation of the exposure of the RoRo Level between the Core Asset and the Reserve Asset may take place weekly (subject to adjustment for holidays and Disrupted Days) on each RoRo Rebalancing Date (as defined in Part E (*Data*) below). The exposure of the RoRo Level to the FX-Adjusted JGB Index is fixed at 50%.

The weights of the VR Constituents in each of the Core Asset and the Reserve Asset may be reset monthly (subject to adjustment for holidays and Disrupted Days) on each VR Constituent Weight Reset Date (as defined in Part E (*Data*) below), such that as of each such VR Constituent Weight Reset Date the weight of each VR Constituent is equal to its respective Base Percentage Weight.

Index Ticker:

Bloomberg Page CB CIXBGLU2 <Index>.

Copies of the Index Conditions for each of the Citi JGB Futures Active Strategy (Target Volatility 5%) XI Index, the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index and the Citi GMRI Index are available free of charge upon request to the Index Administrator.

The Index was launched by the Index Administrator on the Index Launch Date. The Index has been calculated by the Index Calculation Agent for the period from the Index Start Date. The past performance of the Index prior to the Index Launch Date has been derived from a back-testing simulation by applying the Index methodology to published historical levels of the Index constituents. Back-tested performance is provided for illustrative purposes only and should not be regarded as an indication of future performance.

The back-testing simulation assumed that there were no market disruption events and no extraordinary events affecting Index constituents and, in addition, certain proxies have been used due to the unavailability of certain data sources prior to certain dates (as described further in Part E (Data) and Part K (Risk Factors). A simulation based on different assumptions may produce different results. Any Index Linked Product may bear additional fees which will reduce the overall returns of such Index Linked Product as compared with the past performance of the Index.

## Part C: Overview of the Index

### Calculation

#### 1. CALCULATION OF THE INDEX

Subject to the occurrence or existence of Disrupted Days, Adjustment Events and Additional Adjustment Events, the Index Level shall be calculated by the Index Calculation Agent as of the Index Valuation Time on each Index Business Day. The Index Level as of each Index Business Day shall be published on the Index Ticker, generally on the following Index Business Day. This should be considered the official source for the Index Level and a level obtained from any other source (electronic or otherwise) must be considered unofficial. The Index Level is the closing level of the Index for the relevant Index Business Day. The Index Calculation Agent may also, but is not obliged to, calculate the level of the Index in respect of any other valuation time on any Index Business Day or any other day with the consent of the Index Administrator. The detailed procedures for the calculation of the Index Level in respect of each Index Business Day are set out in Part D (Calculation of the Index Level) below.

#### 2. INDEX SPONSOR, INDEX ADMINISTRATOR AND INDEX CALCULATION AGENT

The Index Sponsor is Crédit Agricole Life Insurance Company Japan Limited. The Index Administrator acting on behalf of the Index Sponsor is Citigroup Global Markets Limited. As at the date of these Index Conditions, the Index Administrator also acts as Index Calculation Agent, calculating and publishing the Index in accordance with these Index Conditions. The Index Administrator may, in its sole discretion and without notice (with the consent of the Index Sponsor), appoint an alternative Index Calculation Agent at any time which may be a third party or the Index Administrator or one of its Affiliates.

## Brief description

#### 1. INTRODUCTION

The brief description set out in this Part C is a summary only of these Index Conditions, of which this Part C is a part. These Index Conditions as a whole govern the Index, the calculation of the Index Level, and the determinations made in connection with the maintenance of the Index. In the case of any inconsistency between the brief description in this Part C and the remainder of these Index Conditions, the remainder of these Index Conditions shall prevail.

The Index is a notional rules-based proprietary index developed by the Index Administrator on behalf of the Index Sponsor. The Index Level reflects the change in the levels of the Leveraged RoRo Total Return Sub-Index and the FX Active Strategy Sub-Index between Sub-Index Reset Dates (as defined in Part E (*Data*) below). The weight of each of the Leveraged RoRo Total Return Sub-Index and the FX Active Strategy Sub-Index in the Index will be reset monthly such that they equal to 100% and 250%, respectively.

### Leveraged RoRo Total Return Sub-Index

The Leveraged RoRo Total Return Sub-Index is a volatility-targeted index that tracks the performance of a multi-asset allocation strategy that may be allocated to notional long positions in (i)

the Core Asset, (ii) the Reserve Asset and (iii) the FX-Adjusted JGB Index (each as defined below), as well as the performance of an index tracking daily movements in the U.S. Federal Funds Effective Rate (the "Overnight Index").

The Core Asset, the Reserve Asset and the FX-Adjusted JGB Index are referred to as the "RoRo Assets". The Core Asset and the Reserve Asset are each referred to as the "Variable RoRo Assets", because the exposure of the RoRo Level to the Core Asset and the Reserve Asset will vary from time to time as described below. The exposure of the RoRo Level to the FX-Adjusted JGB Index is fixed at 50%. The weighted performance of the RoRo Assets is reflected in the "RoRo Level".

The "Core Asset" provides exposure to a notional basket of assets comprising certain equity futures contracts and commodity indices, as further described in Part E (*Data*) below.

The "Reserve Asset" provides exposure to a notional basket of assets comprising certain government bond indices, as further described in Part E (*Data*) below.

The assets comprising the Core Asset and the Reserve Assets are referred to as the "VR Constituents".

The FX-Adjusted JGB Index provides exposure to the performance of the Citi JGB Futures Active Strategy (Target Volatility 5%) XI Index (the "JGB Index"), converted into the Index Base Currency. The JGB Index is a rules-based proprietary index developed by the Index Administrator that dynamically provides long, short or no exposure in response to a rules-based trading signal to a notional rolling investment position in 10-year Japanese Government Bond ("JGB") futures contracts traded on the Osaka Stock Exchange. The trading signal reflects both the momentum of such notional investment and sentiment in the Japanese economy, as quantified by the Economy Watchers Indicator, a Japanese Government statistic. A volatility control process aims to target an annualised volatility of 5% in the level of the JGB Index, by scaling the level of the JGB Index with reference to the ratio of the realised returns of the notional investment position to the volatility target level. The level of the JGB Index also reflects a notional transaction cost. More information regarding the calculation of the JGB Index is available in the Index Conditions for the Citi JGB Futures Active Strategy (Target Volatility 5%) XI Index dated 8 August 2016 published by Citigroup Global Markets Limited (as amended and/or restated from time to time).

The exposure of the Leveraged RoRo Total Return Sub-Index to the RoRo Level may not exceed 500% and may not be less than 0%, and therefore the performance of the RoRo Level may be leveraged or de-leveraged. In particular, the leverage cap may prevent the Leveraged RoRo Total Return Sub-Index from achieving its volatility target of 30%. The volatility target is subject to a volatility buffer of 20%, which means that, broadly, there will be no change in the exposure of the Leveraged RoRo Total Return Sub-Index to the RoRo Level unless the absolute difference between the theoretical exposure determined by the Index methodology and the actual exposure is greater than 20%. The aim of the volatility buffer is to avoid overly frequent changes in exposure, and its associated costs. The determination of the exposure of the Leveraged RoRo Total Return Sub-Index to the RoRo Level is further described in paragraph 1.2.1.1 (Exposure of the Leveraged RoRo Level) of Part D (Calculation of the Index Level) below.

Subject to the occurrence of holidays (being non-Scheduled Trading Days) and Disrupted Days, each Variable RoRo Asset, i.e. each of the Core Asset and the Reserve Asset, is weighted on a weekly basis in accordance with:

- (a) a Trend Indicator that aims to model the recent directional performance of the Core Asset over a specified Trend Look Back Period (as defined in paragraph 3.1(3) (Determination of Trend Indicator) of Part D (Calculation of the Index Level) below; and
- (b) a backward-looking indicator of macro-economic sentiment or risk, being the Citi Global Macro Risk Index (the "Citi GMRI Index"),

and their respective weights may vary from time to time.

Allocation to the Core Asset may be 0%, 25%, 50%, 75% or 100%. Conversely, based on the same levels of the Citi GMRI Index and the Trend Indicator, allocation to the Reserve Asset may be 100%, 75%, 50%, 25% or 0% (such that the combined allocation to the Core Asset and the Reserve Asset is always equal to 100%). The exposure of the RoRo Level to the FX-Adjusted JGB Index Level is fixed at 50%.

Subject to the occurrence of holidays (being non-Scheduled Trading Days) and Disrupted Days, the RoRo Level is rebalanced dynamically on the third Index Business Day following a Signal Date subject to the Signal changing on such Signal Date (each such Index Business Day, a "RoRo Rebalancing Date").

The Leveraged RoRo Total Return Sub-Index can be described as replicating notional positions in the RoRo Assets (and by extension, the VR Constituents), because there is no actual portfolio of assets to which any person is entitled or in which any person has any ownership interest. The Leveraged RoRo Total Return Sub-Index references certain investment positions and the level of the Leveraged RoRo Total Return Sub-Index is calculated with reference to the prices of the assets contained in the Leveraged RoRo Total Return Sub-Index and the weights of those assets in the Leveraged RoRo Total Return Sub-Index.

#### **FX Active Strategy Sub-Index**

The FX Active Strategy Sub-Index is a net compounded version of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index, which is itself a notional rules-based proprietary index developed by the Index Administrator.

The FX Active Strategy Sub-Index tracks the return achieved by a notional portfolio of specified USDJPY foreign exchange contracts.

Such notional portfolio is constructed, maintained and rebalanced in accordance with algorithmic signals. These signals may be conceptualised as instructions notionally to trade the specified foreign exchange contracts in a specific notional amount, with a certain direction and settlement day. Such signals are generated as a result of a rules-based methodology and observations of a series of factors on the assumption that such factors may indicate times of JPY appreciation against USD. These factors are (1) high macro-economic risk aversion, as measured by the Citi Global Macro Risk Index (being a rules-based proprietary index that seeks to measure the level of risk aversion prevailing in global financial markets using a set of observable financial indicators computed across different asset classes) and (2) interest rate spread contraction, as measured by observing interest rate spreads between USD and JPY for three different tenors: 2 years, 5 years and 10 years.

By following such instructions, the index calculation agent in respect of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index constructs, maintains and rebalances the notional portfolio of foreign exchange contracts by notionally executing a number of forward exchange contracts representing the notional sale of USD in a specific notional amount (i.e. a short position) and the notional

purchase of JPY in a specific notional amount (i.e. a long position), in times of expected high risk aversion or interest rate contraction as measured by the factors specified above.

The change in value of the notional portfolio is the basis upon which changes in the level of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index are calculated from time to time. The value of all notionally held USDJPY forward contracts shall be determined with regard to the defined notional values and the daily notional profit or loss resulting from the difference between the notional value of all such forward contracts notionally held on an index business day in respect of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index and the value of such forward contracts notionally held as of the immediately preceding index business day in respect of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index. Additionally, the level of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index from time to time reflects a notional fixed rebalancing spread of 0.02% and a notional fixed swap spread of 0.001%, each applied to the traded prices of the forward contracts that are constituents of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index on each monthly roll date and on any other day on which a rebalancing of such forward contracts occurs.

More information regarding the calculation of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index is available in the Index Conditions for the CitiFX<sup>SM</sup> Active Strategy Indices dated 7 September 2016 published by Citigroup Global Markets Limited (as amended and/or restated from time to time).

The FX Active Strategy Sub-Index compounds the performance of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index on a monthly basis, that is, the weight of the FX Active Strategy Sub-Index to the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index may increase or decrease (subject to a minimum of 0%) on each Sub-Index Reset Date according to the performance of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index over the preceding month, net of a notional transaction cost of 0.02% applied to the increase or decrease in the relevant exposure and a notional replication fee of 0.20% per annum.

The Index has leveraged exposure of 250% to the FX Active Strategy Sub-Index.

#### 2. NOTIONAL FEES AND COSTS

The Index Level reflects deductions for fees and notional transaction and replication costs associated with the various elements of the Index.

# Costs associated with resetting the weights of the Leveraged RoRo Total Return Sub-Index and the FX Active Strategy Sub-Index in the Index

These include notional transaction costs in respect of the monthly resetting of the weight of each of the Leveraged RoRo Total Return Sub-Index and the FX Active Strategy Sub-Index in the Index, as described in paragraph 1.4 (*Reset Cost*) of Part D (*Calculation of the Index Level*) below, such that as of each Sub-Index Reset Date the weight of the Leveraged RoRo Total Return Sub-Index in the Index is equal to 100% and the weight of the FX Active Strategy Sub-Index in the Index is equal to 250%.

## Costs associated with adjusting the exposure of the Leveraged RoRo Total Return Sub-Index to the RoRo Level

The level of the Leveraged RoRo Total Return Sub-Index reflects deductions for fees and notional transaction and replication costs associated with daily changes to the exposure of the Leveraged RoRo Total Return Sub-Index to the RoRo Level as a result of the volatility-targeting feature of the Leveraged RoRo Total Return Sub-Index.

#### Costs associated with the RoRo Level

The RoRo Level reflects deductions for fees and notional transaction and replication costs associated with the various elements of the RoRo Level (which will be magnified or reduced in the Leveraged RoRo Total Return Sub-Index, and therefore the Index, depending on the exposure of the Leveraged RoRo Total Return Sub-Index to the RoRo Level at any time). These include (i) a notional fee of 1.00% per annum in the calculation of the RoRo Level, (ii) replication costs of 0.50% per annum for the exposure to the FX-Adjusted JGB Index and (iii) notional transaction costs in respect of the changes in the exposure of the RoRo Level to the Variable RoRo Assets, which are applied on each Index Business Day to the calculation of the Gross RoRo Level (as defined in paragraph 1.2.1.2 (RoRo Level and Gross RoRo Level) of Part D (Calculation of the Index Level) below). In addition, the Constituent Closing Level or Constituent Level (as the case may be) for each VR Constituent (as defined in the applicable section of Part I (Provisions relating to Constituents)) includes a deduction for notional replication costs and any notional roll costs associated with the underlying futures contracts, as applicable. The level of the JGB Index from time to time reflects a fixed notional trading cost of 0.0002 (being the value of two "ticks" JPY 20,000 divided by the contract notional JPY 100,000,000) applied to the change in notional investment amount upon each weekly rebalancing of the JGB Index and on any notional rolling of maturing JGB futures contracts to new JGB futures contracts.

#### Costs associated with the FX Active Strategy Sub-Index

These include replication costs of 0.20% per annum and notional transaction costs of 0.02% in respect of the monthly compounding of the FX Active Strategy Sub-Index, as described in paragraph 1.3 (FX Active Strategy Sub-Index Level) of Part D (Calculation of the Index Level) below.

Additionally, the level of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index from time to time reflects a notional fixed rebalancing spread of 0.02% and a notional fixed swap spread of 0.001%, each applied to the traded prices of the forward contracts that are constituents of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index on each monthly roll date and on any other day on which a rebalancing of such forward contracts occurs.

#### 3. DYNAMIC RESET AND REBALANCINGS

# Resetting of the performance of the Leveraged RoRo Total Return Sub-Index and FX Active Strategy Sub-Index

Subject to the occurrence of holidays or Disrupted Days, the weight of each of the Leveraged RoRo Total Return Sub-Index and the FX Active Strategy Sub-Index is reset monthly as of each Sub-Index Reset Date, such that as of each Sub-Index Reset Date the weight of the Leveraged RoRo Total Return Sub-Index in the Index is equal to 100% and the weight of the FX Active Strategy Sub-Index in the Index is equal to 250%. The Index will not be rebalanced more frequently than monthly.

# Resetting the weight of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index in the FX Active Strategy Sub-Index

Subject to the occurrence of holidays or Disrupted Days, the weight of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index in the FX Active Strategy Sub-Index is reset monthly as of each Sub-Index Reset Date, such that as of each Sub-Index Reset Date the weight of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index in the FX Active Strategy Sub-Index reflects the compounded performance of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index the over the preceding month net of certain notional transaction costs and replication fees.

## Rebalancing of the exposure of the Leveraged RoRo Total Return Sub-Index to the RoRo Level

The exposure of the Leveraged RoRo Total Return Sub-Index to the RoRo Level is adjusted, potentially on each Index Business Day, in accordance with a formula which targets an annualised volatility of the Leveraged RoRo Total Return Sub-Index of 30%, as determined with reference to the recent volatility of the RoRo Level, provided that the exposure of the Leveraged RoRo Total Return Sub-Index to the RoRo Level may not exceed 500% and may not be less than 0%.

#### Rebalancing of the exposure of the RoRo Level to the Variable RoRo Assets

Subject to the occurrence of holidays or Disrupted Days, the exposure of the RoRo Level to the Variable RoRo Assets, i.e., each of the Core Asset and the Reserve Asset, is rebalanced on a dynamic basis as of each RoRo Rebalancing Date through the determination by the Index Calculation Agent of the Signal as described in paragraph 1 (*Introduction*) above, provided that the Signal has changed since the last RoRo Rebalancing Date. The exposure of the RoRo Level to the FX-Adjusted JGB Index is fixed at 50%. The RoRo Level will not be so rebalanced more frequently than weekly.

#### Resetting of the weights of the VR Constituents

At any time, each VR Constituent is represented in the Core Asset or the Reserve Asset, as applicable, by a "Unit Weight" and a "Current Percentage Weight". The Index Calculation Agent determines the Unit Weight of each VR Constituent in accordance with paragraphs 2.1.2 (Core Asset Unit Weights) and 2.2.2 (Reserve Asset Unit Weights) of Part D (Calculation of the Index Level) below, as the case may be, and determines the Current Percentage Weight of each VR Constituent in accordance with paragraphs 2.1.3 (Core Asset Current Percentage Weights) and 2.2.3 (Reserve Asset Current Percentage Weights) of Part D (Calculation of the Index Level) below.

The difference between "unit weight" and "percentage weight" can be understood as the difference between the notional investment in a constituent in an index (the "unit weight") and the proportion that each constituent has to the overall level of the index (the "percentage weight"). The unit weight of a constituent is determined in respect of a rebalancing date by reference to the designated (fixed) base percentage weight of the constituent, the level of the index and the level of the constituent as of the rebalancing date. The unit weight of each constituent remains fixed between rebalancing dates save for adjustments as a result of changes to the constituents or extraordinary events. Unlike percentage weight, which is a snapshot of the proportion that a certain constituent has within the index as a whole, unit weight assesses the synthetic investment value of that constituent within the index. Because constituent levels fluctuate, the proportion that each constituent contributes to the index on any day depends on the relative performance of that constituent compared with the performance of the index as a whole. As such, the percentage weight of a constituent in an index can vary from day to day. On the other hand, a constituent included within an index on a certain rebalancing day, and having a certain percentage weight as of that day, will be represented by a unit weight which is fixed until the next rebalancing day.

In other words, each Variable RoRo Asset can be thought of as a notional basket of assets, and the number of units of each asset in the basket is equal to the unit weight of that asset multiplied by the value per unit of that asset, in each case as of the most recent rebalancing date. The percentage weight of that asset will then increase or decrease according to the performance of that asset relative to the performance of the other assets composing the relevant Variable RoRo Asset. As of each VR Constituent Weight Reset Date, the unit weight of each such asset is adjusted, i.e. units of that asset are notionally purchased or sold, so that each asset contributes to the aggregate value of the basket in a proportion equal to its fixed base percentage weight.

The Index Calculation Agent shall determine the Current Percentage Weight of each VR Constituent as of each VR Constituent Weight Reset Date following the Index Start Date. The Current Percentage Weight is the proportion that the value of the relevant VR Constituent bears to the level of the Core Asset or the Reserve Asset (as the case may be) as a whole prior to the rebalancing, expressed as a percentage.

The Index Calculation Agent shall then determine the Unit Weight of each VR Constituent applicable from the end of that VR Constituent Weight Reset Date in accordance with the formulae set out in paragraphs 2.1.2 (Core Asset Unit Weights) and 2.2.2 (Reserve Asset Unit Weights) of Part D (Calculation of the Index Level) using as one of its inputs the "Net Constituent Level" of the relevant VR Constituent determined in accordance with paragraph 2.3 (Net Constituent Levels) of Part D (Calculation of the Index Level) below.

A notional transaction cost (as specified in Table 2 and Table 3 of Part E (*Data*) below in the column headed "Transaction Cost") will be applied to the difference between the fixed Base Percentage Weight and the Current Percentage Weight of each VR Constituent on each VR Constituent Weight Reset Date. The notional transaction cost is a fixed percentage that represents estimated notional transactional costs that would be incurred by a hypothetical investor notionally trading in such VR Constituent and serves to reduce the Unit Weight that such VR Constituent would otherwise have had in the Core Asset Level or Reserve Asset Level, as the case may be. Overall, this reduction will lower the Core Asset Level and Reserve Asset Level from the levels they would otherwise have occupied if notional transactional costs had not been taken into account.

Subject to any extraordinary rebalancing, the Unit Weight of each VR Constituent will remain constant between VR Constituent Weight Rebalancing Dates, as described in detail in Part D (Calculation of the Index Level).

The level of each of the Core Asset and the Reserve Asset can then be calculated, using the new Unit Weights, for each subsequent Index Business Day up to and including the next following VR Constituent Weight Reset Date. However, the Core Asset Level and the Reserve Asset Level calculated in respect of the VR Constituent Weight Reset Date themselves are not affected by the new Unit Weights of the VR Constituents. The Unit Weight and the Current Percentage Weight of each VR Constituent will not be reset more frequently than monthly.

Copies of the Index Conditions for each of the Citi JGB Futures Active Strategy (Target Volatility 5%) XI Index, the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index and the Citi GMRI Index are available free of charge upon request to the Index Administrator.

### Part D: Calculation of the Index Level

The calculations and determinations in this Part D are subject to the occurrence of, and adjustments made as a consequence of, Disrupted Days (as described in Part G (*Adjustment of dates*), Adjustment Events (as described in both Part H (*Adjustments, disruption and cancellation*) and Part I (*Provisions relating to Constituents*)).

#### 1. DAILY INDEX CALCULATION

#### 1.1 Index Level

The "Index Level" shall be:

- (1) in respect of the Index Start Date, the Index Start Level; and
- (2) in respect of each Index Business Day "t" following the Index Start Date, an amount denominated in the Index Base Currency and determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

$$\begin{split} \text{IndexLevel}_t &= \text{IndexLevel}_r \\ &\times \left[ 1 + \left( \frac{\text{LevIndexTR}_t}{\text{LevIndexTR}_r} - 1 \right) + \text{FXActiveWeight} \times \left( \frac{\text{FXActiveUSDSI}_t}{\text{FXActiveUSDSI}_r} - 1 \right) \\ &- \text{ResetCost}_r \right] \end{split}$$

where:

IndexLevel<sub>t</sub> = the Index Level in respect of Index Business Day t.

IndexLevel<sub>r</sub> = the Index Level in respect of the Sub-Index Reset Date

"r" immediately preceding Index Business Day t.

respect of Index Business Day t, as determined in accordance with paragraph 1.2 (Leveraged RoRo Total

Return Sub-Index Level) below.

LevIndexTR<sub>r</sub> = the Leveraged RoRo Total Return Sub-Index Level in

respect of Sub-Index Reset Date r, as determined in accordance with paragraph 1.2 (Leveraged RoRo Total

Return Sub-Index Level) below.

FXActiveWeight = 250%.

FXActiveUSDSI<sub>t</sub> = the FX Active Strategy Sub-Index Level in respect of

Index Business Day t, as determined in accordance with paragraph 1.3 (FX Active Strategy Sub-Index Level)

below.

FXActiveUSDSI<sub>r</sub>

the FX Active Strategy Sub-Index Level in respect of Sub-Index Reset Date r, as determined in accordance with paragraph 1.3 (FX Active Strategy Sub-Index Level) below.

ResetCost<sub>r</sub>

the notional transaction costs to reset the weights of the Leveraged RoRo Total Return Sub-Index and the FX Active Strategy Sub-Index in the Index in respect of Sub-Index Reset Date r, as determined in accordance with paragraph 1.4 (Reset Cost) below.

provided that the Index Level shall never be less than zero (0). For the avoidance of doubt, if the formula above would result in a negative amount for the Index Level in respect of any Index Business Day, the Index Level as of such Index Business Day shall be deemed to be zero (0). If the Index Level as of any Index Business Day is equal to, or is deemed to be equal to, zero (0), the Index Level will cease to be calculated and the Index will be discontinued and cancelled.

#### 1.2 Leveraged RoRo Total Return Sub-Index Level

The level of the Leveraged RoRo Total Return Sub-Index (the "Leveraged RoRo Total Return Sub-Index Level") shall be:

(1) in respect of the Index Start Date, 1000; and

(2) in respect of each Index Business Day "t" following the Index Start Date, an amount denominated in the Index Base Currency and determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

$$\text{LevIndexTR}_t = \text{LevIndexTR}_{t-1} \times \left[1 + \left(\frac{\text{LevRoRo}_t}{\text{LevRoRo}_{t-1}} - 1\right) + \left(\frac{\text{ONIndex}_t}{\text{ONIndex}_{t-1}} - 1\right)\right]$$

where:

 $LevIndexTR_t = the Leveraged RoRo Total Return Sub-Index Level in$ 

respect of Index Business Day t.

LevIndexTR<sub>t-1</sub> = the Leveraged RoRo Total Return Sub-Index Level in

respect of the Index Business Day immediately

preceding Index Business Day t.

LevRoRo<sub>t</sub> = the Leveraged RoRo Level in respect of Index Business

Day t, as determined in accordance with

paragraph 1.2.1 (Leveraged RoRo Level) below.

LevRoRo<sub>t-1</sub> = the Leveraged RoRo Level in respect of the Index

Business Day immediately preceding Index Business Day t. as determined in accordance with

paragraph 1.2.1 (Leveraged RoRo Level) below.

 $ONIndex_t$  = the Overnight Index Level in respect of Index Business

Day t, as determined in accordance with

paragraph 1.2.2 (Overnight Index Level) below.

ONIndex<sub>t-1</sub>

the Overnight Index Level in respect of the Index Business Day immediately preceding Index Business Day t, as determined in accordance with paragraph 1.2.2 (Overnight Index Level) below.

#### 1.2.1 Leveraged RoRo Level

The "Leveraged RoRo Level" shall be:

(1) in respect of the Index Start Date, 1000; and

(2) in respect of each Index Business Day "t" following the Index Start Date, an amount denominated in the Index Base Currency and determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

$$\mathsf{LevRoRo}_t = \mathsf{LevRoRo}_{t-1} \times \left[1 + \mathsf{TrailingRoRoExposure}_{t-1} \times \left(\frac{\mathsf{RoRo}_t}{\mathsf{RoRo}_{t-1}} - 1\right) - \mathsf{VTCost}_{t-1}\right]$$

where:

LevRoRo<sub>t</sub> = the Leveraged RoRo Level in respect of Index Business

Day t.

Lev $RoRo_{t-1}$  = the Leveraged RoRo Level in respect of the Index

Business Day immediately preceding Index Business Day

t.

TrailingRoRoExposure<sub>t-1</sub> = the Trailing RoRo Exposure in respect of the Index

Business Day immediately preceding Index Business Day t, as determined in accordance with paragraph 1.2.1.1 (Exposure of the Leveraged RoRo Level to the RoRo

Level) below.

RoRot = the RoRo Level in respect of Index Business Day t, as

determined in accordance with paragraph 1.2.1.2 (RoRo

Level and Gross RoRo Level) below.

 $RoRo_{t-1}$  = the RoRo Level in respect of the Index Business Day

immediately preceding Index Business Day t, as determined in accordance with paragraph 1.2.1.2 (RoRo

Level and Gross RoRo Level) below.

VTCost<sub>1-1</sub> = the notional transaction cost to adjust the exposure of the

Leveraged RoRo Level to the RoRo Level in respect of the Index Business Day immediately preceding Index Business Day t, as determined in accordance with

paragraph 1.2.1.4 (VT Cost) below.

#### 1.2.1.1 Exposure of the Leveraged RoRo Level to the RoRo Level

The exposure of the Leveraged RoRo Level to the RoRo Level is determined on each Index Business Day "t" by reference to the short term realised volatility of the RoRo Level over a period of 21 Index Business Days commencing on, and including, the 20th Index Business Day before Index Business Day t and ending on, and including, Index Business Day t. The exposure of the Leveraged RoRo Level to the RoRo Level will never be more than 500% and will never be less than 0%.

The "trailing exposure" of the Leveraged Index Level to the RoRo Level (the "Trailing RoRo Exposure") shall be a percentage determined by the Index Calculation Agent as of the Index Valuation Time in respect of each Index Business Day "t" in accordance with the formula set out below:

 $TrailingRoRoExposure_t = ActualRoRoExposure_{t-2}$ 

where:

TrailingRoRoExposure<sub>t</sub> = the Trailing RoRo Exposure in respect of Index Business Day t.

ActualRoRoExposure<sub>t-2</sub> = the Actual RoRo Exposure in respect of the second Index Business Day preceding Index Business Day t.

The "actual exposure" of the Leveraged RoRo Level to the RoRo Level (the "Actual RoRo Exposure") shall be a percentage determined by the Index Calculation Agent as of the Index Valuation Time in respect of each Index Business Day "t" equal to:

- (1) the Theoretical RoRo Exposure in respect of Index Business Day t, if:
  - (A) the absolute value of the difference between (x) the Theoretical RoRo Exposure in respect of Index Business Day t and (y) the Actual RoRo Exposure in respect of the Index Business Day immediately preceding Index Business Day t is greater than 20%; and
  - (B) the second Index Business Day following Index Business Day t is a Scheduled Trading Day for all RoRo Assets and is not a Disrupted Day for any RoRo Asset;

and otherwise,

(2) the Actual RoRo Exposure in respect of the Index Business Day immediately preceding Index Business Day t.

The "theoretical exposure" of the Leveraged RoRo Level to the RoRo Level (the "Theoretical RoRo Exposure") shall be a percentage determined by the Index Calculation Agent as of the Index Valuation Time in respect of each Index Business Day "t" in accordance with the formula set out below:

$$\label{eq:theoreticalRoRoExposure} \mbox{TheoreticalRoRoExposure}_t = min\left(500\%, \frac{\mbox{Volatility Target}}{\mbox{RV}_t}\right)$$

where:

TheoreticalRoRoExposure<sub>t</sub> = the Theoretical RoRo Exposure in respect of Index Business Day t.

min() = the lower of the two values within the brackets and separated by a comma.

Volatility Target = 30%.

RV<sub>t</sub> = the Realised Volatility of the RoRo Level in respect of Index Business Day t, as determined in accordance with

the following paragraph.

The realised volatility of the RoRo Level (the "**Realised Volatility**") in respect of each Index Business Day "t" shall be a percentage determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

$$RV_{t} = \sqrt{\sum_{i=t-20}^{t} \left(\frac{1}{21} \times \left[\ln\left(\frac{RoRo_{i}}{RoRo_{i-1}}\right) \times \sqrt{\frac{365}{dc(i-1,i)}}\right]^{2}\right)}$$

where:

 $RV_t$  = the Realised Volatility in respect of Index Business Day

 $\sum_{i=t-20}^{t}() \\ = \\ \text{the arithmetic sum of the formula within the brackets,} \\ \text{evaluated with respect to each Index Business Day "i"} \\ \text{from and including the 20th Index Business Day} \\ \text{preceding Index Business Day t, to and including Index Business Day t.} \\$ 

In() = the natural logarithm function applied to the formula within the brackets.

RoRo<sub>i</sub> = the RoRo Level in respect of Index Business Day i, as determined in accordance with paragraph 1.2.1.2 (*RoRo Level and Gross RoRo Level*) below.

RoRo<sub>i-1</sub> = the RoRo Level in respect of the Index Business Day immediately preceding Index Business Day i, as determined in accordance with paragraph 1.2.1.2 (*RoRo* 

Level and Gross RoRo Level) below.

dc(i-1,i) = the number of calendar days from, and including, the Index Business Day immediately preceding Index

Business Day i to, but excluding, Index Business Day i.

#### 1.2.1.2 RoRo Level and Gross RoRo Level

The RoRo Level shall be:

(1) in respect of the RoRo Start Date, 1000; and

in respect of each Index Business Day "t" following the RoRo Start Date, a level determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

$$\text{RoRo}_{t} = \text{RoRo}_{t-1} \times \left[ \frac{\text{GrossRoRo}_{t}}{\text{GrossRoRo}_{t-1}} - \left( \left( \text{fee} + \text{JGB}_{Exp} \times \text{rf}_{JGBFX} \right) \times \frac{\text{dc}(t-1,t)}{360} \right) \right]$$

where:

RoRo<sub>t</sub> = the RoRo Level in respect of Index Business Day t.

RoRo<sub>t-1</sub> = the RoRo Level in respect of the Index Business Day immediately preceding Index Business Day t.

GrossRoRo<sub>t</sub> = the Gross RoRo Level in respect of Index Business Day t, as determined in accordance with the next paragraph.

GrossRoRo<sub>t-1</sub> = the Gross RoRo Level in respect of the Index Business Day immediately preceding Index Business Day t, as determined in accordance with the next paragraph.

fee = 1.00%.

JGB<sub>Exp</sub> = the fixed exposure of the RoRo Level to the FX-Adjusted JGB Index, being 50.00%.

rf<sub>JGBFX</sub> = the notional replication fee in respect of the FX-Adjusted JGB Index, being 0.50%.

dc(t-1,t) = the number of calendar days from, and including, the Index Business Day immediately preceding Index Business Day t to, but excluding, Index Business Day t.

#### The "Gross RoRo Level" shall be:

- (1) in respect of the RoRo Start Date, 1000; and
- in respect of each Index Business Day "t" following the RoRo Start Date, a level determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

$$\begin{aligned} \operatorname{GrossRoRo}_{t} &= \operatorname{GrossRoRo}_{r} \times \begin{bmatrix} 1 + \operatorname{Exposure}_{RoRo,CA,r} \times \left( \frac{\operatorname{CoreAsset}_{t}}{\operatorname{CoreAsset}_{r}} - 1 \right) \\ + \left( 1 - \operatorname{Exposure}_{RoRo,CA,r} \right) \times \left( \frac{\operatorname{ReserveAsset}_{t}}{\operatorname{ReserveAsset}_{r}} - 1 \right) \\ + \operatorname{JGB}_{Exp} \times \left( \frac{\operatorname{JGBFX}_{t}}{\operatorname{JGBFX}_{r}} - 1 \right) \\ - \operatorname{RoRoRebalanceCost}_{r} \end{bmatrix} \end{aligned}$$

where:

GrossRoRo<sub>t</sub> = the Gross RoRo Level in respect of Index Business Day t.

| GrossRoRo <sub>r</sub>         | = | the Gross RoRo Level in respect of the RoRo Rebalancing Date "r" immediately preceding Index Business Day t.   |
|--------------------------------|---|--|
| Exposure <sub>RoRo,CA,r</sub>  | = | the exposure of the Gross RoRo Level to the Core Asset Level as of RoRo Rebalancing Date r, as determined in accordance with paragraph 1.2.1.3 (Exposure of the Gross RoRo Level to the Core Asset Level) below.                     |
| CoreAsset <sub>t</sub>         | = | the Core Asset Level in respect of Index Business Day t, as determined in accordance with paragraph 2.1.1 (Core Asset Level) below.  |
| CoreAsset <sub>r</sub>         | = | the Core Asset Level in respect of RoRo Rebalancing Date r, as determined in accordance with paragraph 2.1.1 ( <i>Core Asset Level</i> ) below.  |
| ReserveAsset <sub>t</sub>      | = | the Reserve Asset Level in respect of Index Business<br>Day t, as determined in accordance with<br>paragraph 2.2.1 ( <i>Reserve Asset Level</i> ) below.   |
| ReserveAsset <sub>r</sub>      | = | the Reserve Asset Level in respect of RoRo Rebalancing Date r, as determined in accordance with paragraph 2.2.1 ( <i>Reserve Asset Level</i> ) below.  |
| $JGB_{Exp}$                    | = | the fixed exposure of the RoRo Level to the FX-Adjusted JGB Index, being 50.00%.   |
| JGBFX <sub>t</sub>             | = | the FX-Adjusted JGB Index Level in respect of Index Business Day t, as determined in accordance with paragraph 2.4 ( <i>JGBFX Level</i> ) below.   |
| JGBFX <sub>r</sub>             | = | the FX-Adjusted JGB Index Level in respect of RoRo Rebalancing Date r, as determined in accordance with paragraph 2.4 ( <i>JGBFX Level</i> ) below.  |
| RoRoRebalanceCost <sub>r</sub> | = | the notional transaction costs to adjust the exposure of the RoRo Level to the Core Assets and the Reserve Assets on RoRo Rebalancing Date r, as determined in accordance with paragraph 3.2 ( <i>RoRo Rebalancing Cost</i> ) below. |

### 1.2.1.3 Exposure of the Gross RoRo Level to the Core Asset Level

The exposure of the Gross RoRo Level to the Core Asset Level (" $Exposure_{RoRo,CA}$ ") in respect of each RoRo Rebalancing Date "r" (including the RoRo Start Date) shall be a level determined by the Index Calculation Agent as of the Index Valuation Time on RoRo Rebalancing Date r in accordance with the formula set out below:

 $Exposure_{RoRo,CA,r} = Signal_s$ 

where:

 ${\sf Exposure}_{{\sf RoRo,CA,r}} \qquad \qquad {\sf =} \quad {\sf the \ exposure \ of \ the \ Gross \ RoRo \ Level \ to \ the \ Core}$ 

Asset Level as of RoRo Rebalancing Date r.

Signal<sub>s</sub> = A value equal to 1, 0.75, 0.50, 0.25 or 0 depending on

the output of the Signal in respect of RoRo Rebalancing Date r, as determined on the related Signal Date s in accordance with paragraph 3.1(1) (*Determination of* 

Signal) below.

#### 1.2.1.4 VT Cost

The volatility targeting cost of the Leveraged RoRo Total Return Sub-Index is the notional cost in relation to any change in the exposure of the Leveraged RoRo Level to the RoRo Level in respect of any Index Business Day.

The volatility targeting cost ("VT Cost") shall be:

(1) in respect of the Index Start Date, zero; and

(2) in respect of each Index Business Day "t" following the Index Start Date, an amount denominated in the Index Base Currency and determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

 $VTCost_t = abs[TrailingRoRoExposure_t - CurrentRoRoExposure_t] \times mc_t^{FB}$ 

where:

VTCost<sub>1</sub> = the notional transaction costs to adjust the exposure of

the Leveraged RoRo Total Return Sub-Index to the

RoRo Level in respect of Index Business Day t.

abs[] = the absolute value function applied to the result of the

formula within the brackets.

TrailingRoRoExposure<sub>t</sub> = the Trailing RoRo Exposure in respect of Index

Business Day t, as determined in accordance with paragraph 1.2.1.1 (Exposure of the Leveraged RoRo

Level to the RoRo Level) above.

CurrentRoRoExposure = the Current RoRo Exposure in respect of Index

Business Day t, as determined in accordance with paragraph 1.2.1.5 (*Current Exposure of the Leveraged RoRo Total Return Sub-Index Level to the RoRo Level*)

below.

 $mc_t^{FB}$  = the sum of the following formula:

 $(ACPW_{CA,t} \times mc_t^{CA}) + (ACPW_{RA,t} \times mc_t^{RA})$ 

$$+(ACPW_{JGBFX,t} \times TC_{JGBFX})$$

where:

ACPW<sub>CA,t</sub> means the Asset Current Percentage Weight of the Core Asset in respect of Index Business Day t, as determined in accordance with paragraph 3.4 (*Current Percentage Weights of the RoRo Assets*) below;

 $\mathrm{mc}_t^{\mathit{CA}}$  means the Core Asset Marginal Costs in respect of Index Business Day t, as determined in accordance with paragraph 2.1.4 (*Core Asset Marginal Costs*) below;

ACPW<sub>RA,t</sub> means the Asset Current Percentage Weight of the Reserve Asset in respect of Index Business Day t, as determined in accordance with paragraph 3.4 (*Current Percentage Weights of the RoRo Assets*) below;

 $\mathrm{mc}_t^{RA}$  means the Reserve Asset Marginal Costs in respect of Index Business Day t, as determined in accordance with paragraph 2.2.4 (*Reserve Asset Marginal Costs*) below;

ACPW<sub>JGBFX,t</sub> means the Asset Current Percentage Weight of the FX-Adjusted JGB Index in respect of Index Business Day t, as determined in accordance with paragraph 3.4 (*Current Percentage Weights of the RoRo Assets*) below; and

TC<sub>JGBFX</sub> means the notional transaction costs in respect of the FX-Adjusted JGB Index, as determined in accordance with paragraph 3.3 (*Transaction Costs*) below.

#### 1.2.1.5 Current Exposure of the Leveraged RoRo Total Return Sub-Index Level to the RoRo Level

The "current exposure" of the Leveraged RoRo Total Return Sub-Index Level to the RoRo Level (the "Current RoRo Exposure") shall be:

- (1) in respect of the Index Start Date, the Actual RoRo Exposure in respect of such Index Business Day; and
- (2) in respect of each Index Business Day "t" following the Index Start Date, a percentage determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

$$\mathsf{CurrentRoRoExposure}_t = \mathsf{TrailingRoRoExposure}_{t-1} \times \frac{\mathsf{LevRoRo}_{t-1}}{\mathsf{LevRoRo}_t} \times \frac{\mathsf{RoRo}_t}{\mathsf{RoRo}_{t-1}}$$

where:

CurrentRoRoExposure<sub>t</sub> = the Current RoRo Exposure in respect of Index Business Day t.

TrailingRoRoExposure<sub>t-1</sub> = the Trailing RoRo Exposure in respect of the Index Business Day immediately preceding Index Business Day t.

LevRoRo<sub>t-1</sub> = the Leveraged RoRo Level in respect of the Index Business Day immediately preceding Index Business Day t, as determined in accordance with paragraph 1.2.1 (*Leveraged RoRo Level*) above.

LevRoRo<sub>t</sub> = the Leveraged RoRo Level in respect of Index Business
Day t, as determined in accordance with
paragraph 1.2.1 (*Leveraged RoRo Level*) above.

RoRo<sub>t</sub> = the RoRo Level in respect of Index Business Day t, as determined in accordance with paragraph 1.2.1.2 (*RoRo Level and Gross RoRo Level*) above.

RoRo<sub>t-1</sub> = the RoRo Level in respect of the Index Business Day immediately preceding Index Business Day t, as determined in accordance with paragraph 1.2.1.2 (*RoRo Level and Gross RoRo Level*) above.

#### 1.2.2 Overnight Index Level

The level of the Overnight Index (the "Overnight Index Level") shall be:

- (1) in respect of the Index Start Date, 100; and
- (2) in respect of each Index Business Day "t" following the Index Start Date, an amount denominated in the Index Base Currency and determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

$$\mathrm{ONIndex}_t = \mathrm{ONIndex}_{t-1} \times \left[ 1 + \frac{\mathrm{FEDFUNDS}_{t-1}}{100} \times \frac{\mathrm{dc}(t-1,t)}{360} \right]$$

where:

 $\mathsf{ONIndex}_\mathsf{t} = \mathsf{the} \; \mathsf{Overnight} \; \mathsf{Index} \; \mathsf{Level} \; \mathsf{in} \; \mathsf{respect} \; \mathsf{of} \; \mathsf{Index} \; \mathsf{Business} \; \mathsf{Day} \; \mathsf{t}.$ 

 $\hbox{ONIndex}_{t\text{-}1} \hspace{1.5cm} = \hspace{1.5cm} \hbox{the Overnight Index Level in respect of the Index} \\ \hbox{Business Day immediately preceding Index Business} \\ \hbox{Day t.}$ 

FEDFUNDS<sub>t-1</sub> = the U.S. Federal Funds Effective Rate (EFFR) in respect of the Index Business Day immediately preceding Index Business Day t, as displayed on Bloomberg screen page FEDL01 <Index> as of the

Index Valuation Time, or if no rate is available on such screen page on the relevant Index Business Day (where such Index Business Day is not a day on which the U.S. Federal Funds Effective Rate is scheduled to be published or where the U.S. Federal Funds Effective Rate is disrupted for any reason), the rate published on the immediately preceding Index Business Day for which a rate is available, or if such screen page is discontinued or unavailable on the relevant Index Business Day for any other reason, such other interest rate as the Index Calculation Agent shall determine appropriate by reference to an alternative rate source.

dc(t-1,t)

the number of calendar days from, and including, the Index Business Day immediately preceding Index Business Day t to, but excluding, Index Business Day t.

#### 1.3 FX Active Strategy Sub-Index Level

The level of the FX Active Strategy Sub-Index (the "FX Active Strategy Sub-Index Level") shall be:

- (1) in respect of the FX Active Start Date, the FX Active Start Level; and
- (2) in respect of each Index Business Day "t" following the FX Active Start Date, an amount denominated in the Index Base Currency and determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

$$\begin{split} \text{FXActiveUSDSI}_t \\ &= \text{FXActiveUSDSI}_r + \left[ \text{UW}_{FX,r} \times (\text{FXActiveUSD}_t - \text{FXActiveUSD}_r) \right] \\ &- \left[ \text{FXActiveUSDSI}_d \times \text{FXActiveFee} \times \frac{dc(r,t)}{365} \right] \\ &- \left[ abs \left( \text{UW}_{FX,r} - \text{UW}_{FX,r-1} \right) \times \text{TC}_{FX} \times 100 \right] \end{split}$$

where:

FXActiveUSDSI<sub>t</sub>

the FX Active Strategy Sub-Index Level in respect of Index Business Day t.

FXActiveUSDSI<sub>r</sub>

the FX Active Strategy Sub-Index Level in respect of the Sub-Index Reset Date "r" immediately preceding Index Business Day t.

 $\mathsf{UW}_{\mathsf{FX},r}$ 

the FX Active Strategy Sub-Index Unit Weight in respect of Sub-Index Reset Date r.

FXActiveUSD<sub>t</sub>

the Constituent Closing Level of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index (as defined in the Proprietary Index section of Part I (*Provisions relating to Constituents*)) in respect of Index Business Day t.

| FXActiveUSD <sub>r</sub>   | = | the Constituent Closing Level of the CitiFX <sup>SM</sup> Active Short Strategy (USDJPY) Index (as defined in the Proprietary Index section of Part I ( <i>Provisions relating to Constituents</i> )) in respect of Sub-Index Reset Date r. |
|----------------------------|---|---|
| FXActiveUSDSI <sub>d</sub> | = | the FX Active Strategy Sub-Index Level in respect of the FX Observation Date d immediately preceding Index Business Day t.  |
| FXActiveFee                | = | 0.20%.  |
| dc(r,t)                    | = | the number of calendar days from, and including, Sub-Index Reset Date r to, but excluding, Index Business Day t.  |
| abs()                      | = | the absolute value function applied to the result of the formula within the brackets.   |
| UW <sub>FX,r-1</sub>       | = | the FX Active Strategy Sub-Index Unit Weight in respect of the Sub-Index Reset Date immediately preceding Sub-Index Reset Date r.   |
| $TC_{FX}$                  | = | 0.02%, being the notional transaction costs in respect of the FX Active Strategy Sub-Index.   |

#### 1.3.1 FX Active Strategy Sub-Index Unit Weight

#### The "FX Active Strategy Sub-Index Unit Weight" shall be:

- (1) in respect of the FX Active Start Date, equal to 1; and
- in respect of each Sub-Index Reset Date "r" following the FX Active Start Date, determined by the Index Calculation Agent in accordance with the formula set out below:

$$UW_{FX,r} = \frac{\text{FXActiveUSDSI}_d}{100}$$

where:

UW<sub>FX,r</sub> = the FX Active Strategy Sub-Index Unit Weight in respect of Sub-Index Reset Date r.

FXActiveUSDSI<sub>d</sub> = the FX Active Strategy Sub-Index Level in respect of the FX Observation Date d immediately preceding Sub-Index Reset Date r.

#### 1.4 Reset Cost

The notional transaction costs in respect of the reset of the weight in the Index of each of the Leveraged RoRo Total Return Sub-Index Level and the FX Active Strategy Sub-Index Level (the "Reset Cost") in respect of each Sub-Index Reset Date shall be:

- (1) in respect of the Index Start Date, zero; and
- (2) in respect of each Sub-Index Reset Date "r" following the Index Start Date, an amount denominated in the Index Base Currency and determined by the Index Calculation Agent as of the Index Valuation Time on Sub-Index Reset Date r in accordance with the formula set out below:

 $ResetCost_r = abs[100\% - SubIndexCurrWeight_{Lev,r}] \times mc_r^{LevFB} + abs[FXActiveWeight - SubIndexCurrWeight_{FX,r}] \times TC_{FX}$ 

where:

ResetCost<sub>r</sub> = the notional transaction costs to reset the weights of

the Leveraged RoRo Total Return Sub-Index and the FX Active Strategy Sub-Index in the Index in respect of

Sub-Index Reset Date r.

abs[] = the absolute value function applied to the result of the

formula within the brackets.

 $SubIndexCurrWeight_{Lev,r}$  = the weight of the Leveraged RoRo Total Return Sub-

Index in the Index as of Sub-Index Reset Date r, as determined in accordance with paragraph 1.4.1 (Current Weight of the Leveraged RoRo Total Return

Sub-Index in the Index) below.

 $mc_r^{LevFB}$  = the product of:

 $mc_r^{FB} \times CurrentRoRoExposure_r$ 

where:

 $\mathrm{mc}_r^{FB}$  is determined in respect of Sub-Index Reset Date r in accordance with in paragraph 1.2.1.4 (VT

Cost) above; and

CurrentRoRoExposure, is the Current RoRo Exposure in respect of Sub-Index Reset Date r, as determined in accordance with paragraph 1.2.1.5 (*Current Exposure of the Leveraged RoRo Total Return Sub-Index Level* 

to the RoRo Level) above.

FXActiveWeight = 250%.

SubIndexCurrWeight<sub>FX,r</sub> = the weight of the FX Active Strategy Sub-Index in the Index as of Sub-Index Reset Date r, as determined in accordance with paragraph 1.4.2 (*Current Weight of* 

accordance with paragraph 1.4.2 (Current weight of the FX Active Strategy Sub-Index in the Index) below.

### 1.4.1 Current Weight of the Leveraged RoRo Total Return Sub-Index in the Index

The weight of the Leveraged RoRo Total Return Sub-Index in the Index ("SubIndexCurrWeight Lev") shall be:

- (1) in respect of the Index Start Date, 100%; and
- (2) in respect of each Index Business Day "t" following the Index Start Date, a percentage determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

$$\label{eq:SubIndexCurrWeight} \begin{aligned} \text{SubIndexCurrWeight}_{Lev,r} &= \frac{\text{IndexLevel}_r}{\text{IndexLevel}_t} \times \frac{\text{LevIndexTR}_t}{\text{LevIndexTR}_r} \end{aligned}$$

where:

SubIndexCurrWeight<sub>Lev,r</sub> = the weight of the Leveraged RoRo Total Return Sub-Index in the Index as of Index Business Day t.

IndexLevel<sub>r</sub> = the Index Level in respect of the Sub-Index Reset Date
"r" immediately preceding Index Business Day t, as
determined in accordance with paragraph 1.1 (*Index* 

Level) above.

IndexLevel<sub>t</sub> = the Index Level in respect of Index Business Day t, as

determined in accordance with paragraph 1.1 (Index

Level) above.

LevIndexTR<sub>t</sub> = the Leveraged RoRo Total Return Sub-Index Level in

respect of Index Business Day t, as determined in accordance with paragraph 1.2 (Leveraged RoRo Total

Return Sub-Index Level) above.

LevIndexTR<sub>r</sub> = the Leveraged RoRo Total Return Sub-Index Level in

respect of Sub-Index Reset Date r, as determined in accordance with paragraph 1.2 (Leveraged RoRo Total

Return Sub-Index Levell above.

#### 1.4.2 Current Weight of the FX Active Strategy Sub-Index in the Index

The weight of the FX Active Strategy Sub-Index in the Index ("SubIndexCurrWeight FX") shall be:

- (1) in respect of the Index Start Date, 250%; and
- (2) in respect of each Index Business Day "t" following the Index Start Date, a percentage determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

$$\label{eq:SubIndexCurrWeight} \begin{aligned} \text{SubIndexCurrWeight}_{FX,r} = & \text{FXActiveWeight} \times \frac{\text{IndexLevel}_r}{\text{IndexLevel}_t} \times \frac{\text{FXActiveUSDSI}_t}{\text{FXActiveUSDSI}_r} \end{aligned}$$

where:

SubIndexCurrWeight<sub>FX,r</sub> = the weight of the FX Active Strategy Sub-Index in the

Index as of Index Business Day t.

FXActiveWeight = 250%.

IndexLevel<sub>r</sub> = the Index Level in respect of the Sub-Index Reset Date

"r "immediately preceding Index Business Day t, as determined in accordance with paragraph 1.1 (Index

Level) above.

IndexLevel<sub>t</sub> = the Index Level in respect of Index Business Day t, as

determined in accordance with paragraph 1.1 (Index

Level) above.

FXActiveUSDSI<sub>1</sub> = the FX Active Strategy Sub-Index Level in respect of

Index Business Day t, as determined in accordance with paragraph 1.3 (FX Active Strategy Sub-Index Level)

above.

FXActiveUSDSI<sub>r</sub> = the FX Active Strategy Sub-Index Level in respect of

Sub-Index Reset Date r, as determined in accordance with paragraph 1.3 (FX Active Strategy Sub-Index

Level) above.

#### 2. LEVELS, WEIGHTS AND MARGINAL COSTS OF THE RORO ASSETS

#### 2.1 Core Asset Level, Weights and Marginal Costs

#### 2.1.1 Core Asset Level

The "Core Asset Level" in respect of each Index Business Day "t" from and including the Core Asset Start Date shall be an amount in the Index Base Currency determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

$$CoreAsset_t = \sum_{i=1}^{7} (UW_{i,rs} \times NetConstituentLevel_{i,t})$$

where:

 $CoreAsset_t$  = the Core Asset Level in respect of Index Business Day

t.

 $\sum_{i=1}^{\infty} (1) = \text{the arithmetic sum of the formula within the brackets,} \\ \text{evaluated with respect to each VR Constituent in the} \\ \text{Core Asset ("Core Constituent i")}.$ 

UW<sub>i,rs</sub> = the Unit Weight in respect of Core Constituent i as of

the VR Constituent Weight Reset Date immediately

preceding Index Business Day t, as determined in accordance with paragraph 2.1.2 (*Core Asset Unit Weights*) below.

NetConstituentLevel<sub>it</sub>

the Net Constituent Level in respect of Core Constituent i as of Index Business Day t, as determined in accordance with paragraph 2.3 (*Net Constituent Levels*) below.

#### 2.1.2 Core Asset Unit Weights

The Unit Weight in respect of each VR Constituent in the Core Asset ("Core Constituent i") shall be:

- (1) in respect of the Core Asset Start Date, PW<sub>i</sub> (as defined below); and
- (2) in respect of each VR Constituent Weight Reset Date "rs" following the Core Asset Start Date, a percentage determined by the Index Calculation Agent as of the Index Valuation Time on VR Constituent Weight Reset Date rs in accordance with the formula set out below:

$$\begin{aligned} \text{UW}_{i,rs} &= \frac{CoreAsset_{rs}}{NetConstituentLevel_{i,rs}} \\ &\times \begin{cases} \left( CPW_{i,rs} + \left( PW_i - CPW_{i,rs} \right) \times (1 + TC_i) \right), if \ PW_i < CPW_{i,rs}; \ or \\ \left( CPW_{i,rs} + \left( PW_i - CPW_{i,rs} \right) \times \frac{1}{1 + TC_i} \right), otherwise \end{cases} \end{aligned}$$

where:

 $UW_{i,rs}$ 

the Unit Weight of Core Constituent i as of VR Constituent Weight Reset Date rs.

CoreAsset<sub>rs</sub>

the Core Asset Level in respect of VR Constituent Weight Reset Date rs, as determined in accordance with paragraph 2.1.1 (Core Asset Level) above.

NetConstituentLevel<sub>i,rs</sub>

the Net Constituent Level of Core Constituent i in respect of VR Constituent Weight Reset Date rs, as determined in accordance with paragraph 2.3 (Net Constituent Levels) below.

 $\mathsf{CPW}_{\mathsf{i},\mathsf{rs}}$ 

the Current Percentage Weight of Core Constituent i on VR Constituent Weight Reset Date rs, as determined in accordance with paragraph 2.1.3 (Core Asset Current Percentage Weights) below.

 $PW_i$ 

the Base Percentage Weight of Core Constituent i, as specified under the heading "Base Percentage Weight" in Table 2 (VR Constituents of the Core Asset) of Part E (Data).

TC<sub>i</sub>

 the notional transaction cost in respect of Core Constituent i, as specified under the heading

#### 2.1.3 **Core Asset Current Percentage Weights**

The Current Percentage Weight in respect of each VR Constituent in the Core Asset ("Core Constituent i") in respect of each Index Business Day "t" from and including the Core Asset Start Date shall be a percentage determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

$$\begin{aligned} \text{CPW}_{i,t} &= \frac{\text{UW}_{i,rs} \times \text{NetConstituentLevel}_{i,t}}{\text{CoreAsset}_t} \\ \text{where:} \\ &= \text{the Current Percentage Weight of Core Constituent i in respect of Index Business Day t.} \\ \text{UW}_{i,rs} &= \text{the Unit Weight of Core Constituent i in respect of the VR Constituent Weight Reset Date immediately preceding Index Business Day t, as determined in accordance with paragraph 2.1.2 (Core Asset Unit Weights) above.} \\ \text{NetConstituentLevel}_{i,t} &= \text{the Net Constituent Level of Core Constituent i in respect of Index Business Day t, as determined in accordance with paragraph 2.3 (Net Constituent Levels)} \\ \end{aligned}$$

## t, as determined in accordance with paragraph 2.1.1

(Core Asset Level) above.

#### 2.1.4 **Core Asset Marginal Costs**

CoreAsset<sub>t</sub>

The "Marginal Costs" in respect of the Core Asset on each Index Business Day shall be:

- (1) in respect of the Core Asset Start Date, zero; and
- (2)in respect of each Index Business Day "t" from and including the Core Asset Start Date, an amount in the Index Base Currency determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

$$mc_t^{Core} = ACPW_{CA.t} \times TC_{Core}$$

where:

ACPW<sub>CAt</sub> the Asset Current Percentage Weight of the Core Asset in respect of Index Business Day t, as determined in

accordance with paragraph 3.4 (Current Percentage

the Core Asset Level in respect of Index Business Day

Weights of the RoRo Assets) below.

 $TC_{Core}$ 

the notional transaction cost in respect of the Core Asset, as determined in accordance with paragraph 3.3 (*Transaction Costs*) below.

#### 2.2 Reserve Asset Level, Weights and Marginal Costs

#### 2.2.1 Reserve Asset Level

The "Reserve Asset Level" in respect of each Index Business Day "t" from and including the Reserve Asset Start Date shall be an amount in the Index Base Currency determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

$$ReserveAsset_t = \sum_{i=1}^{4} (UW_{i,rs} \times NetConstituentLevel_{i,t})$$

where:

 $UW_{irs}$ 

ReserveAsset<sub>t</sub> = the Reserve Asset Level in respect of Index Business Day t.

the arithmetic sum of the formula within the brackets, evaluated with respect to each VR Constituent in the Reserve Asset ("Reserve Constituent i")

Reserve Asset ("Reserve Constituent i").

the Unit Weight in respect of Reserve Constituent i as of the VR Constituent Weight Reset Date immediately preceding Index Business Day t, as determined in accordance with paragraph 2.2.2 (Reserve Asset Unit

Weights) below.

NetConstituentLevel<sub>i,t</sub> = the Net Constituent Level in respect of Reserve

Constituent i as of Index Business Day t, as determined in accordance with paragraph 2.3 (Net Constituent

Levels) below.

#### 2.2.2 Reserve Asset Unit Weights

The Unit Weight in respect of each VR Constituent in the Reserve Asset ("Reserve Constituent i") on each VR Constituent Weight Reset Date shall be:

- (1) in respect of the Reserve Asset Start Date, PW<sub>i</sub> (as defined below); and
- (2) in respect of each VR Constituent Weight Reset Date "rs" following the Reserve Asset Start Date, a percentage determined by the Index Calculation Agent as of the Index Valuation Time on such VR Constituent Weight Reset Date rs in accordance with the formula set out below:

$$\begin{aligned} \text{UW}_{i,rs} &= \frac{ReserveAsset_{rs}}{NetConstituentLevel_{i,rs}} \\ &\times \begin{cases} \left( CPW_{i,rs} + \left( PW_i - CPW_{i,rs} \right) \times (1 + TC_i) \right), if \ PW_i < CPW_{i,rs}; \ or \\ &\times \left\{ \left( CPW_{i,rs} + \left( PW_i - CPW_{i,rs} \right) \times \frac{1}{1 + TC_i} \right), otherwise \end{cases} \end{aligned}$$

where:

 $UW_{irs}$ the Unit Weight of Reserve Constituent i in respect of VR Constituent Weight Reset Date rs.

ReserveAsset<sub>rs</sub> the Reserve Asset Level in respect of VR Constituent Weight Reset Date rs, as determined in accordance

with paragraph 2.2.1 (Reserve Asset Level) above.

the Net Constituent Level of Reserve Constituent i in NetConstituentLevel<sub>i rs</sub> respect of VR Constituent Weight Reset Date rs, as

determined in accordance with paragraph 2.3 (Net

Constituent Levels) below.

CPW<sub>irs</sub> The Current Percentage Weight of Reserve Constituent i in respect of VR Constituent Weight Reset Date rs, as

determined in accordance with paragraph 2.2.3

(Reserve Asset Current Percentage Weights) below.

 $PW_i$ the Base Percentage Weight of Reserve Constituent i.

as specified under the heading "Base Percentage Weight" in Table 3 (VR Constituents of the Reserve

Asset) of Part E (Data).

TC<sub>i</sub> the notional transaction cost in respect of Reserve

> Constituent i, as specified under the heading "Transaction Cost" in Table 3 (VR Constituents of the

Reserve Asset) of Part E (Data).

#### **Reserve Asset Current Percentage Weights** 2.2.3

The Current Percentage Weight in respect of each VR Constituent in the Reserve Asset ("Reserve Constituent i") in respect of each Index Business Day "t" from and including the Reserve Asset Start Date shall be a percentage determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

$$\mathsf{CPW}_{i,t} = \frac{\mathsf{UW}_{i,rs} \times \mathsf{NetConstituentLevel}_{i,t}}{\mathsf{ReserveAsset}_t}$$

where:

 $\mathsf{CPW}_{\mathsf{i},\mathsf{t}}$ the Current Percentage Weight of Reserve Constituent i

in respect of Index Business Day t.

 $UW_{i,rs}$ the Unit Weight of Reserve Constituent i on the VR

Constituent Weight Reset Date immediately preceding

Index Business Day t, as determined in accordance with paragraph 2.2.2 (*Reserve Asset Unit Weights*) above.

NetConstituentLevel<sub>i.t</sub>

the Net Constituent Level of Reserve Constituent i in respect of Index Business Day t, as determined in accordance with paragraph 2.3 (*Net Constituent Levels*) below.

ReserveAsset<sub>t</sub>

the Reserve Asset Level in respect of Index Business Day t, as determined in accordance with paragraph 2.2.1 (*Reserve Asset Level*) above.

#### 2.2.4 Reserve Asset Marginal Costs

The "Marginal Costs" in respect of the Reserve Asset on each Index Business Day shall be:

- (1) in respect of the Reserve Asset Start Date, zero; and
- (2) in respect of each Index Business Day "t" from and including the Reserve Asset Start Date, an amount in the Index Base Currency determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

$$mc_t^{Reserve} = ACPW_{RA,t} \times TC_{Reserve}$$

where:

 $\mathsf{ACPW}_{\mathsf{RA},\mathsf{t}}$ 

the Asset Current Percentage Weight of the Reserve Asset in respect of Index Business Day t, as determined in accordance with paragraph 3.4 (*Current Percentage Weights of the RoRo Assets*) below.

TC<sub>Reserve</sub>

the notional transaction cost in respect of the Reserve Asset, as determined in accordance with paragraph 3.3 (*Transaction Costs*) below.

#### 2.3 Net Constituent Levels

The Net Constituent Level in respect of each VR Constituent in the Core Asset and the Reserve Asset ("VR Constituent i") shall be:

- (1) in respect of the Core Asset Start Date or Reserve Asset Start Date as applicable, 100; and
- (2) in respect of each Index Business Day "t" from and including the Core Asset Start Date or Reserve Asset Start Date, as applicable, an amount in the Index Base Currency determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

$$NetConstituentLevel_{i,t} = \text{NetConstituentLevel}_{i,rs} \times \left(1 + \left(\frac{\text{CL}_{i,t}}{\text{CL}_{i,rs}} - 1\right) - \text{rc}_i \times \left(\frac{\text{dc(rs,t)}}{360}\right)\right)$$

where:

NetConstituentLevel<sub>i,t</sub>

the Net Constituent Level of VR Constituent i in respect

of Index Business Day t.

NetConstituentLevel<sub>i.rs</sub>

the Net Constituent Level of VR Constituent i in respect of the VR Constituent Weight Reset Date immediately preceding Index Business Day t.

 $CL_{i,t}$ 

the VR Constituent Level of VR Constituent i in respect of Index Business Day t, as determined in accordance with paragraph 4 (VR Constituent Levels) below.

**CL**<sub>i.rs</sub>

the VR Constituent Level of VR Constituent i in respect of the VR Constituent Weight Reset Date immediately preceding Index Business Day t, as determined in accordance with paragraph 4 (VR Constituent Levels) below.

rci

the notional replication costs of trading Constituent i, as specified under the heading "Replication Cost" in Table 2 or Table 3, as applicable, of Part E (*Data*).

dc(rs,t)

the number of calendar days from, and including, the VR Constituent Weight Reset Date immediately preceding Index Business Day t to, but excluding, Index Business Day t.

#### 2.4 JGBFX Level

The "FX-Adjusted JGB Index Level" in respect of each Index Business Day shall be:

- (1) in respect of the FX-Adjusted JGB Start Date, 1000; and
- (2) in respect of each Index Business Day "t" following the FX-Adjusted JGB Start Date, an amount in the Index Base Currency determined by the Index Calculation Agent as of the Index Valuation Time on Index Business Day t in accordance with the formula set out below:

$$JGBFX_t = JGBFX_r \times \left(1 + \left(\frac{JGB_t}{JGB_r} - 1\right) + \left(\frac{JGB_t}{JGB_r} - 1\right) \times \left(\frac{FX_t}{FX_r} - 1\right)\right)$$

where:

JGBFX<sub>t</sub>

the FX-Adjusted JGB Index Level in respect of Index Business Day t.

JGBFX<sub>r</sub>

the FX-Adjusted JGB Index Level in respect of the FX Date immediately preceding Index Business Day t.

JGB<sub>t</sub>

the Constituent Closing Level of the JGB Index (as defined in the Proprietary Index section of Part I (Provisions relating to Constituents)) in respect of Index Business Day t.

JGB<sub>r</sub>

 the Constituent Closing Level of the JGB Index (as defined in the Proprietary Index section of Part I (*Provisions relating to Constituents*)) in respect of the FX Date immediately preceding Index Business Day t.

 $FX_t$ 

the Spot FX Rate in relation to the relevant Exchange Rate (as specified in respect of the JGB Index under the heading "Exchange Rate" in Table 1 of Part E (*Data*)) prevailing as of Index Business Day t for the spot exchange of amounts denominated in the Reference Currency of the JGB Index (as specified under the heading "Reference Currency" in Table 1 of Part E (*Data*)) into the Index Base Currency.

 $FX_r$ 

the Spot FX Rate in relation to the relevant Exchange Rate (as specified in respect of the JGB Index under the heading "Exchange Rate" in Table 1 of Part E (*Data*)) prevailing as of the FX Date immediately preceding Index Business Day t for the spot exchange of amounts denominated in the Reference Currency of the JGB Index (as specified under the heading "Reference Currency" in Table 1 of Part E (*Data*)) into the Index Base Currency.

#### 3. VARIABLE RORO ASSET SELECTION AND REBALANCING PROCESS

#### 3.1 Selection of Variable RoRo Asset

On each Signal Date, the Index Calculation Agent shall determine, according to the formula set out in subparagraph (1) (*Determination of Signal*) below, whether the Index shall track the performance of the Core Asset and/or the Reserve Asset from, but excluding, RoRo Rebalancing Date "r" following such Signal Date to, and including, the next RoRo Rebalancing Date "r+1".

#### (1) Determination of Signal

A notional trading signal (the "**Signal**") is incorporated in the determination of the RoRo Level, as fully described in the formulae set out in paragraph 1.2.1.2 (*RoRo Level and Gross RoRo Level*) above. The Signal is the result of an algorithmic determination by the Index Calculation Agent on each Signal Date.

The output of the Signal is a blend of the output of two indicators: (i) a backward looking indicator of macroeconomic risk (the "Macro Indicator") determined in accordance with the formula set out in subparagraph (2) (Determination of Macro Indicator) below and (ii) a trend indicator which aims to model the recent performance of the Core Asset Level (the "Trend Indicator") determined in accordance with the formula set out in sub-paragraph (3) (Determination of Trend Indicator) below.

The Signal in respect of each Signal Date "s" shall be an amount determined by the Index Calculation Agent in accordance with the formulae set out below:

(a)  $Signal_s = TheoreticalSignal_s$  if  $TheoreticalSignal_s \neq Signal_{s-1}$  and the RoRo Rebalancing Date immediately following Signal Date s is a Scheduled Trading Day for each VR Constituent:

or

(b) in any other case,  $Signal_s = Signal_{s-1}$ .

where:

$$Theoretical Signal_s = \begin{cases} 1.00, \text{if MacroIndicator}_s < 0.50 \text{ and } \frac{1}{10} \times \sum_{i=0}^{9} \text{TrendIndicator}_{s-i} \geq 0.00 \\ 0.75, \text{if MacroIndicator}_s < 0.25 \text{ and } \frac{1}{10} \times \sum_{i=0}^{9} \text{TrendIndicator}_{s-i} < 0.00 \\ 0.50, \text{if } 0.25 \leq \text{MacroIndicator}_s < 0.50 \text{ and } \frac{1}{10} \times \sum_{i=0}^{9} \text{TrendIndicator}_{s-i} < 0.00 \\ 0.25, \text{if MacroIndicator}_s \geq 0.50 \text{ and } \frac{1}{10} \times \sum_{i=0}^{9} \text{TrendIndicator}_{s-i} \geq 0.00 \\ 0.00, otherwise \end{cases}$$

and where:

Theoretical Signal<sub>s</sub>

= the theoretical value of the Signal as of Signal Date s.

Signal<sub>s-1</sub>

the value of the Signal as of the Signal Date immediately preceding Signal Date s.

MacroIndicator<sub>s</sub>

the level of the Macro Indicator as of Signal Date s, as determined in accordance with sub-paragraph (2) (Determination of Macro Indicator) below.

$$\frac{1}{10} \times \sum_{i=0}^{9} \text{TrendIndicator}_{s-i}$$

The average of the slope of the linear regression of the Core Asset Level over the 10 Index Business Days, up to and including Signal Date

The linear regression of the Core Asset Level is measured over the Trend Look Back Period (being a variable period of between 20 and 120 Index Business Days which is calculated in respect of Signal Date s in accordance with the formula contained in the definition of "Trend Indicators" in sub-paragraph (3) (Determination of Trend Indicator) below).

When the Signal generates a value of 1, such value is applied in the determination of the formula set out in paragraph 1.2.1.2 (*RoRo Level and Gross RoRo Level*) above. In this case, the formula shall, in effect, measure only the performance of the Core Asset Level and disregard the performance of the Reserve Asset Level in determining the RoRo Level. Conversely, when the Signal has a value of 0, the RoRo Level shall only measure the performance of the Reserve Asset Level and disregard the performance of the Core Asset. In this way, the algorithmic determination of the Signal may have the effect of selecting one Variable RoRo Asset from time to time while disregarding the other in the determination of the RoRo Level. When the Signal has a value between 0 and 1 (i.e., 0.75, 0.50 or 0.25), the RoRo Level shall measure proportionately the performance of the Core Asset Level and the performance of the Reserve Asset Level. For example, if the Signal has a value of 0.75, the RoRo Level shall be determined based on 75% of the performance of the Core Asset Level and 25% of the performance of the Reserve Asset Level.

# (2) Determination of Macro Indicator

The Macro Indicator is intended to measure the level of risk aversion that prevails in the global financial markets using a set of observable financial indicators computed across different asset classes.

The Macro Indicator shall be determined in accordance with the following formula:

$$MacroIndicator_s = \frac{1}{5} \times \sum_{i=0}^{4} GMRI Index_{s-i}$$

where:

MacroIndicator<sub>s</sub> = the level of the Macro Indicator as of Signal Date s.

$$\frac{1}{5} \times \sum_{i=0}^{4} GMRI \ Index_{s-i}$$

the arithmetic average of the GMRI Index Level over the 5 Index Business Days (each an Index Business Day "i") up to, and including, Signal Date s.

GMRI Index Level

the Constituent Closing Level of the Citi GMRI Index in respect of each Index Business Day i, or if no such level is available on the relevant Index Business Day, the Constituent Closing Level of the Citi GMRI Index published on the immediately preceding Index Business Day for which such level is available (in each case as defined in the Proprietary Index section of Part I (*Provisions relating to Constituents*)).

The rationale for the Macro Indicator is to assess a short-term average of the level of risk aversion determined by the Citi GMRI Index during the 5 Index Business Days up to, and including, Signal Date s.

The Citi GMRI Index is a proprietary index of the Index Administrator which tracks the performance of specified indicators to serve as a proxy for estimating the level of general market risk aversion. Such indicators include emerging market sovereign spreads, U.S. credit spreads, the cost of credit protection against corporate default and implied foreign exchange, equity and interest rate volatilities. Further information relating to the Citi GMRI Index is available free of charge upon request to the Index Administrator.

The Citi GMRI Index will, from time to time, have a range of values from zero to one, where values approaching one will imply ever greater levels of general market risk aversion.

# (3) Determination of Trend Indicator

The rationale behind the Trend Indicator is to derive a value which represents the underlying direction and momentum (whether negative or positive) of the performance of the Core Asset Level within the Trend Look Back Period (as defined below).

The Trend Indicator shall be determined as of each Signal Date s by the Index Calculation Agent observing the Core Asset Level as of the Index Valuation Time on each Index Business Day in the Trend Look Back Period (as defined below) (each such value, an "observed value"). For the avoidance of doubt, these observed values shall be recorded regardless of whether the RoRo Level is then tracking the Core Asset.

Because the observed values will follow no perceptible pattern, the Index methodology attempts to make sense of them by finding a mathematical model that provides the best summary describing the scatter of such observed values. Such a mathematical model can be expressed as a linear equation. The Trend Indicator, in turn, measures the rate of change of such linear equation.

These mathematical models may be conceptualised as describing a series of idealised values (each such value, an "idealised value") of the Core Asset Level for each Index Business Day in the Trend Look Back Period. Viewed together with such a mathematical model, each observed value will have its own corresponding idealised value which may (or may not, as the case may be) be very close to such observed

value. An optimisation routine is then used to compare these various mathematical models to find one which provides the best summary description of the observed values.

The Trend Indicator is calculated in accordance with the following formula:

$$Trend\ Indicator_{s} = \frac{\sum_{i=1}^{N_{T}} \left[ DateNum_{i} \times CoreAsset_{i} - \frac{\left(\sum_{d=0}^{N_{T}-1} CoreAsset_{d}\right) \times \left(\sum_{d=0}^{N_{T}-1} DateNum_{d}\right)}{N_{T}} \right]}{\sum_{i=0}^{N_{T}-1} \left( DateNum_{i} - \overline{DateNum}\right)^{2}}$$

where:

Trend Indicators

= the value of the Trend Indicator as of the Signal Date s immediately preceding RoRo Rebalancing Date r.

 $\sum_{i=1}^{N_T}$ 

the sum of the series of values achieved by calculating the formula following such symbol for each DateNum; which is an Index Business Day in the period from, and including, the first Index Business Day of the Trend Look Back Period (as defined below) to, and including, the final Index Business Day of the Trend Look Back Period, being the Signal Date s immediately preceding RoRo Rebalancing Date r.

DateNum<sub>i</sub>

= in respect of each Index Business Day i in the relevant Trend Look Back Period, the integer value corresponding to such Index Business Day i, where such integer values are assigned to an infinite series of consecutive calendar days commencing on 1 January 1990 such that 1 January 1990 is assigned a value of 1 and there is a common difference of 1 between each calendar day in the infinite series of consecutive calendar days (with 2 January 1990 being assigned a value of 2, 3 January 1990 being assigned a value of 3 and so on indefinitely).

CoreAsset<sub>i</sub>

the Core Asset Level on the i-th Index Business Day immediately preceding Signal Date s.

DateNum

The arithmetic average of the values represented by each DateNum, within the Trend Look Back Period (as defined below).

 $N_T$ 

= The "Trend Look Back Period" for Signal Date s immediately preceding RoRo Rebalancing Date r, being the period of consecutive Index Business Days commencing on, and including, the Index Business Day "t" falling a number of Index Business Days, equal to the number derived from the formula below, prior to Signal Date s, and ending on, and including, such Signal Date as determined using the following formula:

$$N_{T} = Max \left[ Min \left[ INT \left( \left( \frac{\sum_{i=t-59}^{t} \left( \frac{1}{60} \times RV_{i} \right)}{RV_{i}} \right)^{2} \times BW \right); n \right]; k \right]$$

where:

$$RV_{i} = \sqrt{\sum_{i=t-9}^{t} \left(\frac{1}{10} \times log\left(\frac{CoreAsset_{i}}{CoreAsset_{i-1}}\right)^{2}\right) \times 252}$$

INT = the nearest integer resulting from the formula within the brackets, rounded downwards;

log = the logarithmic function;

n = 120;

k = 20; and

BW = the bandwidth parameter, set at 60 by default.

# 3.2 RoRo Rebalancing Cost

The notional transaction cost (the "RoRo Rebalancing Cost") in respect of any change in the allocation of the RoRo Level between the Core Asset and the Reserve Asset and any change in the relative weights of the FX-Adjusted JGB Index in respect of each RoRo Rebalancing Date is calculated in accordance with the following formula:

 $\begin{aligned} RoRoRebalanceCost_r \\ &= \left[ TC_{Core} \times abs \big( Signal_s - ACPW_{CA,r} \big) \right] + \left[ TC_{Reserve} \times abs \left( (1 - Signal_s) - ACPW_{RA,r} \right) \right] \\ &+ \left[ TC_{IGRFX} \times abs \big( IGB_{Exp} - ACPW_{IGRFX,r} \big) \right] \end{aligned}$ 

where:

RoRoRebalanceCost<sub>r</sub> = the notional transaction cost in respect of any change in the allocation of

the RoRo Level between the Core Asset and the Reserve Asset on the RoRo Rebalancing Date r and the resetting of the weight of the JGBFX

Level in the RoRo Level to its fixed weight of 50%.

 $TC_{Core}$  = the notional transaction cost in respect of the Core Asset, as determined

in accordance with paragraph 3.3 (*Transaction Costs*) below.

Signal<sub>s</sub> = a value equal to 1, 0.75, 0.50, 0.25 or 0 depending on the output of the

Signal in respect of RoRo Rebalancing Date r immediately preceding Index Business Day t determined on the related Signal Date s in

accordance with paragraph 3.1(1) (Determination of Signal) below

 $ACPW_{CA,r}$  = the Asset Current Percentage Weight of the Core Asset as of RoRo

Rebalancing Date r, as determined in accordance with paragraph 3.4

(Current Percentage Weights of the RoRo Assets) below.

TC<sub>Reserve</sub> = the notional transaction cost in respect of the Reserve Asset, as

determined in accordance with paragraph 3.3 (*Transaction Costs*) below.

 $ACPW_{RA,r}$  = the Asset Current Percentage Weight of the Reserve Asset as of RoRo

Rebalancing Date r, as determined in accordance with paragraph 3.4 (Current Percentage Weights of the RoRo Assets) below.

 $TC_{JGBFX}$ the notional transaction cost in respect of the FX-Adjusted JGB Index, as

determined in accordance with paragraph 3.3 (Transaction Costs) below.

JGB<sub>Exp</sub> the fixed exposure of the RoRo Level to the FX-Adjusted JGB Index,

being 50%.

ACPW<sub>JGB,r</sub> the Asset Current Percentage Weight of the FX-Adjusted JGB Index as of

RoRo Rebalancing Date r, as determined in accordance with paragraph

3.4 (Current Percentage Weights of the RoRo Assets) below.

The RoRo Rebalancing Cost for the period starting on the RoRo Start Date until the following RoRo Rebalancing Date is equal to zero.

#### 3.3 **Transaction Costs**

(a) The notional transaction costs relating to the Core Asset are:

> $TC_{Core}$  $=\sum_{i=1}^{7} PW_{CA,i} \times TC_{CA,i}$

(b) The notional transaction costs relating to the Reserve Asset are:

> $= \sum_{i=1}^{4} PW_{RA,i} \times TC_{RA,i}$ TC<sub>Reserve</sub>

The notional transaction costs relating to the FX-Adjusted JGB Index are: (c)

> $TC_{JGBFX}$ 0.05%

where:

the Base Percentage Weight of VR Constituent i in the Core Asset, as  $PW_{CA,i}$ 

specified under the heading "Base Percentage Weight" in Table 2 (VR

Constituents of the Core Asset) of Part E (Data).

 $\mathsf{PW}_{\mathsf{RA},i}$ the Base Percentage Weight of Constituent i in the Reserve Asset, as

specified under the heading "Base Percentage Weight" in Table 3 (VR

Constituents of the Reserve Asset) of Part E (Data).

 $TC_{CA,i}$ the notional transaction cost of VR Constituent i in the Core Asset, as

specified under the heading "Transaction Cost" in Table 2 (VR

Constituents of the Core Asset) of Part E (Data).

 $TC_{RA,i}$ the notional transaction cost of VR Constituent i in the Reserve Asset, as

specified under the heading "Transaction Cost" in Table 3 (VR

Constituents of the Reserve Asset) of Part E (Data).

# 3.4 Current Percentage Weights of the RoRo Assets

On each Index Business Day "t", the "Asset Current Percentage Weight" of each of the Core Asset, the Reserve Asset and the FX-Adjusted JGB Index will be determined by the Index Calculation Agent as follows:

$$ACPW_{CA,t} = AUW_{CA,r} \times \left(\frac{CoreAsset_t}{GrossRoRo_t}\right)$$

$$ACPW_{RA,t} = AUW_{RA,r} \times \left(\frac{ReserveAsset_t}{GrossRoRo_t}\right)$$

$$ACPW_{JGBFX,t} = AUW_{JGBFX,r} \times \left(\frac{JGBFX_t}{GrossRoRo_t}\right)$$

where:

 $ACPW_{CA,t}$  = the Asset Current Percentage Weight of the Core Asset in respect of

Index Business Day t.

AUW<sub>CA,r</sub> = the Asset Unit Weight of the Core Asset in respect of the RoRo

Rebalancing Date immediately preceding Index Business Day t, as determined in accordance with paragraph 3.5 (*Unit Weights of the RoRo* 

Assets) below.

CoreAsset<sub>t</sub> = the Core Asset Level in respect of Index Business Day t, as determined in

accordance with paragraph 2.1.1 (Core Asset Level) above.

GrossRoRot = the Gross RoRo Level in respect of Index Business Day t, as determined

in accordance with paragraph 1.2.1.2 (RoRo Level and Gross RoRo

Level) above.

ACPW<sub>RA,t</sub> = the Asset Current Percentage Weight of the Reserve Asset in respect of

Index Business Day t.

AUW<sub>RA.r</sub> = the Asset Unit Weight of the Reserve Asset in respect of the RoRo

Rebalancing Date immediately preceding Index Business Day t, as determined in accordance with paragraph 3.5 (*Unit Weights of the RoRo* 

Assets) below.

ReserveAsset<sub>t</sub> = the Reserve Asset Level in respect of Index Business Day t, as

determined in accordance with paragraph 2.2.1 (Reserve Asset Level)

above.

 $ACPW_{JGBFX,t}$  = the Asset Current Percentage Weight of the FX-Adjusted JGB Index in

respect of Index Business Day t.

AUW<sub>JGBFX,r</sub> = the Asset Unit Weight of the FX-Adjusted JGB Index in respect of the

RoRo Rebalancing Date immediately preceding Index Business Day t, as determined in accordance with paragraph 3.5 (*Unit Weights of the RoRo* 

Assets) below.

 $JGBFX_t$  = the FX-Adjusted JGB Index Level in respect of Index Business Day t, as

determined in accordance with paragraph 2.4 (*JGBFX Level*) above.

Where Index Business Day t is itself a VR Constituent Weight Reset Date, references to VR Constituent Weight Reset Date rs and Index Business Day t in the above formulae shall be construed such that  $UW_{CA,r}$ ,  $UW_{RA,r}$  and  $UW_{JGBFX,r}$  are determined prior to the rebalancing taking place on VR Constituent Weight Reset Date rs.

# 3.5 Unit Weights of the RoRo Assets

On each RoRo Rebalancing Date "r", the "Asset Unit Weight" of each of the Core Asset, the Reserve Asset and the FX-Adjusted JGB Index will be determined by the Index Calculation Agent as follows:

$$\begin{aligned} &AUW_{CA,r} = \left(\frac{\text{GrossRoRo}_r}{\text{CoreAsset}_r}\right) \times \text{Exposure}_{RoRo,CA,r} \\ &AUW_{RA,r} = \left(\frac{\text{GrossRoRo}_r}{\text{ReserveAsset}_r}\right) \times \left(1 - \text{Exposure}_{RoRo,CA,r}\right) \end{aligned}$$

$$AUW_{JGBFX,r} = \left(\frac{GrossRoRo_r}{IGBFX_r}\right) \times JGB_{Exp}$$

where:

AUW<sub>CA,r</sub> = the Asset Unit Weight of the Core Asset in respect of RoRo Rebalancing Date r.

GrossRoRo<sub>r</sub> = the Gross RoRo Level in respect of RoRo Rebalancing Date r, as determined in accordance with paragraph 1.2.1.2 (*RoRo Level and Gross RoRo Level*) above.

CoreAsset<sub>r</sub> = the Core Asset Level in respect of RoRo Rebalancing Date r, as determined in accordance with paragraph 2.1.1 (*Core Asset Level*) above.

the exposure of the Gross RoRo Level to the Core Asset Level as of RoRo Rebalancing Date r, as determined in accordance with paragraph 1.2.1.3 (Exposure of the Gross RoRo Level to the Core Asset Level) above.

= the Asset Unit Weight of the Reserve Asset in respect of RoRo Rebalancing Date r.

the Reserve Asset Level in respect of RoRo Rebalancing Date r, as determined in accordance with paragraph 2.2.1 (*Reserve Asset Level*) above.

the Asset Unit Weight of the FX-Adjusted JGB Index in respect of RoRo Rebalancing Date r.

= the FX-Adjusted JGB Index Level in respect of RoRo Rebalancing Date r, as determined in accordance with paragraph 2.4 (*JGBFX Level*) above.

= the fixed exposure of the RoRo Level to the FX-Adjusted JGB Index, being 50%.

 $\mathsf{JGB}_{\mathsf{Exp}}$ 

Exposure<sub>RoRo,CA,r</sub>

 $AUW_{RA,r}$ 

ReserveAsset<sub>r</sub>

AUW, IGBEX r

JGBFX<sub>r</sub>

#### 4. VR CONSTITUENT LEVELS

The Index Calculation Agent will determine the closing level of each VR Constituent in the Core Asset and the Reserve Asset (the "VR Constituent Level") in respect of each Index Business Day.

In respect of each VR Constituent for which "Y" is specified in Table 2 or Table 3 of Part E (*Data*) in the column headed "FX Adjusted?" (an "**FX-Adjusted Constituent**"), the Index Calculation Agent will determine the applicable VR Constituent Level in respect of each Index Business Day in accordance with paragraph 4.1 (*FX-Adjusted Constituents*) below. This FX adjustment is applied to minimise the exposure of the Leveraged RoRo Total Return Sub-Index to movements in the exchange rates between the relevant Reference Currencies of the VR Constituents and the Index Base Currency. However, intra-month fluctuations of such exchange rates will cause fluctuations in the level of the Leveraged RoRo Total Return Sub-Index and by extension, the Index.

In respect of each VR Constituent for which "N" is specified in Table 2 or Table 3 of Part E (*Data*) in the column headed "FX Adjusted?" (an "Non-FX-Adjusted Constituent"), the Index Calculation Agent will determine the applicable VR Constituent Level in respect of each Index Business Day in accordance with paragraph 4.2 (*Non-FX-Adjusted Constituents*) below.

# 4.1 FX-Adjusted Constituents

In respect of each FX-Adjusted Constituent ("**FX-Adjusted Constituent i**"), the VR Constituent Level of FX-Adjusted Constituent i:

- (i) on the Core Asset Start Date or the Reserve Asset Start Date, as applicable, is equal to 1000; and
- (ii) in respect of any Index Business Day "t" following the Core Asset Start Date or the Reserve Asset Start Date, as applicable, shall be determined by the Index Calculation Agent as follows:

$$VRCL_{i,t} = VRCL_{i,fx} \times \left[1 + \left(\frac{LCL_{i,t}}{LCL_{i,fx}} - 1\right) + \left(\frac{LCL_{i,t}}{LCL_{i,fx}} - 1\right) \times \left(\frac{FX_{i,t}}{FX_{i,fx}} - 1\right)\right]$$

where:

LCL<sub>i,fx</sub>

 $FX_{i,t}$ 

VRCL<sub>i,t</sub> = the VR Constituent Level of FX-Adjusted Constituent i in respect of Index Business Day t.

VRCL<sub>i,fx</sub> = the VR Constituent Level of FX-Adjusted Constituent i in respect of the FX Date immediately preceding Index Business Day t.

LCL<sub>i,t</sub> = the Local Currency Level of FX-Adjusted Constituent i in respect of Index Business Day t, as determined in accordance with paragraph 4.3 (*Local Currency Levels*) below.

the Local Currency Level of FX-Adjusted Constituent i on the FX Date immediately preceding Index Business Day t, as determined in accordance with paragraph 4.3 (Local Currency Levels) below.

the Spot FX Rate in relation to the relevant Exchange Rate (as specified in respect of FX-Adjusted Constituent i under the heading "Exchange Rate" in Table 2 or 3, as applicable, of Part E (*Data*)) prevailing as of Index Business Day t for the spot exchange of amounts denominated in the Reference Currency of such FX-Adjusted Constituent (as specified in respect of FX-Adjusted Constituent i under the heading "Reference Currency" in Table 2 or 3, as applicable, of Part E (*Data*)) into the Index Base Currency.

 $FX_{i,fx} \\$ 

the Spot FX Rate in relation to the relevant Exchange Rate (as specified in respect of FX-Adjusted Constituent i under the heading "Exchange Rate" in Table 2 or 3, as applicable, in Part E (*Data*)) prevailing as of the FX Date immediately preceding Index Business Day t for the spot exchange of amounts denominated in the Reference Currency of such VR Constituent (as specified in respect of FX-Adjusted Constituent i under the heading "Reference Currency" in Table 2 or 3, as applicable, of Part E (*Data*)) into the Index Base Currency.

With respect to the foregoing determination of FX<sub>i,t</sub>:

- (i) on the relevant Index Business Day during the back-testing period on which the Index Calculation Agent began using the Spot FX Rate and not its proxy specified in the Annex to Part E (*Data*) (the relevant "**Proxy Switch Date**"), such value was calculated using the proxy rate specified in the Annex to Part E (*Data*); and
- (ii) on any Index Business Day on or following the relevant Proxy Switch Date, such value was calculated using the Spot FX Rate and not the relevant proxy therefor, notwithstanding that the FX Date immediately preceding such Index Business Day may have been a date prior to the relevant Proxy Switch Date.

With respect to the foregoing determination of FX<sub>i,fx</sub>:

- (i) on any FX Date falling prior to the relevant Proxy Switch Date, such value was calculated using the proxy rate specified in the Annex to Part E (*Data*); and
- (ii) on any FX Date falling on or after the relevant Proxy Switch Date, such value was calculated using the Spot FX Rate and not the relevant proxy therefor.

For the avoidance of doubt, if a VR Constituent is not an FX-Adjusted Constituent, this paragraph 4.1 shall not apply to the determination of the VR Constituent Level of such VR Constituent.

### 4.2 Non-FX-Adjusted Constituents

In respect of each Non-FX-Adjusted Constituent ("Non-FX-Adjusted Constituent i"), the VR Constituent Level in respect of any Index Business Day "t" shall be determined by the Index Calculation Agent as follows:

 $VRCL_{i,t} = LCL_{i,t}$ 

where:

VRCL<sub>i,t</sub> = the VR Constituent Level of Non-FX-Adjusted Constituent i in respect of Index Business Day t.

LCL<sub>i,t</sub> = the Local Currency Level of Non-FX-Adjusted Constituent i in respect of Index Business Day t, as determined in accordance with paragraph 4.3 (*Local Currency Levels*) below.

#### 4.3 Local Currency Levels

The Index Calculation Agent shall calculate the "**Local Currency Level**" in respect of each VR Constituent on each Index Business Day in accordance with the applicable section below.

# 4.3.1 Commodity Indices

In respect of each VR Constituent that is classified (in Part E (*Data*) under the heading "*Classification*") as a "Generic Index", the Local Currency Level of such VR Constituent in respect of any Index Business Day "t" shall be the Constituent Closing Level in respect thereof (as defined in the Generic Index section of Part I (*Provisions relating to Constituents*)), denominated in its Reference Currency.

#### 4.3.2 ETD Contracts

#### 4.3.2.1 Description of ETD Contracts

As of each Index Business Day t following the Core Asset Start Date and the Reserve Asset Start Date, as applicable, the Index Calculation Agent shall calculate the Local Currency Level in respect of each VR Constituent that is classified (in Part E (*Data*) under the heading "*Classification*") as an "ETD Contract", in accordance with the applicable formula below.

Each ETD Contract represents a notional investment in one of the futures contracts specified in Table 4 of Part E (*Data*). The applicable Electronic Page for each such ETD Contract is also specified the corresponding row of Table 2 or Table 3 of Part E (*Data*) (as the case may be).

Such ETD Contracts are traded on the relevant exchange(s) specified in Table 4 of Part E (*Data*) in the column headed "Relevant Exchange(s)" and on various types of electronic trading facilities and markets. As of the date of these Index Conditions, each ETD Contract is an exchange-traded futures contract. An exchange-traded futures contract provides for the purchase and sale of a specified type and quantity of an underlying asset or financial instrument during a stated delivery month for a fixed price. A futures contract provides for a specified settlement month in which settlement is made in cash or in which the underlying asset or financial instrument is to be delivered by the seller (whose position is therefore described as "short") and acquired by the purchaser (whose position is therefore described as "long"). Each ETD Contract in the Core Asset and the Reserve Asset represents a notional long position in the ETD Contract.

Unlike equity securities, futures contracts by their terms have stated expirations. After a date specified by the relevant Underlying Exchange (as set forth on the applicable Electronic Page for such contract) (the "First Notice Date"), a holder of a futures contract for the current delivery month may be required to take possession (if long) or to deliver (if short) the underlying asset or financial instrument, and trading in that futures contract will cease. As a result, a market participant that wishes to maintain its exposure to a futures contract on a particular asset or financial instrument with the nearest expiration must close out its position in the expiring contract and establish a new position in the contract for the next delivery month—a process referred to as "rolling." For example, a market participant with a long position in a May Hang Seng Index futures contract that wishes to maintain a position in the nearest delivery month will, as the May futures contract nears expiration, sell the May futures contract, which serves to close out the existing long position, and buy a June futures contract. This will "roll" the May position into a June position and, when the May futures contract expires, the market participant will still have a long position in the nearest delivery month (now June).

As the expiration date of a futures contract nears, its price will generally tend toward the spot price of the underlying asset or financial instrument. If the prices of longer-dated futures contracts are higher than the spot price of the underlying asset or financial instrument (a market condition known as "contango" represented by an upward-sloping futures curve), an investor rolling a futures position will be able to

purchase fewer new longer-dated contracts than the number of expiring contracts sold to finance such purchase. Conversely, if the prices of longer-dated futures contracts are lower than the spot price of the underlying asset or financial instrument (a market condition known as "backwardation" represented by a downward-sloping futures curve), such a rolling investor will be able to purchase more new contracts than the number of expiring contracts sold. Therefore, rolling an investment in ETD Contracts in a contango market will tend to impact negatively the return on such investment, while rolling an investment in ETD Contracts in a backwardated market will tend to have a positive impact on the return on such investment.

Each VR Constituent that is an ETD Contract is notionally invested on any Index Business Day "t" in the futures contract that is due to expire in the next occurring month set forth in Table 4 of Part E (*Data*) in the column headed "Futures Contract Month". Each ETD Contract will be hypothetically rolled from the expiring ETD Contract (the "Expiring Contract") into a new ETD Contract relating to the same VR Constituent (the "New Contract") on the Scheduled Trading Day (the "Roll Date") that is five Scheduled Trading Days prior to the First Notice Date for such Expiring Contract. On each Roll Date for an ETD Contract, each Expiring Contract will be notionally unwound and the proceeds will be notionally reinvested in a New Contract (being the second nearest ETD Contract to expire in respect of such Roll Date) in order to calculate the VR Constituent Level of the relevant VR Constituent that is an ETD Contract. As of the First Notice Date for the Expiring Contract in respect of each VR Constituent that is an ETD Contract, the futures contract that was the New Contract immediately prior to that date will become the relevant Expiring Contract and the thensecond nearest expiring relevant ETD Contract will become the relevant New Contract.

### 4.3.2.2 Local Currency Levels for ETD Contracts

The Local Currency Level in respect of each VR Constituent that is classified in Table 2 or Table 3 of Part E (*Data*) under the heading "*Classification*" as an "ETD Contract" (a "**Futures Constituent**") is equal to 100 on the relevant VR Constituent Start Date.

In respect of each Futures Constituent "i", the Local Currency Level of such VR Constituent in its Reference Currency in respect of any Index Business Day "t" following the relevant VR Constituent Start Date shall be determined by the Index Calculation Agent as follows:

$$LCL_{i,t} = CL_{i,n-1,t} \times FCU_{i,n-1,t-1} + CL_{i,n,t} \times FCU_{i,n,t-1}$$

where:

 $LCL_{i,t}$ 

= the Local Currency Level of Futures Constituent i in respect of Index Business Day t.

 $CL_{i,n\text{-}1,t}$ 

(a) in respect of each Futures Constituents i other than that identified in row 3 of Table 3 (VR Constituents of the Reserve Asset) of Part E (Data), the Constituent Level in respect of the Expiring Contract relating to Futures Constituent i in respect of Index Business Day t (or if Index Business Day t is not a Scheduled Trading Day in respect of Futures Constituent i, the Constituent Level in respect of the immediately preceding Scheduled Trading Day for Futures Constituent i), as defined in the ETD Contracts section of Part I (Provisions relating to Constituents); and

(b) in respect of the Futures Constituent identified in row 3 of Table 3 (*VR Constituents of the Reserve Asset*) of Part E (*Data*), the Constituent Contract Value in respect of the Expiring Contract relating to that Futures Constituent in respect of Index Business Day t (or if Index Business Day t is not a Scheduled Trading Day in respect of that Futures Constituent, the

Constituent Contract Value in respect of the immediately preceding Scheduled Trading Day for that Futures Constituent).

FCU<sub>i,n-1,t-1</sub>

the number of Futures Contract Units of the Expiring Contract relating to Futures Constituent i in respect of the Index Business Day immediately preceding Index Business Day t, as determined in accordance with paragraph 4.3.2.3 (*Futures Contract Units*) below.

 $CL_{i,n,t} \\$ 

- (a) in respect of each Futures Constituents i other than that identified in row 3 of Table 3 (VR Constituents of the Reserve Asset) of Part E (Data), the Constituent Level in respect of the New Contract relating to Futures Constituent i in respect of Index Business Day t (or if Index Business Day t is not a Scheduled Trading Day in respect of Futures Constituent i, the Constituent Level in respect of the immediately preceding Scheduled Trading Day for Futures Constituent i); and
  - (b) in respect of the Futures Constituent identified in row 3 of Table 3 (*VR Constituents of the Reserve Asset*) of Part E (*Data*), the Constituent Contract Value in respect of the New Contract relating to that Futures Constituent in respect of Index Business Day t (or if Index Business Day t is not a Scheduled Trading Day in respect of that Futures Constituent, the Constituent Contract Value in respect of the immediately preceding Scheduled Trading Day for that Futures Constituent).

FCU<sub>i,n,t-1</sub>

the number of Futures Contract Units of the New Contract relating to Futures Constituent i in respect of the Index Business Day immediately preceding Index Business Day t, as determined in accordance with paragraph 4.3.2.3 (Futures Contract Units) below.

Constituent Contract Value

In respect of each Index Business Day from and including the Index Launch Date, an amount in respect of the Expiring Contract or the New Contract relating to Futures Constituent "i", as the case may be, calculated in accordance with the following formula:

$$\begin{split} \textit{CCV}_{i,t} &= round\left(1000 \\ &\times \left[round\left(\frac{3\times\left(1-round(v_t^{20},8)\right)}{i_t},8\right) + 100 \\ &\times round(v_t^{20},8)\right],2 \right) \end{split}$$

where:

 $\mathsf{CCV}_{i,t}$  means the Constituent Contract Value in respect of Futures Constituent i on Index Business Day t;

round() represents the first value within the brackets to the number of decimal places specified by the second value within the brackets, separated by a comma;

$$v_t$$
 means  $round\left(\frac{1}{1+i_t}, 8\right)$ ;

$$i_t$$
 means  $\frac{100-ConstituentLevel_t}{200}$ ; and

ConstituentLevel<sub>t</sub> means the Constituent Level in respect of the Expiring Contract or the New Contract relating to Futures Constituent i, as applicable, in respect of Index Business Day t (or if Index Business Day t is not a Scheduled Trading Day in respect of Futures Constituent i, the Constituent Level in respect of the immediately preceding Scheduled Trading Day for Futures Constituent i), as defined in the ETD Contracts section of Part I (*Provisions relating to Constituents*).

Notwithstanding the foregoing, the Index Calculation Agent will adjust the formula set out above from time to time to correspond to any amendments or alterations made by the relevant Underlying Exchange to the published methodology used by it for valuing the ETD Contracts relating to any Futures Constituent i.

In respect of each Index Business Day prior to the Index Launch Date: the Constituent Contract Value in respect of each relevant Futures Constituent i shall be an amount equal to the Total Contract Value in respect of the Expiring Contract relating to Futures Constituent i in respect of Index Business Day t (or if Index Business Day t is not a Scheduled Trading Day in respect of Futures Constituent i, the Total Contract Value in respect of the immediately preceding Scheduled Trading Day for the Expiring Contract relating to Futures Constituent i), where "Total Contract Value" means, in respect of a futures contract relating to a Futures Constituent, the total cost of the relevant futures contract, as specified under the "Contract Value" field on the relevant Electronic Page for that Futures Constituent.

#### 4.3.2.3 Futures Contract Units

In respect of each Index Business Day "t" that is not a Roll Date in respect of a VR Constituent that is an ETD Contract, the number of Futures Contract Units in respect of the Expiring Contract and New Contract relating to that VR Constituent remain constant, i.e. they are each equal to the number of Futures Contract Units in respect of the immediately preceding Index Business Day, that is:

$$FCU_{i,n-1,t} = FCU_{i,n-1,t-1}$$

and

$$FCU_{i,n,t} = FCU_{i,n,t-1}$$

where:

FCU<sub>i,n-1,t</sub> = the number of Futures Contract Units of the Expiring Contract relating to Futures Constituent i in respect of Index Business Day t.

FCU<sub>i,n-1,t-1</sub> = the number of Futures Contract Units of the Expiring Contract relating to Futures Constituent i in respect of the Index Business Day immediately

preceding Index Business Day t.

 $FCU_{i,n,t}$  = the number of Futures Contract Units of the New Contract relating to

Futures Constituent i in respect of Index Business Day t.

FCU<sub>i,n,t-1</sub> = the number of Futures Contract Units of the New Contract relating to Futures Constituent i in respect of the Index Business Day immediately preceding Index Business Day t.

In respect of each Index Business Day "t" that is a Roll Date in respect of a VR Constituent that is an ETD Contract ("Futures Constituent i"), the number of Futures Contract Units in respect of the Expiring Contract relating to that VR Constituent will be equal to zero, that is:

$$FCU_{i,n,t} = 0$$

and the number of Futures Contract Units in respect of the New Contract relating to that VR Constituent will be determined by the Index Calculation Agent in accordance with the following formula:

$$FCU_{i,n,t} = \text{FCU}_{i,n,t-1} + \frac{\text{CL}_{i,n-1,t} \times \text{FCU}_{i,n-1,t-1}}{\text{CL}_{i,n,t} \times (X_i - db_{i,t})} - \frac{\text{LCL}_{i,t} \times \left(2 \times \frac{\text{RollCost}_i}{X_i}\right)}{\text{CL}_{i,n,t}}$$

where:

 $FCU_{i,n,t}$ 

the number of Futures Contract Units of the New Contract relating to Futures Constituent i in respect of Index Business Day t.

FCU<sub>i,n,t-1</sub>

the number of Futures Contract Units of the New Contract relating to Futures Constituent i in respect of the Index Business Day immediately preceding Index Business Day t.

CL<sub>i n-1 t</sub>

- (a) in respect of each Futures Constituents i other than that identified in row 3 of Table 3 (*VR Constituents of the Reserve Asset*) of Part E (*Data*), the Constituent Level in respect of the Expiring Contract relating to Futures Constituent i in respect of Index Business Day t (or if Index Business Day t is not a Scheduled Trading Day in respect of Futures Constituent i, the Constituent Level in respect of the immediately preceding Scheduled Trading Day for Futures Constituent i), as defined in the ETD Contracts section of Part I (*Provisions relating to Constituents*); and
  - (b) in respect of the Futures Constituent identified in row 3 of Table 3 (*VR Constituents of the Reserve Asset*) of Part E (*Data*), the Constituent Contract Value in respect of the Expiring Contract relating to that Futures Constituent in respect of Index Business Day t (or if Index Business Day t is not a Scheduled Trading Day in respect of that Futures Constituent, the Constituent Contract Value in respect of the immediately preceding Scheduled Trading Day for that Futures Constituent), as determined in accordance with paragraph 4.3.2.2 (*Local Currency Levels for ETD Contracts*) above.

 $FCU_{i,n-1,t-1}$ 

the number of Futures Contract Units of the Expiring Contract relating to Futures Constituent i in respect of the Index Business Day immediately preceding Index Business Day t.

 $CL_{i,n,t}$ 

- (a) in respect of each Futures Constituents i other than that identified in row 3 of Table 3 (*VR Constituents of the Reserve Asset*) of Part E (*Data*), the Constituent Level in respect of the New Contract relating to Futures Constituent i in respect of Index Business Day t (or if Index Business Day t is not a Scheduled Trading Day in respect of Futures Constituent i, the Constituent Level in respect of the immediately preceding Scheduled Trading Day for Futures Constituent i), as defined in the ETD Contracts section of Part I (*Provisions relating to Constituents*); and
  - (b) in respect of the Futures Constituent identified in row 3 of Table 3 ( $\it{VR}$

Constituents of the Reserve Asset) of Part E (Data), the Constituent Contract Value in respect of the New Contract relating to that Futures Constituent in respect of Index Business Day t (or if Index Business Day t is not a Scheduled Trading Day in respect of that Futures Constituent, the Constituent Contract Value in respect of the immediately preceding Scheduled Trading Day for that Futures Constituent), as determined in accordance with paragraph 4.3.2.2 (Local Currency Levels for ETD Contracts) above.

 $X_i = 1.$ 

 $db_{i,d} = 0.$ 

LCL<sub>i,d</sub> = the Local Currency Level of Futures Constituent i in respect of Index Business Day t, as determined in accordance with paragraph 4.3.2.2 (*Local Currency Levels for ETD Contracts*) above.

RollCost<sub>i</sub> = the rolling cost of Futures Constituent i as specified in Table 4 of Part E (*Data*) in the column headed "Rolling Cost".

In respect of each VR Constituent that is an ETD Contract ("Futures Constituent i"), on the relevant VR Constituent Start Date:

(1) the number of Futures Contract Units in respect of the New Contract relating to Futures Constituent i will be equal to zero; and

(2) the number of Futures Contract Units in respect of the Expiring Contract relating to Futures Constituent i will be determined by the Index Calculation Agent in accordance with the following formula:

$$\text{FCU}_{i,n-1,ISD} = \frac{\text{LCL}_{i,ISD}}{\text{CL}_{i,n-1,ISD}} \times \frac{1}{1 + \text{RollCost}_i}$$

where:

 $CL_{i,n-1,ISD}$ 

FCU<sub>i,n-1,ISD</sub> = the number of Futures Contract Units of the Expiring Contract relating to Futures Constituent i in respect of the Index Start Date.

LCL<sub>i,ISD</sub> = the Local Currency Level of Futures Constituent i in respect of the Index Start Date, as determined in accordance with paragraph 4.3.2.2 (*Local Currency Levels for ETD Contracts*) above.

(a) in respect of each Futures Constituents i other than that identified in row 3 of Table 3 (VR Constituents of the Reserve Asset) of Part E (Data), the Constituent Level in respect of the Expiring Contract relating to Futures Constituent i in respect of Index Business Day t (or if Index Business Day t is not a Scheduled Trading Day in respect of Futures Constituent i, the Constituent Level in respect of the immediately preceding Scheduled Trading Day for Futures Constituent i), as defined in the ETD Contracts section of Part I (Provisions relating to Constituents); and

(b) in respect of the Futures Constituent identified in row 3 of Table 3 (*VR Constituents of the Reserve Asset*) of Part E (*Data*), the Constituent Contract Value in respect of the Expiring Contract relating to that Futures

Constituent in respect of Index Business Day t (or if Index Business Day t is not a Scheduled Trading Day in respect of that Futures Constituent, the Constituent Contract Value in respect of the immediately preceding Scheduled Trading Day for that Futures Constituent), as determined in accordance with paragraph 4.3.2.2 (*Local Currency Levels for ETD Contracts*) above.

RollCost<sub>i</sub>

the rolling cost of Futures Constituent i as specified in Table 4 of Part E (Data) in the column headed "Rolling Cost".

#### 5. ADDITIONAL ADJUSTMENT EVENTS AND REBALANCING DATES

### (1) General

Certain Constituent Schedules are expressed to be applicable to this Index methodology as indicated in Table 1 (*RoRo Assets*), Table 2 (*VR Constituents of the Core Asset*) and Table 3 (*VR Constituents of the Reserve Asset*) of Part E (*Data*) and should be read and construed in conjunction with this Index methodology. The Index Calculation Agent shall apply, where necessary, the adjustments contained therein upon the occurrence of certain Adjustment Events as described in the applicable Constituent Schedules.

#### (2) Regulatory Events

"Regulatory Event" shall mean that, owing to any applicable law or regulation or policy, the Index Calculation Agent determines that either:

- (i) a hypothetical broker dealer would be either (a) required (or there is a reasonable likelihood that, within the next 30 Index Business Days, it would be required) to unwind positions in, or dispose of, any instrument or security on which is the value of a Constituent depends; or (b) not permitted (or there is a reasonable likelihood that, within the next 30 Index Business Days, it would not be permitted) to hold, acquire, establish, increase, decrease or dispose of positions in any instrument or security on which the value of a Constituent depends; or
- (ii) the Index Administrator or the Index Calculation Agent is not permitted (or there is a reasonable likelihood that, within the next 30 Index Business Days, it will not be permitted) to continue to sponsor, administer, maintain or calculate, as applicable, an index which contains a particular instrument or security on which is the value of a Constituent depends.

# (3) Following a Regulatory Event

Following the occurrence of a Regulatory Event, the Index Calculation Agent shall determine whether or not such occurrence has a material effect on the Index.

If the Index Calculation Agent determines that such occurrence has a material effect on the Index, then the Index Calculation Agent shall inform the Index Administrator of such determination and either:

- (a) the Index Administrator shall follow established procedures in order to amend the index and these Index Conditions with the agreement of any investors in Index Linked Products; or
- (b) the Index Administrator may discontinue and cancel the Index.

If the Index Calculation Agent determines that such occurrence does not have a material effect on the Index, then with effect from (and including) a date designated by the Index Administrator (in which case the Index Administrator will notify the relevant date to the Index Calculation Agent) or the Index Calculation Agent:

- (a) the Constituent affected by such Regulatory Event (the "Removed Constituent") shall be removed from the Index; and
- (b) either (i) the weights of the remaining Constituents shall be scaled up such that the weight of the Removed Constituent is proportionately redistributed to the remaining Constituents; or (ii) the Index Calculation Agent may replace the Removed Constituent with a replacement constituent which has substantially similar characteristics to the Removed Constituent, having regard to the manner in which the Removed Constituent is used in the calculation of the Index, in which case the Index Calculation Agent will determine the effective date of such replacement and make such adjustment(s) to these Index Conditions as it determines appropriate to account for the effect on the Index of such replacement.

# Part E: Data

(As at the Index Start Date.)

This Part E sets out the particulars of the RoRo Assets, the VR Constituents and the other constituents and certain elections and inputs relating to the calculation of the Index.

# Sub-indices of the Index

|   | Sub-Index   | Electronic Page<br>(Bloomberg) | Constituent Schedule | Reference<br>Currency | Exchange Rate  |
|---|---|--------------------------------|----------------------|-----------------------|----------------|
| 1 | Leveraged RoRo Total<br>Return Sub-Index  | Not Applicable                 | Not Applicable       | USD                   | Not Applicable |
| 2 | CitiFX <sup>SM</sup> Active Short<br>Strategy (USDJPY)<br>Index (as adjusted for<br>net compounding as<br>provided in paragraph<br>1.3 (FX Active Strategy<br>Sub-Index Level) of<br>Part D (Calculation of<br>the Index Level) | CAFZAHUJ <index></index>       | Proprietary Index    | USD                   | Not Applicable |

# Components of the Leveraged RoRo Total Return Sub-Index

|   | Component            | Electronic Page<br>(Bloomberg) | Constituent Schedule | Reference<br>Currency | Exchange Rate  |
|---|----------------------|--------------------------------|----------------------|-----------------------|----------------|
| 1 | Leveraged RoRo Level | Not Applicable                 | Not Applicable       | USD                   | Not Applicable |
| 2 | Overnight Index      | Not Applicable                 | Not Applicable       | USD                   | Not Applicable |

# Reference index with respect to the Signal

|   | Reference index | Electronic Page<br>(Bloomberg) | Constituent Schedule | Reference<br>Currency | Exchange Rate  |
|---|-----------------|--------------------------------|----------------------|-----------------------|----------------|
| 1 | Citi GMRI Index | CIISGMRI <index></index>       | Proprietary Index    | Not<br>Applicable     | Not Applicable |

# RoRo Assets

# 1. RoRo Assets

|   | RoRo Asset   | Electronic Page<br>(Bloomberg) | Constituent Schedule | Reference<br>Currency | Exchange Rate  |
|---|--|--------------------------------|----------------------|-----------------------|----------------|
| 1 | Core Asset (see Table 2 below)   | Not Applicable                 | Not Applicable       | USD                   | Not Applicable |
| 2 | Reserve Asset (see<br>Table 3 below)   | Not Applicable                 | Not Applicable       | USD                   | Not Applicable |
| 3 | Citi JGB Futures Active<br>Strategy (Target<br>Volatility 5%) XI Index<br>(as currency-adjusted<br>as provided in<br>paragraph 1.3 of Part<br>D (Calculation of the<br>Index Level)) | CGDUXI5J <index></index>       | Proprietary Index    | JPY                   | 1/USDJPY WMCO  |

Further information relating to the Citi JGB Futures Active Strategy (Target Volatility 5%) Series II XI Index, the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index and the Citi GMRI Index is available free of charge upon request to Citigroup Global Markets Limited.

# VR Constituents of the Core Asset and the Reserve Asset

# 2. VR Constituents of the Core Asset

|   | VR Constituent<br>(Core)            | Electronic<br>Page<br>(Bloomberg) | Classification | Base<br>Percentage<br>Weight | Reference<br>Currency | Exchange<br>Rate | FX<br>Adjusted<br>? | Replication<br>Cost | Transaction<br>Cost |
|---|-------------------------------------|-----------------------------------|----------------|------------------------------|-----------------------|------------------|---------------------|---------------------|---------------------|
| 1 | S&P 500 E-Mini<br>Active Contract   | ESA <index></index>               | ETD Contract   | 14%                          | USD                   | N/A              | N                   | 0.10%               | 0.025%              |
| 2 | Nikkei 225 Active<br>Contract       | NKA <index></index>               | ETD Contract   | 14%                          | JPY                   | 1/USDJPY<br>WMCO | Y                   | 0.10%               | 0.050%              |
| 3 | Stoxx Europe 600<br>Active Contract | SXOA <index></index>              | ETD Contract   | 14%                          | EUR                   | EURUSD<br>WMCO   | Y                   | 0.15%               | 0.050%              |
| 4 | ASX SPI 200<br>Active Contract      | XPA <index></index>               | ETD Contract   | 14%                          | AUD                   | AUDUSD<br>WMCO   | Y                   | 0.15%               | 0.050%              |
| 5 | mini MSCI EM<br>Active Contract     | MESA <index></index>              | ETD Contract   | 14%                          | USD                   | N/A              | N                   | 0.15%               | 0.030%              |
| 6 | S&P GSCI Gold<br>Index ER           | SPGSGCP<br><index></index>        | Generic Index  | 15%                          | USD                   | N/A              | N                   | 0.20%               | 0.025%              |
| 7 | S&P GSCI Crude<br>Oil Index ER      | SPGCCLP<br><index></index>        | Generic Index  | 15%                          | USD                   | N/A              | N                   | 0.25%               | 0.050%              |

# 3. VR Constituents of the Reserve Asset

|   | VR Constituent<br>(Reserve)                      | Electronic<br>Page<br>(Bloomberg) | Classification | Base<br>Percentage<br>Weight | Reference<br>Currency | Exchange<br>Rate | FX<br>Adjusted<br>? | Replication<br>Cost | Transaction<br>Cost |
|---|--|-----------------------------------|----------------|------------------------------|-----------------------|------------------|---------------------|---------------------|---------------------|
| 1 | Euro Bund Active<br>Contract                     | RXA<br><comdty></comdty>          | ETD Contract   | 25%                          | EUR                   | EURUSD<br>WMCO   | Y                   | 0.05%               | 0.025%              |
| 2 | Japan Gov't Bond<br>10Yr Active<br>Contract      | JBA <comdty></comdty>             | ETD Contract   | 25%                          | JPY                   | 1/USDJPY<br>WMCO | Y                   | 0.05%               | 0.025%              |
| 3 | Australian Gov't<br>Bond 10Yr Active<br>Contract | XMA<br><comdty></comdty>          | ETD Contract   | 25%                          | AUD                   | AUDUSD<br>WMCO   | Y                   | 0.05%               | 0.025%              |
| 4 | U.S. Treasury<br>Note, 10Yr Active<br>Contract   | TYA<br><comdty></comdty>          | ETD Contract   | 25%                          | USD                   | N/A              | Ν                   | 0.05%               | 0.025%              |

# 4. Particulars of the VR Constituents that are ETD Contracts

| Variable<br>RoRo Asset | VR<br>Constituent                      | Rolling<br>Cost | Underlying<br>Exchange | ETD<br>Valuation<br>Time | Futures<br>Contract<br>Month | Relevant<br>Exchange(s)            | VR Constituent<br>Start Date |
|------------------------|--|-----------------|------------------------|--------------------------|------------------------------|------------------------------------|------------------------------|
| Core Asset             | S&P 500 E-<br>Mini Active<br>Contract* | 0.025%          | NYS                    | 16:00                    | H-M-U-Z                      | NYS & CME                          | 24 September<br>1997         |
| Core Asset             | Nikkei 225<br>Active<br>Contract       | 0.05%           | TSE                    | 15:00                    | H-M-U-Z                      | Tokyo Stock<br>Exchange<br>(TSE) & | 22 November<br>1991          |

|                  |   |        |       |                           |         | Singapore<br>Mercantile<br>Exchange                            |                      |
|------------------|---|--------|-------|---------------------------|---------|--|----------------------|
| Core Asset       | Stoxx Europe<br>600 Active<br>Contract*             | 0.05%  | XETRA | 17:30                     | H-M-U-Z | Eurex &<br>TARGET  | 12 August 2010       |
| Core Asset       | ASX SPI 200<br>Active<br>Contract*                  | 0.05%  | ASX   | 16:00                     | H-M-U-Z | Australian Securities Exchange (ASX) & Sydney Futures Exchange | 17 May 2000          |
| Core Asset       | Mini MSCI EM<br>Active<br>Contract*                 | 0.03%  | NYS   | 16:00                     | H-M-U-Z | NYS & ICE  | 23 September<br>2009 |
| Reserve<br>Asset | Euro Bund<br>Active<br>Contract*                    | 0.025% | EUREX | 17:15                     | H-M-U-Z | Eurex &<br>TARGET  | 19 October 1998      |
| Reserve<br>Asset | Japan Gov't<br>Bond 10Yr<br>Active<br>Contract      | 0.025% | OSE   | Scheduled<br>Closing Time | H-M-U-Z | Tokyo & Osaka<br>Exchange                                      | 29 August 1991       |
| Reserve<br>Asset | Australian<br>Gov't Bond<br>10Yr Active<br>Contract | 0.025% | ASX   | 16:29                     | H-M-U-Z | ASX & SFE  | 2 December 1991      |
| Reserve<br>Asset | U.S. Treasury<br>Note, 10Yr<br>Active<br>Contract   | 0.025% | СВТ   | 14:00                     | H-M-U-Z | NYS & CBT  | 2 January 1992       |

<sup>\*</sup> Prior to the respective Proxy Switch Dates specified in the Annex to this Part E, due to the unavailability of certain data sources, the back-tested performance of the Index has been calculated using the proxies for the corresponding data sources that are unavailable prior to such Proxy Switch Dates. The methodology employed by such proxy data sources may differ from the present data sources and as a result the back-tested Index performance information prior to the respective Proxy Switch Dates may not reflect how the Index would have performed had the relevant data sources been available during that time period. Please see risk factor headed "Hypothetical back-tested performance information is subject to significant limitations" in Part K (Risk Factors).

where, in respect of each ETD Contract specified in the table above, the letters appearing in the column headed "Futures Contract Month" represent the relevant futures contracts maturing in the following months:

| Letter | Contract<br>Expiration Month | Letter | Contract<br>Expiration Month |
|--------|------------------------------|--------|------------------------------|
| F      | January                      | N      | July                         |
| G      | February                     | Q      | August                       |
| Н      | March                        | U      | September                    |
| J      | April                        | V      | October                      |
| K      | May                          | Х      | November                     |
| М      | June                         | Z      | December                     |

# Dates and times

Core Asset Start Date: 1 February 1996.

FX Active Start Date: 3 February 1997.

FX Date: The first Index Business Day of each month.

FX Observation Date: The second Index Business Days prior to each Scheduled Sub-Index

Reset Date.

Index Business Day: Each day on which commercial banks and foreign exchange markets are

scheduled to be open for general business (including dealings in foreign

exchange and foreign exchange currency deposits) in London.

Index Start Date: 13 February 1997.

Index Valuation Time: In respect of an Index Business Day, 11:00 p.m. (London time) on such

Index Business Day.

Reserve Asset Start Date: 1 February 1996.

Roll Date: In respect of each VR Constituent that is an ETD Contract, the fifth

Scheduled Trading Day on the relevant Underlying Exchange prior to the First Notice Date (each a "Scheduled Roll Date"), subject to adjustment

in accordance with Part G (Adjustment of dates).

RoRo Rebalancing Date: The third Index Business Day following a Signal Date (each a

"Scheduled RoRo Rebalancing Date"), subject to adjustment in

accordance with Part G (Adjustment of dates).

The RoRo Start Date shall be deemed to be the first RoRo Rebalancing

Date.

RoRo Start Date: 13 January 1997.

Signal Date: The third Index Business Day scheduled to fall prior to the first Index

Business Day of each week.

Sub-Index Reset Date: The first Index Business Day of each month (each a "Scheduled Sub-

Index Reset Date"), subject to adjustment in accordance with Part G

(Adjustment of dates).

The Index Start Date shall be deemed to be the first Sub-Index Reset

Date.

Valuation Date: Each Index Business Day (each a "Scheduled Valuation Date"), subject

to adjustment in accordance with Part G (Adjustment of dates).

VR Constituent Weight Reset

Date:

The first Index Business Day of each month, subject to adjustment in accordance with Part G (*Adjustment of dates*).

The Core Asset Start Date shall be deemed to be the first VR Constituent Weight Reset Date in respect of each VR Constituent in the Core Asset,

and the Reserve Asset Start Date shall be deemed to be the first VR Constituent Weight Reset Date in respect of each VR Constituent in the Reserve Asset.

#### **Annex to Part E**

### **Historic Data Inputs**

During the period prior to the Index Launch Date (the "back-testing period"), certain data inputs used in the calculation of the Index, over certain specified periods of time within that back-testing period, have differed from the current data inputs which are used in the calculation of the Index, as described further below:

#### S&P 500 E-Mini Active Contract

The S&P 500 E-Mini Active Contract (Bloomberg ticker: ESA <Index>) has only been published daily since 24 September 1997. Prior to that date, the performance of the S&P 500 Index (with Bloomberg code SPX <Index>) was used as a proxy for such VR Constituent.

# **Stoxx Europe 600 Active Contract**

The Stoxx Europe 600 Active Contract (Bloomberg ticker: SXOA <Index>) has only been published daily since 12 August 2010. Prior to that date, the performance of the STOXX Europe 600 Price Return Index (Bloomberg ticker: SXXP <Index>) was used as a proxy for such VR Constituent.

#### **ASX SPI 200 Active Contract**

The ASX SPI 200 Active Contract (Bloomberg ticker: XPA <Index>) has only been published daily since 17 May 2000. Prior to that date, the performance of the S&P/ASX 200 Index (Bloomberg ticker: AS51 <Index>) was used as a proxy for such VR Constituent.

### **Mini MSCI EM Active Contract**

The Mini MSCI EM Active Contract (Bloomberg ticker: MESA <Index>) has only been published daily since 23 September 2009. Prior to that date, the performance of the MSCI Emerging Markets Index (Bloomberg ticker: MXEF <Index>) was used as a proxy for such VR Constituent.

#### **Euro Bund Active Contract**

The Euro Bund Active Contract (Bloomberg ticker: RXA <Index>) has only been published daily since 19 October 1998. Prior to that date, the performance of the Citi Germany GBI Index (Bloomberg ticker: SBDML <Index>) minus the Germany Mark 12 Month Deposit rate (Bloomberg ticker: DMDR1T) was used as a proxy for such VR Constituent. Additionally, the Germany Mark 12 Month Deposit rate (Bloomberg ticker: DMDR1T) was only available from 3 December 1996 and therefore the rate applicable in respect of such date was used for the proxy calculations prior to 3 December 1996.

#### Citi JGB Futures Active Strategy (Target Volatility 5%) XI Index

Prior to the JGB Start Date (24 April 2001), a proxy (the "**JGB proxy**") was used that uses only a market momentum indicator to determine the long/short position in JGB futures.

The proxy index level for the JGB Index is calculated in exactly the same way as the Citi JGB Futures Active Strategy (Target Volatility 5%) XI Index with the only difference being that in the determination of the trading signal (see paragraph 2 (*Signal*) of Part D1 (*Core Calculations*) of the Index Conditions of the JGB Index) no Economy Watchers Indicator is used as it was not available. Therefore the determination of the trading signal for the JGB proxy is as follows:

The Signal determined on each Observation Date "s" shall be either:

- (a) -1, if the Momentum Signal on Observation Date s is less than 0; or
- (b) 1, if the Momentum Signal on Observation Date s is greater than 0,

where "Signal", "Momentum Signal" and "Observation Date" have the meanings given to such terms in the Index Conditions of the Citi JGB Futures Active Strategy (Target Volatility 5%) XI Index dated 8 August 2016. The rest of the calculation of the JGB proxy follow the rules as specified in therein.

# **EURUSD WMCO < Curncy>**

Prior to 5 January 1999, Bloomberg page XEUUSD CMPN <Curncy> was used as a proxy for EURUSD WMCO <Curncy>.

# **AUDUSD WMCO < Curncy >**

Prior to 2 March 1999, the invert of Bloomberg page USDAUD CMPL <Curncy> was used as a proxy for AUDUSD WMCO <Curncy>.

# **USDJPY WMCO < Curncy >**

Prior to 2 April 1999, Bloomberg page USDJPY CMPN <Curncy> was used as a proxy for USDJPY WMCO <Curncy>.

# Part F: Valuation of Constituents

#### 1. VR CONSTITUENT LEVEL

The VR Constituent Level of a VR Constituent on a Valuation Date shall be determined in accordance with paragraph 4 of Part D (*Calculation of the Index Level*) by reference to the **Constituent Closing Level** or **Constituent Level** for such VR Constituent, as applicable, which shall be the level, price, rate or value specified in Part I (*Provisions relating to Constituents*), and determined by the Index Calculation Agent, where applicable, by reference to the Electronic Page specified in respect of such Constituent in Part E (*Data*) under the heading "Electronic Page (Bloomberg)".

# 2. LEVELS OF THE JGB INDEX, THE CITIFX<sup>SM</sup> ACTIVE SHORT STRATEGY (USDJPY) INDEX AND THE CITI GMRI INDEX

The **Constituent Closing Level** of each of the JGB Index, the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index and the Citi GMRI Index on an Index Business Day shall be the level, price, rate or value specified in Part I (*Provisions relating to Constituents*), and determined by the Index Calculation Agent, where applicable, by reference to the Electronic Page specified in respect of that index in Part E (*Data*) under the heading "Electronic Page (Bloomberg)".

### 3. CORRECTIONS OF PUBLISHED OR ANNOUNCED LEVELS, PRICES, RATES OR VALUES

If the level, price, rate or value (as applicable) of any VR Constituent, the JGB Index, the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index or the Citi GMRI Index (each a "Published Component") for any time on any day, that is (1) announced by or on behalf of the person or entity responsible for such publication or announcement; and (2) used for any calculation or determination in respect of the Index, is subsequently corrected, and the corrected level, price, rate or value (as applicable) (the "Corrected Level") is published by or on behalf of such person or entity within the Correction Period in respect of such Published Component, then such Corrected Level shall be deemed to be the level, price, rate or value (as applicable) for such Published Component for the relevant time on the relevant day. If the Correction Period (1) relates to a VR Constituent but does not include a VR Constituent Weight Reset Date, a RoRo Rebalancing Date, a Sub-Index Reset Date, or a Roll Date, (2) relates to the JGB Index or the Citi GMRI Index but does not include a RoRo Rebalancing Date or a Sub-Index Reset Date or (3) relates to the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index but does not include a Sub-Index Reset Date, then the Index Calculation Agent shall revise the Index Level for such day. If the Correction Period (1) relates to a VR Constituent and does include a VR Constituent Weight Reset Date, a RoRo Rebalancing Date, a Sub-Index Reset Date, or a Roll Date, (2) relates to the JGB Index or the Citi GMRI Index and does include a RoRo Rebalancing Date or a Sub-Index Reset Date or (3) relates to the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index and does include a Sub-Index Reset Date, then the Index Calculation Agent may, but shall not be obliged to, make appropriate adjustments to the Index Level for such day.

# Part G: Adjustment of dates

# 1. ADJUSTMENT OF VALUATION DATES

# 1.1 "Holidays": "Look Back"

If a Scheduled Valuation Date "**svd**" (other than a Sub-Index Reset Date, a RoRo Rebalancing Date or a VR Constituent Weight Reset Date) is (a) not a Scheduled Trading Day for one or more Constituents or (b) not a Specified Exchanges Business Day, then:

- (1) the relevant Valuation Date for each Constituent for which Scheduled Valuation Date svd is a Scheduled Trading Day shall be Scheduled Valuation Date svd; and
- (2) the relevant Valuation Date for each Constituent for which Scheduled Valuation Date svd is not a Scheduled Trading Day shall be the first Scheduled Trading Day for such Constituent immediately preceding Scheduled Valuation Date svd which is not a Disrupted Day for such Constituent.

#### 1.2 "Disruptions": "Look Back"

If a Scheduled Valuation Date "**svd**" (other than a Sub-Index Reset Date, a RoRo Rebalancing Date or a VR Constituent Weight Reset Date) is a Disrupted Day for any Constituent, then:

- (1) the relevant Valuation Date for each Constituent for which Scheduled Valuation Date svd is not a Disrupted Day shall be Scheduled Valuation Date svd; and
- (2) the relevant Valuation Date for each Constituent for Scheduled Valuation Date svd is a Disrupted Day shall be the first Scheduled Trading Day for such Constituent immediately preceding Scheduled Valuation Date svd which is not a Disrupted Day for such Constituent.

### 2. ADJUSTMENT OF SUB-INDEX RESET DATES

# 2.1 "Holidays": "Move in Block"

If a Sub-Index Reset Date "r" is (a) not a Scheduled Trading Day for one or more Constituents or (b) not a Specified Exchanges Business Day, then the relevant Sub-Index Reset Date shall be the first Index Business Day immediately following Sub-Index Reset Date r which is a Scheduled Trading Day for all Constituents and a Specified Exchanges Business Day.

# 2.2 "Disruptions": "Value What You Can"

If a Sub-Index Reset Date "r" is a Disrupted Day for any Constituent (after taking into account any adjustment pursuant to paragraph 2.1 above), then:

- (1) the relevant Sub-Index Reset Date for each Constituent for which Sub-Index Reset Date r is not a Disrupted Day shall be Sub-Index Reset Date r; and
- the relevant Sub-Index Reset Date for each Constituent for which Sub-Index Reset Date r is a Disrupted Day shall be the earlier of (a) the first Index Business Day immediately following Sub-Index Reset Date r which is both (i) a Scheduled Trading Day for such Constituent; and (ii) not a Disrupted Day for such Constituent; and (b) the fifth Scheduled Trading Day for such Constituent immediately following Sub-Index Reset Date r, notwithstanding that such day is a Disrupted Day for any Constituent, in which case the provisions of Part H (Adjustments, disruption and cancellation) shall apply.

#### 3. ADJUSTMENT OF RORO REBALANCING DATES

### 3.1 "Holidays": No rebalancing

If a Scheduled RoRo Rebalancing Date "r" is (a) not a Scheduled Trading Day for one or more Constituents or (b) not a Specified Exchanges Business Day, then no rebalancing of the Index shall occur in respect of that Scheduled RoRo Rebalancing Date.

# 3.2 "Disruptions": "Value What You Can"

If a RoRo Rebalancing Date "r" is a Disrupted Day for one or more Constituents, then:

- (1) the relevant RoRo Rebalancing Date for each Constituent for which RoRo Rebalancing Date r is not a Disrupted Day shall be RoRo Rebalancing Date r; and
- the relevant RoRo Rebalancing Date for each Constituent for which RoRo Rebalancing Date r is a Disrupted Day shall be the earlier of (a) the first Index Business Day immediately following RoRo Rebalancing Date r which is both (i) a Scheduled Trading Day for such Constituent; and (ii) not a Disrupted Day for such Constituent; and (b) the fifth Scheduled Trading Day for such Constituent immediately following RoRo Rebalancing Date r, notwithstanding that such day is a Disrupted Day for any Constituent, in which case the provisions of Part H (Adjustments, disruption and cancellation) shall apply.

#### 4. ADJUSTMENT OF VR CONSTITUENT WEIGHT RESET DATES

# 4.1 "Holidays": "Move in Block"

If a VR Constituent Weight Reset Date "rs" is (a) not a Scheduled Trading Day for one or more VR Constituents or (b) not a Specified Exchanges Business Day, then the relevant VR Constituent Weight Reset Date shall be the first Index Business Day immediately following VR Constituent Weight Reset Date rs which is a Scheduled Trading Day for all VR Constituents and a Specified Exchanges Business Day.

# 4.2 "Disruptions": "Value What You Can"

If a VR Constituent Weight Reset Date "**rs**" is a Disrupted Day for any VR Constituent (after taking into account any adjustment pursuant to paragraph 4.1 above), then:

- (1) the relevant VR Constituent Weight Reset Date for each VR Constituent for which VR Constituent Weight Reset Date rs is not a Disrupted Day shall be VR Constituent Weight Reset Date rs; and
- (2) the relevant VR Constituent Weight Reset Date for each VR Constituent for which VR Constituent Weight Reset Date rs is a Disrupted Day shall be the earlier of (a) the first Index Business Day immediately following VR Constituent Weight Reset Date rs which is both (i) a Scheduled Trading Day for such VR Constituent; and (b) the fifth Scheduled Trading Day for such VR Constituent immediately following VR Constituent Weight Reset Date rs, notwithstanding that such day is a Disrupted Day for any VR Constituent, in which case the provisions of Part H (Adjustments, disruption and cancellation) shall apply.

#### 5. ADJUSTMENT OF ROLL DATES

# 5.1 "Holidays": "Move in Block"

If a Roll Date "rd" is not a Scheduled Trading Day for any VR Constituent, then the relevant Roll Date shall be the first Scheduled Trading Day for such VR Constituent immediately following Roll Date rd, *provided that* if such date were otherwise to fall after the First Notice Date in respect of such VR Constituent, the First Notice Date shall be treated as the relevant Roll Date.

# 5.2 "Disruptions": "Value What You Can"

If a Roll Date "rd" is a Disrupted Day for any VR Constituent (after taking into account any adjustment pursuant to paragraph 5.1 above), then the relevant Roll Date shall be the first Scheduled Trading Day for such VR Constituent immediately following Roll Date rd which is not a Disrupted Day, provided that if such date were otherwise to fall after the First Notice Date in respect of such VR Constituent, the First Notice Date shall be treated as the relevant Roll Date, notwithstanding that such day is a Disrupted Day for such VR Constituent, in which case the provisions of Part H (Adjustments, disruption and cancellation) shall apply.

### 6. When a Scheduled Date is both a "Holiday" and "Disrupted"

If a Sub-Index Reset Date, VR Constituent Weight Reset Date, a RoRo Rebalancing Date or a Roll Date (each, a "**Scheduled Date**") is both (1) not a Scheduled Trading Day for any Constituent; and (2) a Disrupted Day for any Constituent, then:

- (1) *first,* such Scheduled Date shall be postponed in accordance with paragraph 2.1, paragraph 4.1 or paragraph 5.1 above (as applicable) to adjust for any "holiday"; and then
- (2) **second,** such Scheduled Date after such postponement shall be further adjusted (if necessary) in accordance with paragraph 2.2, paragraph 4.2 or paragraph 5.2 above (as applicable) for any "disruption".

# 7. Additional Definitions

"Specified Exchanges Business Day" means a day on which all Specified Exchanges are scheduled to be open for their respective regular trading sessions.

"Specified Exchange" means each of BM&FBovespa, the Mexico Stock Exchange, the Korea Stock Exchange, the Johannesburg Stock Exchange, the Taiwan Stock Exchange, the National Stock Exchange of India, the New York Stock Exchange, the Tokyo Stock Exchange, the London Stock Exchange, the Sydney Stock Exchange, the Sydney Futures Exchange, the Frankfurt SE, the Hong Kong Stock Exchange, and the Russian Trading System.

# Part H: Adjustments, disruption and cancellation

#### 1. ADJUSTMENT EVENTS

If an Adjustment Event occurs in respect of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index, the JGB Index, the Citi GMRI Index or any VR Constituent (the "**Affected Constituent**"), then:

- (a) the Index Calculation Agent may suspend the calculation, publication and dissemination of the Index and the Index Level until the first succeeding Index Business on which such Adjustment Event does not occur or continue to occur; and/or
- (b) the Index Calculation Agent may replace the Affected Constituent with a replacement constituent which has substantially similar characteristics to the Affected Constituent, having regard to the manner in which the Affected Constituent is used in the calculation of the Index, in which case the Index Calculation Agent will:
  - (i) determine the effective date of such replacement; and
  - (ii) make such adjustment(s) to these Index Conditions as it determines appropriate to account for the effect on the Index of such replacement; and/or
- (c) the Index Administrator may discontinue and cancel the Index.

# 2. DISRUPTED DAYS

If any Index Business Day is a Disrupted Day for the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index, the JGB Index, the Citi GMRI Index or any VR Constituent (the "**Affected Constituent**") then the Index Calculation Agent may:

- (a) publish its good faith estimate of the Index Level for such Index Business Day (notwithstanding the occurrence of a Disrupted Day), using its good faith estimate of the value of the Affected Constituent(s) affected by the occurrence of a Disrupted Day. Any such estimated value may be subject to correction once the relevant event or circumstances giving rise to such Disrupted Day cease; and/or
- (b) suspend the calculation, publication and dissemination of the Index and the Index Level until the first succeeding Index Business Day which is not a Disrupted Day for the Affected Constituent.

# 3. CANCELLATION OF THE INDEX

The Index Administrator may discontinue and cancel the Index at any time and is under no obligation to continue, or to procure the continuation of, the calculation, publication and dissemination of the Index and the Index Level.

# Part I: Provisions relating to Constituents

# ETD Contract (exchange-traded derivative contract)

This section of this Part I is applicable only to each VR Constituent which is classified (in Part E (*Data*) under the heading "*Classification*") as an "ETD Contract" (each such VR Constituent, an "**ETD Contract**").

| Constituent Level:     | The Fixing Price of the relevant ETD Contract.  |
|------------------------|---|
| Scheduled Trading Day: | Any day on which each relevant Exchange is scheduled to be open for its regular trading session.          |
| Disrupted Day:         | Any Scheduled Trading Day on which an Exchange Disruption occurs in respect of the relevant ETD Contract. |
| Adjustment Event:      | Each of the following: (1) ETD Contract Cancellation; and (2) ETD Contract Modification.                  |
| Correction Period:     | 2 Index Business Days.  |

"ETD Contract Cancellation" shall mean, in respect of the relevant ETD Contract, trading in such ETD Contract is permanently discontinued on the relevant Exchange.

"ETD Contract Modification" shall mean, in respect of the relevant ETD Contract, the relevant Exchange makes a material change to either (1) the content, composition or constitution of such ETD Contract; or (2) the formula for and method of calculating the Settlement Price of such ETD Contract.

"ETD Valuation Time" shall mean, in respect of an ETD Contract on a Scheduled Trading Day in respect of the relevant Underlying Exchange, the time specified in the applicable row of Table 4 of Part E (*Data*) in the column headed "ETD Valuation Time".

"Exchange" shall mean, in respect of the relevant ETD Contract, each Trading Venue in respect of such ETD Contract, as specified in Table 4 of Part E (*Data*) in the column headed "Relevant Exchange", or any successor to any such Trading Venue, or any substitute Trading Venue to which trading in such ETD Contract has temporarily relocated, provided that, in the determination of the Index Calculation Agent, there is comparable liquidity in such ETD Contract on such temporary substitute Trading Venue as on the relevant original Trading Venue.

"Exchange Disruption" shall mean, in respect of the relevant ETD Contract:

(1) a relevant Exchange fails to open fails to open for trading during its regular trading session; or

- the occurrence or existence at any time during the one hour period which ends at the end of the Scheduled Closing Time (on any relevant Exchange) of any suspension of or limitation imposed (for any reason, including movements in price exceeding permitted limits) on the trading on that relevant Exchange; or
- (3) the occurrence or existence at any time during the one hour period which ends at the end of the Scheduled Closing Time (on any relevant Exchange) of any other event (other than an event described in sub-paragraph (4)) which disrupts or impairs the ability of market participants in general on that relevant Exchange to effect transactions in or to obtain market values for such ETD Contract; or
- (4) the closure on any Scheduled Trading Day of any relevant Exchange prior to the relevant Scheduled Closing Time (on that relevant Exchange) at least one hour prior to the earlier of (a) the actual closing for the regular trading session of that relevant Exchange on such day; and (b) the deadline for the submission of orders to be entered into the Exchange system for execution at the relevant Scheduled Closing Time (on that relevant Exchange) on such day; or
- (5) the Settlement Price of such ETD Contract has increased or decreased by an amount equal to the maximum permitted price change for the previous day's Settlement Price on any relevant Exchange;
- (6) the Settlement Price of such ETD Contract is not published or otherwise made available by or on behalf of any relevant Exchange.

"Fixing Price" shall mean, in respect of an ETD Contract on a Scheduled Trading Day in respect of the relevant Underlying Exchange, the first traded price for delivery of such ETD Contract at the ETD Valuation Time, as published or otherwise made available by the relevant Electronic Page, provided that in respect of each Scheduled Trading Day falling prior to the Index Launch Date, the Fixing Price in respect of each ETD Contract will be the daily settlement price or final settlement price (as the case may be, as described by the relevant Underlying Exchange) in respect of such Scheduled Trading Day, as published or otherwise made available by the relevant Underlying Exchange.

"Scheduled Closing Time" shall mean, in respect of a Scheduled Trading Day and an Exchange, the scheduled weekday closing time on such Exchange on such Scheduled Trading Day, without regard to afterhours trading or other trading outside the hours of the regular trading session on such Exchange.

"Settlement Price" shall mean, in respect of the relevant ETD Contract, the daily settlement price or the final settlement price (as the case may be, and however described by the relevant Exchange) of such ETD Contract, as published or otherwise made available by the relevant Exchange.

"Trading Venue" means an exchange, trading system or quotation system.

"Underlying Exchange" shall mean, in respect of the relevant ETD Contract, the Trading Venue in respect of such ETD Contract specified in Table 4 of Part E (*Data*) in the column headed "Underlying Exchange", or any successor to any such Trading Venue, or any substitute Trading Venue to which trading in such ETD Contract has temporarily relocated, provided that, in the determination of the Index Calculation Agent, there is comparable liquidity in such ETD Contract on such temporary substitute Trading Venue as on the relevant original Trading Venue.

# Generic Index

This section of this Part I is applicable only to each VR Constituent which is classified (in Part E (*Data*) under the heading "*Classification*") as a "Generic Index" (each such VR Constituent, a "**Generic Index**").

A Generic Index shall also be classified as a Constituent Index for the purposes of the Additional Constituent Index Definitions, which set of additional definitions is set out at the end of Part I and must be read in conjunction with this section of Part I.

| Constituent Closing Level: | The official closing level at the Valuation Time of the relevant Generic Index, or if the level of such Generic Index is published only once a day, the level of such Generic Index as displayed on the applicable Electronic Page. |
|----------------------------|---|
| Scheduled Trading Day:     | Any day on which the relevant Constituent Index Sponsor (or an agent appointed by such Constituent Index Sponsor) is scheduled to publish the level of the relevant Generic Index.  |
| Disrupted Day:             | Any Scheduled Trading Day on which a Market Disruption Event occurs.  |
| Adjustment Event:          | Each of the following: (1) Constituent Index Cancellation; (2) Constituent Index Modification; and (3) Constituent Licensing Event.   |
| Correction Period:         | 30 calendar days.   |

"Component" shall mean, in respect of the relevant Generic Index, each component included in such Generic Index.

"Constituent Licensing Event" shall mean, in respect of any Constituent that is a Generic Index, that (1) any licence granted to the Index Administrator and/or the Index Calculation Agent and/or any of their respective Affiliates to use such Constituent in connection with the Index is terminated; or (2) any such person's right to use such Constituent in connection with the Index is otherwise disputed, impaired or ceases for any reason.

"Exchange" shall mean, in respect of the relevant Component, the primary exchange, trading system or quotation system ("Trading Venue") in respect such relevant Component, or any successor to such Trading Venue, or any substitute Trading Venue to which trading in such relevant Component has temporarily relocated, provided that, in the determination of the Index Calculation Agent, there is comparable liquidity in such relevant Component on such temporary substitute Trading Venue as on the original Trading Venue.

"Exchange Business Day" shall mean, in respect of the relevant Generic Index, any Scheduled Trading Day for such Generic Index on which the relevant Constituent Index Sponsor publishes the level of such Generic Index.

"Market Disruption Event" shall mean, in respect of the relevant Generic Index:

- (1) the relevant Constituent Index Sponsor (or an agent appointed by such Constituent Index Sponsor) fails to publish the level of such Generic Index; or
- (2) the relevant Exchange or any relevant Related Exchange fails to open for trading during its regular trading session; or
- the occurrence or existence at any time during the one hour period which ends at the relevant Valuation Time of any suspension of or limitation imposed (by reason of movements in price exceeding permitted limits or otherwise) on the trading on (a) any relevant Exchange of Components which in aggregate comprise 20%. or more of the level of such Generic Index; or (b) any relevant Related Exchange of futures contracts or option contracts relating to such Generic Index; or
- (4) the occurrence or existence at any time during the one hour period which ends at the relevant Valuation Time of any other event (other than an event described in (5) or (6) below) which disrupts or impairs the ability of market participants in general (a) (on any relevant Exchange) to effect transactions or to obtain market values for Components which in aggregate comprise 20%. or more of the level of such Generic Index; or (b) (on any relevant Related Exchange) to effect transactions in or to obtain market values for futures contracts or option contracts relating to such Generic Index; or
- (5) the closure (which has a material effect on the Index) on any Exchange Business Day of any relevant Exchange in respect of Components (which in aggregate comprise 20%. or more of the level of such Generic Index) prior to its Scheduled Closing Time (unless such earlier closing time is announced by such Exchange at least one hour prior to (a) the actual closing time for the regular trading session on such Exchange on such Exchange Business Day; and (b) the deadline for the submission of orders to be entered into such Exchange for execution at the relevant Valuation Time on such Exchange Business Day); or
- (6) the closure (which has a material effect on the Index) on any Exchange Business Day of any relevant Related Exchange in respect of futures contracts or option contracts relating to such Generic Index prior to its Scheduled Closing Time, unless such earlier closing time is announced by such Related Exchange at least one hour prior to (a) the actual closing time for the regular trading session on such Related Exchange on such Exchange Business Day; and (b) the deadline for the submission of orders to be entered into such Related Exchange for execution at the relevant Valuation Time on such Exchange Business Day.

For the purposes of determining whether or not a Market Disruption Event exists in respect of the relevant Generic Index at any time, if an event giving rise to a Market Disruption Event occurs in respect of a Component included in such Generic Index at that time, then the relevant percentage contribution of such Component to the level of such Generic Index shall be based on a comparison of (1) the portion of the level of such Generic Index attributable to such Component; and (2) the overall level of such Generic Index immediately before the occurrence of such Market Disruption Event.

"Related Exchange" shall mean, in respect of the relevant Generic Index, each exchange, trading system or quotation system ("Trading Venue") in respect of futures contracts or option contracts relating to such Generic Index, or any successor to such Trading Venue, or any substitute Trading Venue to which trading in such futures contracts or option contracts has temporarily relocated, provided that, in the determination of the Index Calculation Agent, there is comparable liquidity in such futures contracts or option contracts on such temporary substitute Trading Venue as on the original Trading Venue.

"Scheduled Closing Time" shall mean, in respect of a Scheduled Trading Day and an Exchange or Related Exchange (as relevant), the scheduled weekday closing time on such Exchange or Related Exchange (as relevant) on such Scheduled Trading Day, without regard to after-hours trading or any other trading outside the hours of the regular trading session on such Exchange or Related Exchange.

"Valuation Time" shall mean, in respect of the relevant Generic Index, a Constituent Closing Level and a Scheduled Trading Day for such Generic Index, either:

- (1) the Scheduled Closing Time on the relevant Exchange on such Scheduled Trading Day; or
- (2) if the level of such Generic Index is only published once a day (a) for the purposes of determining whether a Market Disruption Event has occurred: (i) in respect of any Component, the time at which such Component is valued for the purposes of determining the level of such Generic Index for the relevant day; and (ii) in respect of any futures contract or options contract relating to such Generic Index, the close of trading on the relevant Related Exchange; and (b) in all other circumstances, the time when the official closing level of such Generic Index for such day is calculated and published by the relevant Constituent Index Sponsor.

# **Proprietary Index**

This section of this Part I is applicable only to each Constituent which is classified (in Part E (*Data*) under the heading "*Classification*") as a "Proprietary Index" (each such Constituent, a "**Proprietary Index**").

A Proprietary Index shall also be classified as a Constituent Index for the purposes of the Additional Constituent Index Definitions, which set of additional definitions is set out at the end of Part I and must be read in conjunction with this section of Part I.

| Constituent Closing Level: | The official closing level of the relevant Proprietary Index.  |
|----------------------------|--|
| Scheduled Trading Day:     | Any day on which the relevant Constituent Index Sponsor (or an agent appointed by such Constituent Index Sponsor) is scheduled to publish the level of the relevant Proprietary Index. |
| Disrupted Day:             | Any Scheduled Trading Day on which the level of the relevant Proprietary Index is not published by or on behalf of the relevant Constituent Index Sponsor.                             |
| Adjustment Event:          | Each of the following: (1) Constituent Index Cancellation; and (2) Constituent Index Modification.   |
| Correction Period:         | 30 calendar days.  |

# Additional Constituent Index Definitions

The following definitions constitute the "Additional Constituent Index Definitions".

"Constituent Index" shall mean each Constituent classified as such.

"Constituent Index Cancellation" shall mean, in respect of any Constituent Index, that the relevant Constituent Index Sponsor permanently cancels such Index.

"Constituent Index Modification" shall mean, in respect of any Constituent Index, that the relevant Constituent Index Sponsor announces that it will make a material change in the formula for or method of calculating such Constituent Index or in any other way materially modifies such Constituent Index (other than a modification prescribed in that formula or method to maintain such Constituent Index in the event of routine events).

"Constituent Index Sponsor" shall mean, in respect of any Constituent Index, the corporation or entity which (1) is responsible for setting and reviewing the rules and procedures and methods of calculations and adjustments, if any, related to such Constituent Index; and (2) announces (directly or through an agent) the level of such Constituent Index on a regular basis.

#### SUCCESSOR CONSTITUENT INDEX AND SUCCESSOR CONSTITUENT INDEX SPONSOR

If the relevant Constituent Index is (1) not calculated and announced by the relevant Constituent Index Sponsor but is calculated and announced by a successor sponsor acceptable to the Index Calculation Agent; or (2) replaced by a successor index using, in the determination of the Index Calculation Agent, the same or a substantially similar formula for or method of calculation as used in the calculation of such Constituent Index, then in each case that index will be deemed to be such Constituent Index with effect from the date determined by the Index Calculation Agent, who may (but is not obliged to) make such adjustment(s) to these Index Conditions as it determines appropriate to account for such change.

# Part J: Definitions

- "Additional Constituent Index Definitions" shall have the meaning given to it in Part I (*Provisions relating to Constituents*).
- "Adjustment Event" shall, in respect of a VR Constituent or RoRo Asset, have the meaning given to it in the relevant section of Part I (*Provisions relating to Constituents*).
- "Affected Constituent" shall have the meaning given to it in Part H (Adjustments, disruption and cancellation).
- "Affiliate" shall mean, in respect of a person "X", any entity controlled (directly or indirectly) by X, any entity which controls (directly or indirectly) X or any entity (directly or indirectly) under common control with X. For this purpose, "control" of any person or entity shall mean the ownership or a majority of the voting power of such person or entity.
- "Amount" shall have the meaning given to it in Part L (*Miscellaneous*).
- "Asset Current Percentage Weight" shall have the meaning given to it in paragraph 1.1 of Part D (Calculation of the Index Level).
- "Asset Unit Weight" shall have the meaning given to it in paragraph 3.5 of Part D (Calculation of the Index Level).
- "back-testing period" has the meaning given to such term in Part E (*Data*).
- "Calculations" shall have the meaning given to it in Part L (Miscellaneous).
- "Citi" shall mean Citigroup Inc. and its Affiliates.
- "Citi GMRI Index" shall have the meaning given to it in Part C (Overview of the Index).
- "Component" shall have the meaning given to it in Part I (Provisions relating to Constituents).
- "Constituent" means each VR Constituent, the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index and the JGB Index.
- "Constituent Closing Level" or "Constituent Level" shall, in respect of a VR Constituent, the JGB Index, the Citi GMRI Index or the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index, have the meaning given to it in the relevant section of Part I (*Provisions relating to Constituents*).
- "Constituent Index" has the meaning given to such term in Part I (Provisions relating to Constituents).
- "Constituent Index Cancellation" has the meaning given to such term in Part I (*Provisions relating to Constituents*).
- "Constituent Index Modification" has the meaning given to such term in Part I (*Provisions relating to Constituents*).

"Constituent Index Sponsor" has the meaning given to such term in Part I (*Provisions relating to Constituents*).

"Constituent Licensing Event" has the meaning given to such term in Part I (*Provisions relating to Constituents*).

"Core Asset" shall have the meaning given to it in Part C (Overview of the Index).

"Core Asset Level" shall have the meaning given to it in paragraph 2.1.1 of Part D (Calculation of the Index Level).

"Corrected Level" shall have the meaning given to it in Part F (Valuation of Constituents).

"Correction Period" shall, in respect of a VR Constituent or a RoRo Asset, have the meaning given to it in the relevant section of Part I (*Provisions relating to Constituents*).

"Current Percentage Weight" shall have the meaning given to it in Part C (Overview of the Index).

"Disrupted Day", in respect of a VR Constituent, the JGB Index or the Citi GMRI Index, shall have the meaning given to it in the relevant section of Part I (*Provisions relating to Constituents*).

"Electronic Page" shall mean, in respect of a datum, (1) an electronic page or source specified in respect of such datum in these Index Conditions; or (2) if no such electronic page or source has been so specified, such Bloomberg page or Reuters page or other widely-recognised source of financial data as the Index Calculation Agent may determine appropriate; or (3) in any case, any successor electronic page or source that has been designated by either (a) the sponsor of the original electronic page or source; or (b) the relevant information vendor or provider of the original electronic page or source; or (4) any alternative electronic page or source that may be designated by the Index Calculation Agent, provided that such electronic page or source is widely recognised by participants in the relevant market.

"ETD Contract" shall have the meaning given to it in Part I (Provisions relating to Constituents).

"ETD Contract Cancellation" shall have the meaning given to it in Part I (*Provisions relating to Constituents*).

"ETD Contract Modification" shall have the meaning given to it in Part I (*Provisions relating to Constituents*).

"ETD Valuation Time" has the meaning given to such term in Part I (Provisions relating to Constituents).

"Exchange" shall have the meaning given to it in Part I (Provisions relating to Constituents).

"Exchange Business Day" shall have the meaning given to it in Part I (Provisions relating to Constituents).

"Exchange Disruption" shall have the meaning given to it in Part I (Provisions relating to Constituents).

"Expert Judgement" shall have the meaning given to it in Part L (*Miscellaneous*).

"Fixing Price" has the meaning given to such term in Part I (Provisions relating to Constituents).

**"FX-Adjusted Constituent**" shall have the meaning given to it in paragraph 4 (*VR Constituent Levels*) of Part D (*Calculation of the Index Level*).

"FX-Adjusted JGB Index Level" shall have the meaning given to it in paragraph 2.4 (*JGBFX Level*) of Part D (*Calculation of the Index Level*).

"FX Active Strategy Sub-Index" has the meaning given to such term in Part B (Key Information).

"**FX Hedging**" shall have the meaning given to it in Part K (*Risk Factors*).

"Generic Index" shall have the meaning given to it in Part I (Provisions relating to Constituents).

"Gross RoRo" shall have the meaning given to it in Part C (Overview of the Index).

"Index" shall have the meaning given to it in Part A (Introduction).

"Index Activity" shall have the meaning given to it in Part L (*Miscellaneous*).

"Index Administrator" shall mean the person specified as such in Part B (*Key Information*) or any successor to such person or any assignee of such person.

"Index Base Currency" shall mean the currency specified as such in Part B (Key Information).

"Index Calculation Agent" shall mean the person specified as such in Part B (Key Information) and appointed by the Index Administrator, any successor to such person, or any alternative calculation agent appointed by the Index Administrator.

"Index Conditions" has the meaning given to such term in Part A (Introduction).

"Index Fee" shall have the meaning given to it in Part K (Risk Factors).

"Index Launch Date" shall mean the day specified as such in Part B (Key Information).

"Index Level" shall mean, in respect of an Index Business Day, the closing level of the Index as of the Index Valuation Time on such Index Business Day. The Index Level shall be an amount expressed in the Index Base Currency.

"Index Linked Product" shall mean any security, contract or other financial product the return of which is linked, in whole or in part, to the performance of the Index.

"Index Start Date" shall mean the date specified as such in Part B (Key Information).

"Index Start Level" shall mean the Index level on the Index Start Date, as specified in Part B (Key Information).

"Index Sponsor" shall mean the person specified as such in Part B (*Key Information*) or any successor to such person or any assignee of such person.

"Index Swap" shall have the meaning given to it in Part K (*Risk Factors*).

"Index Ticker" shall mean the Electronic Page specified as such in Part B (Key Information).

"Index Valuation Time" shall mean the time specified as such in Part E (Data).

"Information" shall have the meaning given to it in Part L (Miscellaneous).

"JGB" shall have the meaning given to it in Part C (Overview of the Index).

"JGB Index" shall have the meaning given to it in Part C (Overview of the Index).

"JGB proxy" shall have the meaning given to it in the Annex to Part E (Data).

"JPY" shall mean the lawful currency of Japan.

"Leveraged RoRo Level" shall have the meaning given to it in paragraph 1.2.1 of Part D (*Calculation of the Index Level*).

"Leveraged RoRo Total Return Sub-Index" has the meaning given to such term in Part B (Key Information).

"Licensing Event" shall have the meaning given to it in the Generic Index section of Part I (*Provisions relating to Constituents*).

"Macro Indicator" shall have the meaning given to it in Part K (Risk Factors).

"Market Disruption Event" shall have the meaning given to it in Part I (Provisions relating to Constituents).

"Mean" shall have the meaning given to it in Part K (Risk Factors).

"Net Constituent Level" shall have the meaning given to it in Part C (Overview of the Index).

"Notional Transaction Costs" shall have the meaning given to it in Part K (Risk Factors).

"Overnight Index" shall have the meaning given to it in Part C (Overview of the Index).

"Part" shall mean a part of these Index Conditions.

"Passive Strategy" shall have the meaning given to it in Part K (*Risk Factors*).

"Proprietary Index" shall have the meaning given to it in Part I (Provisions relating to Constituents).

"Published Component" has the meaning given to such term in Part F (Valuation of Constituents).

"Related Exchange" shall have the meaning given to it in Part I (Provisions relating to Constituents).

"Related Instruments" shall have the meaning given to it in Part K (Risk Factors).

"Relevant Person" has the meaning given to such term in Part K (Risk Factors).

"Reserve Asset" shall have the meaning given to it in Part C (Overview of the Index).

"Reserve Asset Level" shall have the meaning given to it in paragraph 2.2.1 of Part D (Calculation of the Index Level).

"RoRo Assets" shall have the meaning given to it in Part C (Overview of the Index).

"RoRo Level" shall have the meaning given to it in Part C (Overview of the Index).

"RoRo Rebalancing Date" shall have the meaning given to it in Part C (Overview of the Index).

"Scheduled Closing Time" shall have the meaning given to it in Part I (*Provisions relating to Constituents*).

"Scheduled Date" shall have the meaning given to it in Part G (Adjustment of dates).

"Scheduled RoRo Rebalancing Date" has the meaning given to such term in Part E (Data).

"Scheduled Sub-Index Reset Date" has the meaning given to such term in Part E (Data).

"Scheduled Trading Day" (i) in respect of a VR Constituent, the JGB Index or the Citi GMRI Index, shall have the meaning given to it in the relevant section of Part I (*Provisions relating to Constituents*), (ii) in respect of the FX-Adjusted JGB Index means any day that is a Scheduled Trading Day in respect of the JGB Index and (iii) in respect of the Core Asset and the Reserve Asset, means each day that is a Scheduled Trading Day in respect of each VR Constituent in the Core Asset or the Reserve Asset, respectively.

"Scheduled Valuation Date" has the meaning given to such term in Part E (Data).

"Settlement Price" shall have the meaning given to it in Part I (Provisions relating to Constituents).

"Signal" shall have the meaning given to it in paragraph 3.1(1) of Part D (Calculation of the Index Level).

"Specified Exchanges" shall have the meaning given to it in Part G (Adjustment of dates).

"Specified Exchanges Business Day" shall have the meaning given to it in Part G (Adjustment of dates).

"Spot FX Rate" shall mean, in respect of the notional exchange of one currency to another currency on a day, the applicable WM/Reuters "Closing Spot Rate" as published by The World Markets Company plc in conjunction with Reuters at approximately 4.00 p.m. (London time) on the relevant day or, if such rate is discontinued or unavailable on the relevant day for any reason, such other exchange rate for the relevant currency conversion as the Index Calculation Agent shall determine appropriate by reference to an alternative foreign exchange rate service.

"Sub-Index" shall have the meaning given to it in Part K (Risk Factors).

"Sub-Index Reset Date" shall have the meaning given to it in Part E (Data).

"Swap Dealer" shall have the meaning given to it in Part K (*Risk Factors*).

"Trading Venue" shall have the meaning given to it in Part I (*Provisions relating to Constituents*).

"Trend Indicator" shall have the meaning given to it in Part C (Overview of the Index).

"Trend Look Back Period" shall have the meaning given to it in the relevant section of Part D (Calculation of the Index Level).

"Underlying Exchange" shall have the meaning given to it in Part I (Provisions relating to Constituents).

"Underlying Methodology" shall have the meaning given to it in Part K (Risk Factors).

"Unit Weight" shall have the meaning given to it in Part C (Overview of the Index).

"**USD**" has the meaning given to such term in Part B (*Key Information*).

"Valuation Time" shall have the meaning given to it in Part I (Provisions relating to Constituents).

"Values" shall have the meaning given to it in Part K (Risk Factors).

"Variable RoRo Assets" shall have the meaning given to such term in Part C (Overview of the Index).

"Volatility Target" shall have the meaning given to it in Part B (Key Information).

"VR Constituent" shall mean each eligible constituent of the Core Asset and the Reserve Asset, respectively, as specified in Part E (*Data*). Each VR Constituent in the Core Asset and each VR Constituent of the Reserve Asset shall be identified by a unique serial number, denoted by "i", as specified in Part E (*Data*). Part E (*Data*) also sets out the classification of each VR Constituent.

"VR Constituent Start Date" shall mean, in respect of a VR Constituent that is an ETD Contract, the date set out in Table 4 of Part E (*Data*) in the column headed "VR Constituent Start Date" in the relevant row corresponding to that VR Constituent.

# Part K: Risk Factors

The discussion of risks in this Part K comprises a discussion of specific risk factors, followed by a discussion of general risk factors.

# Specific Risk Factors

## 1. INDEX METHODOLOGY REFERENCES OTHER METHODOLOGIES

The algorithmic strategy embedded in the Index methodology set out in these Index Conditions tracks the performance of the Constituents, some of which are themselves proprietary indices developed by the Index Administrator that contain embedded algorithmic strategies. These proprietary indices also embed a variety of other parameters, for example, different weighting schemes, each of which may be unique to that index and have a significant effect on its performance. While the Index methodology set out in these Index Conditions identifies each Constituent herein, it does not, by itself, address all the necessary details required to analyse and understand how the performance of a Constituent may contribute to the overall performance of the Index.

On that basis, investors in any Index Linked Product are also advised to obtain and review the methodology (an "**Underlying Methodology**") of any Constituent or the constituents thereof. Where a Constituent is sponsored by the Index Administrator, the applicable Underlying Methodology is available free of charge upon request from the Index Administrator.

#### 2. STRATEGY RISK - RORO

The methodology of the Leveraged RoRo Total Return Sub-Index uses a dynamic exposure strategy that is designed to provide exposure to a RoRo Level composed of (1) the Core Asset, which provides exposure to a notional basket of equities and commodities, (2) the Reserve Asset, which provides exposure to a notional basket of fixed income assets and (3) the FX-Adjusted JGB Index. The exposure to the Core Asset and the Reserve Asset is determined through weekly observation of two specified market indicators, i.e., a recent Core Asset price trends risk indicator (the Trend Indicator) and a risk indicator which is intended to be a "leading" (as opposed to "lagging") risk indicator (the FX-Adjusted Macro Indicator), as discussed further in risk factors relating to the Signal below. Exposure to the FX-Adjusted JGB Index is static and will not change from the exposure as of the Index Start Date.

The determination of the exposure on a weekly basis is premised on the assumption that, on each weekly signal date, the Signal will provide an accurate indicator of the performance of the Core Asset over the next week. In other words, the strategy assumes that the Core Asset is likely to appreciate over the next week if, as of a weekly signal date, *either* of the market indicators are favourable, i.e., (i) the Core Asset has been trending upward over a preceding period of up to 120 Index Business Days, *or* (ii) the market perception of risk measured by the Citi GMRI Index is low relative to levels measured over the preceding year. Conversely, the strategy also assumes that the Core Asset is likely to depreciate over the next week if, as of a weekly signal date, *both* the market indicators are unfavourable, i.e., (i) the Core Asset has been trending downward over a preceding

period of up to 120 Index Business Days, and (ii) the market perception of risk measured by the Citi GMRI Index is high relative to levels measured over the preceding year.

If the Signal is not binary (i.e., is equal to 25%, 50% or 75%) on a weekly signal date, the strategy assumes an increasing level of probability that the Core Asset is likely to appreciate over the next week depending on the levels of the market indicators. These assumptions may not prove correct for the simple reason that it is impossible to predict the future, as well as for the other reasons more fully described below. If it does not prove correct, the strategy underlying the Index may not be successful and the Index may experience significant declines. On any weekly signal date, based on the market indicators, the methodology provides exposure to either the Core Asset or the Reserve Asset, or alternatively, a combination of both. The Leveraged RoRo Total Return Sub-Index methodology can therefore result in limited exposure to the Core Asset or the Reserve Asset and therefore will not be appropriate for Investors seeking exposure only to the Core Asset or the Reserve Asset, respectively.

Investors in Index Linked Products should be aware of this limitation in considering their investment decision.

# 3. STRATEGY RISK - FX ACTIVE STRATEGY SUB-INDEX (AND CITIFX<sup>SM</sup> ACTIVE SHORT STRATEGY (USDJPY) INDEX)

The algorithmic strategies embedded in the methodology of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index track the performance of notional short positions in USD and notional long positions in the JPY, in each case using notional one-month forward exchange contracts, in times of expected JPY appreciation against USD based on observations of a series of factors: (i) high macroeconomic risk aversion (as measured by the Citi Global Macro Risk Index, being a rules-based proprietary index which measures the level of risk aversion which prevails in global financial markets using a set of observable financial indicators computed across different asset classes), and (ii) interest rate spread contraction (as measured by observing interest spreads between USD and JPY for three tenors: 2 years, 5 years and 10 years. However, such factors may not necessarily be correlated to high macro-economic risk aversion or interest rate spread contraction, and irrespective of whether such factors are so correlated those factors may not indicate times of JPY appreciation against USD.

The CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index, and by extension the Index, may be subject to a number of risks associated with foreign exchange transactions. Prospective investors in any Index Linked Product should be familiar with investments in the broad global financial markets, financial instruments, and indices generally. Global economic, financial and political developments, among other things, may have a material effect on the performance of the constituents of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index, which may in turn have a material adverse effect on the performance of the Index. In addition, the 2-year, 5-year and 10-year interest rate spreads may be affected by a number of factors including liquidity, supply and demand, market activity and regulatory intervention, natural disaster and other geopolitical circumstances, for example, which may similarly have a material adverse effect on the performance of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index, and in turn the Index. Consequently, the methodology of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index may not be successful and investors considering an investment in an Index Linked Product should be familiar with such risks generally.

The performance of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index and, as a result, the FX Active Strategy Sub-Index, may be volatile. The Index Administrator makes no representations as the ability of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index to perform in a certain manner. There can be no assurance that the FX Active Strategy Sub-Index Level will be positive over time. The value of the FX Active Strategy Sub-Index Level can go down as well as up. Various market

factors and circumstances at any time and over any period could cause the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index to generate negative notional returns and the FX Active Strategy Sub-Index Level to be negative, which will have an adverse impact on the performance of the Index.

Investors in Index Linked Products should be aware of these limitations in considering their investment decision.

Further information relating to the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index is available free of charge upon request to the Index Administrator.

#### 4. RISKS ASSOCIATED WITH USING THE CITI GMRI INDEX AS A MACRO RISK INDICATOR

The Leveraged RoRo Total Return Sub-Index uses the Citi GMRI Index (which aims to identify periods of increased risk aversion in financial markets) as a weekly signal for the purpose of determining a reallocation of its exposure to the Reserve Asset, the Core Asset or a combination of both.

If the Citi GMRI Index fails to successfully identify market risk aversion levels, this may affect a favourable notional allocation of the Leveraged RoRo Total Return Sub-Index (and may mean that the Leveraged RoRo Total Return Sub-Index is exposed to the Core Asset (or the Reserve Asset or a combination of both) in circumstances where the Leveraged RoRo Total Return Sub-Index would perform better if it were exposed to the Reserve Asset (or the Core Asset or a combination of both), and the Leveraged RoRo Total Return Sub-Index will underperform other assets and may decline in value. By extension, in such circumstances the Index may underperform other assets and may decline in value.

The Leveraged RoRo Total Return Sub-Index, and by extension Index, may underperform a direct investment in the Variable RoRo Assets in an environment of frequently changing trends in respect of the Variable RoRo Assets as these trends may be too short for the Citi GMRI Index influencing the allocation within the Leveraged RoRo Total Return Sub-Index to detect.

The Citi GMRI Index aims to measure the relative level of risk aversion in financial markets using a one-year rolling window to determine whether the current environment can be characterised by a relatively high or low risk aversion level. By its nature it is backward-looking and may fail to be a useful indicator of future market returns and may not accurately predict future levels of macroeconomic or market risk. The Citi GMRI Index was designed as a general reference tool and there may be other indicators which would be more successful as an asset allocation signal.

The Citi GMRI Index relies on certain macroeconomic and technical indicators including emerging market sovereign spreads, U.S. credit spreads, the cost of credit protection against corporate default and implied foreign exchange, equity and interest rate volatilities. It is expected that certain (though not all) types of market risk may be signalled by an observation of these indicators. There is no guarantee that such indicators are currently good proxies for signalling market risk. Equally, social, economic and political developments in future may cause the macroeconomic and technical indicators embedded within the Citi GMRI Index to become unsuitable proxies for signalling risk. These things may render the Citi GMRI Index unsuitable for its intended purpose.

Further information relating to the Citi GMRI Index, including specific risks, is available free of charge upon request to the Index Administrator.

#### 5. RISKS ASSOCIATED WITH USING THE TREND INDICATOR AS A SIGNAL

The Leveraged RoRo Total Return Sub-Index allocates exposure to the Variable RoRo Assets according to the "trend" of the Core Asset, as determined by a monthly signal that uses the Trend Indicator (which aims to identify whether the Core Asset is in an upward trend or a downward trend). If these trend signals fail to successfully identify asset trends, the Leveraged RoRo Total Return Sub-Index (and by extension, the Index) will underperform other assets and may decline in value. The trend assessment by the Trend Indicator (when combined with the macro risk indicator) is simplified into a 5-level output between 100% and 0%. It does not purport to provide or replace a nuanced assessment of investing in each Variable RoRo Asset.

The Trend Indicator in the Index methodology uses a linear regression algorithm with a variable observation period to identify positive or negative momentum in the price movements of the Core Asset, on the assumption that the performance of the Core Asset may exhibit "trending" behaviour. There is no guarantee that this method will work under all market conditions, for instance, in volatile market conditions where the Core Asset experiences large price movements or where the Core Asset exhibits mean reversion tendencies (the theory of mean reversion says that asset prices tend to fluctuate around and revert to a particular level (the "mean") over time) or where there is no clearly discernable trend. If the performance of the Core Asset constantly changes direction or rapidly reverts to its long-term mean after exhibiting an upward trend, then the Trend Indicator (and by extension, the Signal) may not work as intended. The performance of the Leveraged RoRo Total Return Sub-Index (and by extension, the Index) may be adversely affected in any of these cases.

Momentum investing may not necessarily outperform other investment methodologies. There are other more common methods for identifying market trends, such as comparing moving averages with different lengths, which may with hindsight prove to be more successful than the Trend Indicator. The Trend Indicator may fail to accurately identify trends or predict the future direction of the Core Asset. If a trend in respect of the Core Asset exhibits a sudden change of direction, there may be a significant time lag before the Trend Indicator identifies the new trend because the observation period is up to 120 Index Business Days long.

The Trend Indicator is, by its nature, backward-looking and may fail to be a useful indicator of future performance, for example, if it identifies a new trend which does not continue.

#### 6. RISKS RELATING TO FOREIGN EXCHANGE EXPOSURE

Prospective investors in an Index Linked Product linked to the Index should be familiar with currency exchange markets generally.

Foreign exchange rates may be volatile and are influenced by many factors. Foreign exchange rates may vary considerably over the term of an instrument linked to the Index. Foreign exchange rates are influenced by supply and demand, which in turn are influenced by existing and expected rates of inflation, existing and expected interest rate levels, the balance of payments between the relevant countries and government surpluses or deficits in the relevant countries, among other factors. Foreign exchange rates may be especially volatile during times of financial turmoil, as capital can flow very quickly out of regions that are perceived to be impacted disproportionately by such turmoil. The CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index tracks the return achieved by a notional portfolio of specified foreign exchange contracts, in respect of which the profit or loss from time to time will be affected not only by changes in exchange rates between USD and JPY, but also by changes in applicable exchange rates where there is a need to convert from the currency denomination of a relevant forward contract to another currency.

Foreign currencies represent the legal tender of one or more foreign nations and normally are not linked to any intrinsically valuable commodity (such as precious metals). Any transaction involving foreign currencies, including instruments linked to indices based on OTC foreign currency contracts, involves risks not common to investments denominated entirely in a person's domestic currency. Such enhanced risks include (but are not limited to) the risks of political or economic policy changes in a foreign nation, which may substantially and permanently alter the conditions, terms, marketability or price of a foreign currency. For example, some governments intervene in markets to affect the values of their currencies, which may have an impact on the performance of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index and, in turn, the Index.

Foreign currency markets are subject to periodic disruptions and distortions due to many factors, including new laws and regulations and the participation of speculators and governments in the markets. These circumstances could affect exchange rates and, consequently, the value of the Index. These economic and political factors are independent of other market forces of supply and demand.

Therefore, Index Linked Products are appropriate only for persons who understand and are willing and financially able to assume the economic, legal and other risks involved in foreign currency-linked transactions (including, but not limited to, the risks noted above).

#### 7. TOTAL RETURN AND INTEREST RATE RISK

The Leveraged RoRo Total Return Sub-Index is a "total return" index, which means that, in general terms, the Leveraged RoRo Total Return Sub-Index includes the performance of an interest rate (the U.S. Federal Funds Effective Rate) representing the return on a notional investment in cash. However, the Leveraged RoRo Total Return Sub-Index does not employ a standard "total return" methodology due to the potential for the relevant Leveraged RoRo Total Return Sub-Index Level to use leverage.

The Leveraged RoRo Total Return Sub-Index is calculated on a daily basis by reference to the RoRo Level, which itself is determined using the performance of the Core Asset Level, the Reserve Asset Level and the JGBFX Level. In the final stage of the Leveraged RoRo Total Return Sub-Index Level calculation an amount is added reflecting the returns that would be available from an investment in the Index Base Currency at a benchmark overnight interest rate being the U.S. Federal Funds Effective Rate.

Investing in an Index Linked Product linked to the Leveraged RoRo Total Return Sub-Index may underperform a return that could be achieved from a direct investment in the selected assets comprised in the Index from time to time. Additionally, if the U.S. Federal Funds Effective Rate decreases, the performance of the Index may suffer.

#### 8. NOTIONAL ALLOCATION TO THE CORE ASSET

If at any time the Signal has selected the Core Asset to be a constituent in the RoRo Level, then the Index will be exposed to two distinct assets classes: equities and commodities, as further described in Part E (*Data*) above until, at least, the next RoRo Rebalancing Date (and possibly longer, depending on the Signal observed in respect of the next RoRo Rebalancing Date). Accordingly, the Index may be subject to all the risks of investing in equities and commodity indices. Investors considering an investment in an Index Linked Product linked to the Index should be familiar with each of these asset classes generally.

There is no guarantee that a previously-observed upward price trend in the Core Asset will continue in the future or that the Core Asset will in fact perform positively in a market where there is perceived

low risk aversion and if the Core Asset does not perform as anticipated by the Index methodology, the Index Level will be adversely affected.

#### 9. NOTIONAL ALLOCATION TO THE RESERVE ASSET

If at any time the Signal has selected the Reserve Asset to be a constituent in the RoRo Level, then the Index will be exposed to fixed income assets (i.e., a Eurozone sovereign debt index, a Japanese government debt index, an Australian government debt index and a U.S. government debt index, respectively), as further described in Part E (*Data*) above until, at least, the next RoRo Rebalancing Date (and possibly longer, depending on the Signal observed in respect of the next RoRo Rebalancing Date).

The Index strategy is based on the assumption that the performance of the Reserve Asset is expected to be a lower-risk, lower-reward alternative to the Core Asset. However, the level of the Reserve Asset is subject to market fluctuations just as the Core Asset is and there is no guarantee that the Reserve Asset will not prove to be as risky, or even riskier, than the Core Asset. The Reserve Asset is not risk-free and if the Reserve Asset Level declines when the Index has exposure to it, the Index Level will be adversely affected.

#### 10. NOTIONAL ALLOCATION TO THE JGB INDEX

The FX-Adjusted JGB Index will be a constituent in the RoRo Level, and therefore the Index may be exposed to Japanese government debt risk through either a long or short notional position in bond futures linked to such Japanese debt, via the JGB Index. The signal used in the JGB Index determines whether the JGB Index is subject to a long exposure, a short exposure or no exposure to a notional investment position in 10-year Japanese Government Bond futures contracts traded on the Osaka Stock Exchange (such notional investment being the "Passive Strategy"). The signal used in the JGB Index reflects both a momentum indicator and an economy watchers indicator. These signals quantify macro-economic phenomena; however, other ways of quantifying macro-economic phenomena may exist, and may give different results. Also, the use of such indicators to quantify macro-economic phenomena is subject to the risk of the occurrence of unexpected macro-economic events, including without limitation changes in the policies of the Government of Japan.

The momentum indicator used in the JGB Index is based on four moving averages of an index level which tracks the performance of the Passive Strategy. There is no guarantee that the comparison of such moving averages will accurately identify trends in, or predict the future direction of movements in, the level of the Passive Strategy. By following the rules governing the momentum indicator, the JGB Index might not identify the Passive Strategy as being in an upward trend when it is trending upwards based on the most recent market behaviour, or as being in a downward trend when it is trending downwards based on the most recent market behaviour. Furthermore, the rules governing the momentum indicator identify a change in the trend of the Passive Strategy if its short-term average crosses its long-term average. However, it may take significantly longer than a short-term observation period before such a cross takes place. As a result of this delay in identifying a change in trend, the JGB Index may retain an allocation to the Passive Strategy for longer than it should. The momentum indicator may also be ineffective in markets which do not trend downwards or upwards for a sustained period. In more volatile markets, where movements rapidly change direction, or where there is no discernible trend in movements, the momentum indicator may identify a trend which does not continue. The performance of the JGB Index will be severely affected if an allocation to the Passive Strategy is established on the basis of recent market behaviour which indicates a particular trend which in the event is reversed.

The economy watchers indicator used in the JGB Index is based on the changes in a published quantification of the general perception of the economic outlook of the Japanese economy, the

Economy Watchers Survey (Future Conditions DI). The JGB Index methodology may not perform as intended which may result in the JGB Index underperforming a similar investment in bond futures on Japanese government debt. Knowledge of the methodology that is used to determine the Economy Watchers Survey is essential to evaluate the JGB Index. Additionally, in common with many published economic statistics, the Economy Watchers Survey may be revised after its original publication. If the level of the Economy Watchers Survey is revised after its publication, and that revision occurs after a cut-off date, then the determination of the signal in the JGB Index will not reflect that revision.

The JGB Index has an annualised volatility target of 5%. However, the volatility targeting methodology of the JGB Index may not succeed in maintaining the annualised volatility of the level of the JGB Index at the volatility target specified in respect of it. The actual annualised volatility of the level of the JGB Index may be higher than or lower than the volatility target that is specified in respect of it.

The RoRo Level has a fixed exposure of 50% to the FX-Adjusted JGB Index and therefore if the level of the FX-Adjusted JGB Index increases, the impact of that increase on the RoRo Level will be dampened versus the impact that would be had if the exposure of the RoRo Level to the FX-Adjusted JGB Index were greater.

Investments in futures contracts involve certain risks. The price of a futures contract on a bond will generally be at a premium or discount to the underlying bond's price. An investment linked to bond futures contracts may provide a different return than if such investment were linked to the relevant bond. Investments in futures contracts involve certain other risks, including potential illiquidity due to imposition of daily limits on traded futures contracts prices. Investors also do not participate in any interest yields from a hypothetical fully collateralised investment in bond futures contracts.

The Index strategy is based on the assumption that the performance of the JGB Index is expected to be a lower-risk, lower-reward alternative investment. However, the level of the JGB Index is subject to market fluctuations just as investments in equities are and there is no guarantee that the JGB Index will not prove to be as risky, or even riskier, than investments in equities. The JGB Index is not risk-free and if the JGB Level declines then the Index Level will be adversely affected.

Further information relating to the Citi JGB Futures Active Strategy (Target Volatility 5%) XI Index is available free of charge upon request to the Index Administrator.

# 11. LIMITED DIVERSIFICATION AND CORRELATION RISK

The Index offers the potential to achieve some diversification amongst a number of different constituents and asset classes. However, the Index may be less diversified than an investment in any fund, investment portfolio or other product which invests in or tracks a diversified investment portfolio, and therefore could experience greater volatility and may underperform such other investment products or a more diversified index.

The strategy embedded within the Index methodology set out in these Index Conditions is premised on the Reserve Asset and the Core Asset being uncorrelated or inversely correlated, particularly during times of market stress and/or a falling Core Asset Level (i.e., periods when the Index is intended to have more exposure to the Reserve Asset), and an assumption that the Reserve Asset (and the VR Constituents thereof) will perform differently from the Core Asset (and the VR Constituents thereof). The thesis underlying the Index methodology is that, if the Index determines that the Core Asset Level is likely to decline over the next week/period, the Index may avoid losses and even potentially generate positive returns over that week/period by allocating greater notional exposure to the Reserve Asset Level instead of the Core Asset Level. However, these expectations

will only be fulfilled if the performance of the Core Asset is uncorrelated or negatively correlated with the Reserve Asset in practice. If, in fact, the Reserve Asset also declines over that next week/period, then the Index will decline regardless of whether its notional exposure is allocated entirely to the Core Asset or the Reserve Asset. If the Core Asset and the Reserve Asset tend to decline at the same time (in other words, if they prove to be positively correlated) and FX Active Strategy Sub-Index and the FX-Adjusted JGB Index both decline, the Index's strategy will not be successful, and the Index may experience significant declines.

#### 12. NO GUARANTEE OF RETURN

The Index methodology cannot guarantee that tracking the Leveraged RoRo Total Return Sub-Index and the FX Active Strategy Sub-Index will result in an increased Index Level over time. It is possible that each of the Core Asset, the Reserve Asset, the FX-Adjusted JGB Index and the FX Active Strategy Sub-Index perform negatively, such that the negative overall performance of the Index is assured, regardless of whichever of the Core Asset or the Reserve Asset is algorithmically selected by the Signal to be reflected in the RoRo Level. It is also possible that the Core Asset and the Reserve Asset perform as anticipated but the FX-Adjusted JGB Index and/or the FX Active Strategy Sub-Index performs negatively, such that the Index Level declines as measured from the Index Start Date.

#### 13. THE SIGNAL IS BACKWARD LOOKING AND MAY NOT BE ACCURATE

The algorithmic selection of either the Core Asset or the Reserve Asset as constituents of the RoRo Level tracked by the Index from time to time is embedded within the Index methodology and is dependent on the output of the Signal (a value of "1" provides exposure to the Core Asset and ignores the performance of the Reserve Asset whereas a value of "0" provides exposure to the Reserve Asset and ignores the performance of the Core Asset, while a value of "0.25", "0.50" or "0.75" provides exposure to each of the Core Asset and the Reserve Asset, proportionately, e.g., a value of "0.25" provides 25% exposure to the Core Asset and 75% exposure to the Reserve Asset), observed on a weekly basis. The output of the Signal is itself algorithmically determined by the prevailing values of the Macro Indicator and the Trend Indicator.

The anticipated role of the Signal is to embed an assessment of the prevailing macroeconomic and market risks in selecting between the Core Asset and/or the Reserve Asset to form the Leveraged RoRo Total Return Sub-Index from time to time.

However, there is no assurance that the Signal will perform as intended. Although the Macro Indicator aims to be a forward-looking or "leading" indicator (as opposing to a "lagging" indicator), the Macro Indicator is calculated on the basis of the current macro-economic and market environment and expectations, which may in turn be influenced by past performance. So even though the market, on the Signal Date, may perceive a low level of risk associated with the Core Asset, the Core Asset may nevertheless decline significantly over the next week.

The Trend Indicator is also a "lagging" indicator as it is calculated on the basis of historical information as to recent price trends. By virtue of using these two indicators as inputs, the Signal itself becomes a backward looking indicator that may not accurately predict future levels of macroeconomic or market risk.

The failure of the Signal to work as intended may undermine the operation of the Index methodology as a whole, resulting in an unsatisfactory performance of the Index Level.

#### 14. THE SIGNAL RELIES PARTLY ON REGRESSION ANALYSIS

The Index uses a linear regression algorithm with a variable observation period to identify positive or negative momentum in the price movements of the Core Asset (the Trend Indicator), on the assumption that the performance of the Core Asset may exhibit "trending" behaviour. There is no guarantee that this method will work under all market conditions, for instance, in volatile market conditions where the Core Asset experiences large price movements or where the Core Asset exhibits mean reversion tendencies (the theory of mean reversion says that asset prices tend to fluctuate around and revert to a particular level (the "mean") over time) or where there is no clearly discernible trend. If the Core Asset performance constantly changes direction or rapidly reverts to its long-term mean after exhibiting an upward trend, then the Trend Indicator (and by extension, the Signal) may not work as intended. The performance of the Leveraged RoRo Total Return Sub-Index, and by extension the Index, may be adversely affected in any of these cases.

Momentum investing may not necessarily outperform other investment methodologies. There are other more common methods for identifying market trends, such as comparing moving averages with different lengths, which may with hindsight prove to be more successful than the Trend Indicator.

#### 15. THE SIGNAL MAY NOT WORK GOING FORWARD

The Macro Indicator uses the Citi GMRI Index, which aims to measure the relative level of risk aversion in financial markets using a one-year rolling window to determine whether the current environment can be characterised by relatively a high or low risk aversion level. The Citi GMRI Index works on the basis of testing certain macroeconomic and technical indicators including emerging market sovereign spreads, U.S. credit spreads, the cost of credit protection against corporate default and implied foreign exchange, equity and interest rate volatilities. It is expected that certain (though not all) types of market risk may be signalled by an observation of these indicators. There is no guarantee that such indicators are currently good proxies for signalling market risk. Equally, social, economic and political developments in future may cause the macroeconomic and technical indicators embedded within the Macro Indicator to become unsuitable proxies for signalling risk. These things may render the Macro Indicator (and by extension, the Signal) unsuitable for its intended purpose.

Further information relating to the Citi GMRI Index is available free of charge upon request to the Index Administrator.

## 16. THE SIGNAL IS A SIMPLIFIED MEASURE

The Signal takes into account the prevailing macroeconomic and market risks and simplifies its assessment into a limited output of "1", "0.75", "0.50", "0.25" or "0". It does not purport to provide or replace a nuanced assessment of macroeconomic and market risks, and does not take into account all possible risks, whether known or unknown. The output of the Signal is merely an algorithmic parameter of the Index methodology and should not be used independently to drive trading or investment decisions in other contexts.

The Signal gives expression to a simplified model of macroeconomic and market risk and is used to select either the Core Asset or the Reserve Asset to be the RoRo Level in the context of this model's simplified risk assessment. Therefore, it is crucial to understand that the Signal is not designed to be a pure measure of momentum. When called upon, the Signal may select the Core Asset if it has recently exhibited an upward price trend although there is no guarantee that it will do so in all circumstances.

If the Signal is not successful this may affect a favourable exposure to the Core Asset (or the Reserve Asset) in circumstances where the Leveraged RoRo Total Return Sub-Index, and by extension the Index, would perform better if it were exposed to the Reserve Asset (or the Core Asset), and the Leveraged RoRo Total Return Sub-Index, and by extension the Index, will underperform other assets and may decline in value.

#### 17. USE OF LEVERAGE

The maximum exposure of the Index to the RoRo Level is 500% (five times the performance of the RoRo Level). It should be noted that whenever the exposure exceeds 100%, the Index will have a leveraged exposure to the RoRo Level. In these circumstances, the performance of the RoRo Level, either positive or negative, will be magnified at the level of the Index. The use of leverage will magnify the adverse effect on the level of the Index if the RoRo Level declines in value.

The use of leverage means that the level of the Leveraged RoRo Total Return Sub-Index could fall to zero even if the level of the RoRo Level does not fall to zero. If the level of the Leveraged RoRo Total Return Sub-Index falls to zero, the level of the Leveraged RoRo Total Return Sub-Index will remain at zero and will never regain any positive performance.

Additionally, the exposure of the Index to the FX Active Strategy Sub-Index Level is 250% (2.5 times the performance of the FX Active Strategy Sub-Index). The Index will therefore have a leveraged exposure to the FX Active Strategy Sub-Index and the performance of the FX Active Strategy Sub-Index, either positive or negative, will be magnified at the level of the Index. The use of leverage will magnify the adverse effect on the level of the Index if the FX Active Strategy Sub-Index declines in value.

#### 18. VOLATILITY TARGET

The exposure of the Leveraged RoRo Level to the RoRo Level is adjusted, potentially on a daily basis, in accordance with a formula which seeks to maintain an overall specified annualised volatility level for the Leveraged RoRo Level of not more than 30% (the "Volatility Target"). The exposure is determined by reference to the recent volatility of the RoRo Level. Although the volatility of the RoRo Level and the exposure of the Leveraged RoRo Level thereto is determined and adjusted daily, the actual volatility of the Leveraged RoRo Level may be greater or less than the Volatility Target. Further, the application of the Volatility Target is based on the historical volatility of the Leveraged RoRo Level over a 21 Index Business Day period, as well as a buffer of 10%, before making any adjustment to the exposure of the Leveraged RoRo Level. This means there may be a significant period of time before the Leveraged RoRo Level increases or reduces exposure to account for any increase in volatility, this could result in a lower Index Level than would prevail if the exposure had been adjusted more quickly.

There can be no assurance that the volatility targeting mechanism used to construct the Leveraged RoRo Level will be successful or that the Leveraged RoRo Level will outperform the RoRo Level or any alternative volatility adjusted index that might be constructed by reference to the RoRo Assets.

The volatility target is subject to a volatility buffer of 20%, which means that, broadly, there will be no change in the exposure of the Leveraged RoRo Total Return Sub-Index to the RoRo Level unless the absolute difference between the theoretical exposure determined by the Index methodology and the actual exposure is greater than 20%. Whilst the aim of the volatility buffer is to avoid overly frequent changes in exposure, and its associated costs, the consequence of this feature is that the exposure of the Leveraged RoRo Total Return Sub-Index to the RoRo Level is only likely to change where there is a significant spike in market volatility.

#### 19. FX RISK

The Index Base Currency is USD whereas the JGB Index and the FX-Adjusted Constituents are denominated in non-USD currencies. The Index applies an exchange rate hedging technique ("**FX Hedging**") which is intended to link the Index Level to changes in the performance of the JGB Index and such FX-Adjusted Constituents while minimising the impact of changes in the currency in which such FX-Adjusted Constituents are denominated against USD.

While FX Hedging aims to reduce the impact of changes in exchange rates, it may not entirely remove this, and such changes in exchange rates may contribute to a decline in the Index Level. Investors should note in particular that foreign exchange rates can be volatile and move in an unanticipated fashion. Historic exchange rates should not be considered indicative of future exchange rates.

#### 20. EFFECT OF NOTIONAL FEES AND COSTS

The Index can be simply conceived of as a strategy which invests in the Leveraged RoRo Total Return Sub-Index and the FX Active Strategy Sub-Index. The Leveraged RoRo Total Return Sub-Index can be simply conceived of as a strategy which invests in the Leveraged RoRo Level and the Overnight Index. The Leveraged RoRo Level can be simply conceived of as a strategy which invests in the FX-Adjusted JGB Index and the RoRo Assets, and switches its investment in the RoRo Assets between the Reserve Asset and the Core Asset and adjusts its exposure thereto upon the activation of certain triggers.

Switching the focus of investment and varying the level of exposure require certain notional transaction and replication costs to be taken into account for the Index to be an accurate measure the strategy's effectiveness. Investors in any Index Linked Product are advised to scrutinise and understand the various notional fees and costs set out in these Index Conditions and in the Index Conditions relating to the Constituent indices because all of them will ultimately serve to act as a drag on the Index Level and restrict the return available (if any) under such Index Linked Product. The cumulative effect of these notional fees and costs may be significant and will adversely affect the performance of the Index. An overview of the fees and costs applicable to the Index and the Constituents of the Index is provided in Part B (Key Information) and Part C (Overview of the Index) above, and more detail in respect of the fees and costs applicable to the Index is provided in Part D (Calculation of the Index Level).

# 21. PERFORMANCE RISK

The Index may underperform the RoRo Level and other indices with the same constituents, where those other indices employ a different weighting scheme or scheme to manage volatility. The Index methodology does not seek to outperform any other equity benchmark in absolute terms and may not outperform at all.

Index Linked Products based on the Index methodology cannot and do not guarantee absolute returns in any situation.

#### 22. REBALANCING FREQUENCY LIMITATIONS

The frequency of rebalancing of the Leveraged RoRo Total Return Sub-Index methodology is potentially weekly. The Index methodology only observes the Signal (which is a blend of the output of two market indicators: the Macro Indicator and the Trend Indicator) weekly, which means that the composition of the Leveraged RoRo Total Return Sub-Index is determined with respect to the Signal as observed on each weekly date, at which point the composition of the Leveraged RoRo Total

Return Sub-Index is fixed for a week in the Core Asset or the Reserve Asset or a combination of each, subject to the occurrence of holidays and Disrupted Days. The percentage weights of the VR Constituents represented within the Core Asset and the Reserve Asset are fixed and will be reset on each VR Constituent Weight Reset Date (if their respective weightings have changed as a result of market movements) – the Index methodology does not contain any mechanism for varying the weightings of the VR Constituents within the Core Asset or the Reserve Asset.

This may mean that the Leveraged RoRo Total Return Sub-Index is exposed to the Core Asset (or the Reserve Asset) in circumstances where the Leveraged RoRo Total Return Sub-Index would otherwise have been exposed to the Reserve Asset (or the Core Asset) had the market indicators been observed over a different period and the Signal determined on a different day, perhaps a few days earlier or later. Accordingly, this may result in significant falls in the Index Level where the Leveraged RoRo Total Return Sub-Index is exposed to the Core Asset and the Core Asset suffers a sudden sharp change in trend.

The Leveraged RoRo Total Return Sub-Index may underperform a direct investment in the VR Constituents of the Core Asset in an environment of frequently changing trends as these may be too short for the market indicators influencing the Signal to detect or may result in frequent consecutive rebalancings at higher cost.

#### 23. INDEX METHODOLOGY LIMITATIONS

The performance of the Index is dependent on the pre-defined rules-based methodology set out in the Index Conditions. There is no assurance that other selection and weighting methodologies for the Constituents would not result in better performance than the methodology set out in the Index Conditions.

#### 24. FIXED ALGORITHMIC MODEL PARAMETERS

In common with all algorithmic strategies, the Index uses a rules-based methodology which contains fixed parameters. For example, (i) the Signal that determines whether the Core Asset or the Reserve Asset or a combination of each is to be included in the RoRo Level is determined on a weekly basis; (ii) the rebalancing of the Leveraged RoRo Total Return Sub-Index occurs on a weekly basis and the weightings of the VR Constituents within the Core Asset and the Reserve Asset are fixed, (iii) the period used to determine the Signal is up to 120 Index Business Days, (iv) realised volatility (for the purpose of determining the exposure of the Index to the RoRo Level) is calculated by reference to the volatility of the RoRo Level over a fixed number of days (being 21 Index Business Days), and (v) the annualised volatility target for the Leveraged RoRo Total Return Sub-Index is set at 30% (with a volatility buffer of 20%), which is deemed to be indicative of the limits beyond which the realised volatility of the RoRo Level will hinder the performance objective of the Index. The Index methodology assumes that these parameters and the other fixed parameters used in the calculation of the Index are reasonable in the context of the Index. However, alternative parameters (for instance, more or less frequent rebalancing, a longer or shorter period for calculating realised volatility) could have a positive effect on the performance of the Index.

#### 25. MODEL PRECISION

The Index methodology is a complex calculation model which is sensitive to the precision of both the original inputs and the interim calculations. Each of these are in turn dependent on the rounding conventions used in the financial market for the primary data and the rounding conventions determined appropriate by the Index Calculation Agent at each stage of the calculation process.

#### 26. LIMITED OPERATING HISTORY

The Index was launched by the Index Administrator on the specified Index Launch Date and has been calculated by the Index Calculation Agent for the period from the specified Index Start Date. Any back-testing or similar performance analysis performed by any person in respect of the Index must be considered illustrative only and may be based on estimates or assumptions not used by the Index Calculation Agent when determining the Index Level.

# General Risk Factors

#### 1. INTRODUCTION

The Index Level may go down as well as up, depending on the performance of the Constituents, and their effect on the strategy that the Index has been developed to reflect. There can be no assurance as to the future performance of the Index, and the Index Level on any day may not reflect either its past performance or its future performance. The strategy that the Index has been developed to reflect may not be successful, and other strategies using the Constituents and alternative indices and benchmarks may perform better than the Index.

The Index represents the weighted value of the Leveraged RoRo Total Return Sub-Index and the FX Active Strategy Sub-Index. The Index has been developed to be "investable", but the methodology set out in these Index Conditions is quantitative, which means that the Index Level is determined according to the rules and the processes set out in these Index Conditions on a purely notional basis, without reference to any actual investment in any of the Constituents.

The result of any such actual investment may be different to the performance of the Index. In particular, any notional fees or costs deducted in the calculation of the Index Level, and any proportionate amount included in the Index Level of any dividend, distribution or payment in respect of any Constituents, may be different from those arising in respect of any actual investment in any Constituent or any combination of Constituents.

Prospective investors in any Index Linked Product should be familiar with investments in the global financial and commodity markets, financial instruments and indices generally.

#### 2. RISKS IN RESPECT OF THE VR CONSTITUENTS AND RORO ASSETS

The performance of the Index is dependent on the performance of all of the Constituents contained in the Index.

Fluctuations in the level, price, rate or value (as applicable) of the Constituents contained in the Index from time to time will directly affect the Index Level. The extent to which fluctuations in the Constituent Closing Level or Closing Level (as the case maybe) of a particular Constituent will affect the Index Level will, amongst other things, depend on the weight attributed to that Constituent at the relevant time.

Please refer to the following paragraphs for a discussion of the particular general market risks arising in respect of the classification of each Constituent (as applicable).

#### Commodity

Prospective investors in an Index Linked Product linked to an Index which has exposure to a commodity, whether through one or more Constituents each of which is a Commodity Index or one or more Constituents each of which is an exchange-traded derivative contract (i.e. an ETD Contract), should be familiar with commodities generally. Therefore the risks discussed under the headings "Commodity Index" and "ETD Contract (exchange-traded derivative contract)" are also relevant.

Commodity markets can be highly volatile. In addition to being affected by general economic and market factors, including without limitation (1) weather; (2) governmental, agricultural, commercial and trade programmes and policies introduced to influence commodity prices; (3) global political and economic events; and (4) changes in interest rates, commodity markets are also subject to temporary distortions or other disruptions caused by various factors including (a) changes in supply and demand; (b) any potential lack of liquidity in the market; (c) the participation of speculators; and (d) government regulation and intervention.

### Commodity Index

Prospective investors in an Index Linked Product linked to a Constituent that is or contains a Commodity Index should be familiar with commodity indices generally. The level of a Commodity Index is generally based on the value of the commodities and/or the exchange-traded derivative contracts (i.e. ETD Contracts) contained in the Commodity Index, and therefore the risks discussed under the heading "Commodity" and "ETD Contract (exchange-traded derivative contract)" are also relevant.

## "Rolling" futures contracts

The trend in the level of a Commodity Index may not correlate with the trend in the price of a particular commodity if the Commodity Index uses a "roll" mechanism by which exposure in the Commodity Index to a futures contract which is approaching delivery/expiry is replaced with an exposure to another futures contract which has a later delivery/expiry date. The level of the Commodity Index may not therefore fully reflect any increase or decrease in the price of the relevant commodity.

# • ETD Contract (exchange-traded derivative contract)

Prospective investors in an Index Linked Product linked to a Constituent that is or contains an ETD Contract (whether a futures contract or an option contract) should be familiar with futures contracts and option contracts generally. The value and price volatility of both the ETD Contracts contained in the Index and of the assets or reference factors underlying such ETD Contracts must be considered.

# Daily Limits

ETD Contracts are traded on exchanges, and are subject to regulations which limit the extent to which the prices of ETD Contracts can fluctuate during a single trading day. These regulations are commonly referred to as "daily limits". Under these regulations, on a particular trading day, no trades may be executed at prices beyond the daily limits. Once the price of an ETD Contract has increased or decreased by an amount equal to the applicable daily limit, a trader cannot take a position or liquidate a position unless he is willing to effect the trade at or within the applicable daily limit. This could prevent the holder

of an ETD Contract from promptly liquidating unfavourable positions and subject him to substantial losses.

#### FX Rate

Prospective investors in an Index Linked Product linked to a Constituent that is or contains an FX Rate should be familiar with currency exchange markets generally.

Movements in currency exchange rates may be subject to significant fluctuations which may not correlate with changes in interest rates or other indices.

Emerging market currencies may exhibit greater volatility and less certainty as to future levels than other currencies. Emerging market currencies are highly exposed to the risk of a currency crisis.

Currency exchange markets may be affected by complex economic and political factors, including government action to fix or support the value of a currency, or to impose exchange controls. These economic and political factors are independent of other market forces of supply and demand.

#### Interest Rate

Prospective investors in an Index Linked Product linked to a Constituent which has exposure to interest rates should be familiar with interest rates generally.

Interest rate markets can be highly volatile. Interest rates are affected by a complex range of macro-economic factors, including, for example, the decisions and public statements of central banks and monetary authorities; government policies; expectations as to future levels of inflation; the prices of assets, goods and services; levels of economic activity; and confidence in the relevant economies generally.

#### 3. PERFORMANCE OF THE INDEX

# 3.1 The performance of the Index may be significantly lower than the performance of certain Constituents

The performance of the Index could be significantly less than the performance of alternative indices and benchmarks with similar risk characteristics, even if some of the Constituents have generated significant positive returns. The levels, prices, rates or values ("Values") of the Constituents may move in different directions at different times compared to each other, and underperformance by one or more of the Constituents may reduce the performance of the Index as a whole, even if other Constituents generate positive returns.

# 3.2 The correlation between the Constituents may change unpredictably

Correlation is the extent to which the values of the Constituents increase or decrease to the same degree at the same time. If the correlations among the Constituents change, the level of the Index may be adversely affected.

#### 3.3 The Index may be subject to currency rate risk

The Index may be exposed to currency rate risk because the values of Constituents may be converted into the base currency of the Index for the purposes of calculating the level of the Index if those values are expressed in a different currency. Currency rates may be volatile and move in an

unexpected way. Historical currency rates should not be considered indicative of future currency rates.

#### 4. NOTIONAL EXPOSURE

The Index creates a notional exposure to the Constituents and such notional exposure will only exist in the books and records of the Index Administrator and the Index Calculation Agent.

#### 4.1 No rights

Investors in Index Linked Products (1) have no legal or beneficial ownership interest in any Constituent and therefore have no recourse to any Constituent; (2) have no right to take delivery of any Constituent; (3) have no voting rights with respect to any Constituent; (4) have no right to receive dividends, distributions or other payments with respect to any Constituent.

#### 4.2 No offer

Nothing in these Index Conditions constitutes an offer to buy or to sell any Constituent or any other asset, commodity, contract or security (including without limitation any asset, contract, commodity or security included in any Constituent).

#### 4.3 Reinvestment

If the Index is a "total return index", it will include the notional reinvestment of amounts calculated by reference to any dividend, distribution or payment that would be received by a holder of a Constituent. If the Index is not a "total return index", it will not include any such notional reinvestment.

#### 5. NO INVOLVEMENT OF PERSONS CONNECTED WITH ANY CONSTITUENT

The Index does not create any obligation of any person connected with any Constituent (each such person, for the purposes of this paragraph, a "Relevant Person"), including without limitation the issuer of any Constituent which is a security, the sponsor or calculation agent of any Constituent which is itself an index, and the provider of any service (such as an investment adviser or an investment manager) to any Constituent which is a fund.

No Relevant Person in respect of any Constituent (other than Citigroup Global Markets Limited with respect to the CitiFX<sup>SM</sup> Active Strategy USDJPY Index and the Citi JGB Futures Active Strategy (Target Volatility 5%) XI Index) has participated in the preparation of these Index Conditions or in the arrangement and offer of any Index Linked Product.

# 6. NO INVESTIGATION

Neither the Index Administrator nor the Index Calculation Agent has made or will make any investigation or enquiry with respect to any Constituent, including with respect to any publicly-available information that is disclosed in these Index Conditions. Consequently there can be no assurance that all events have been disclosed which would affect the performance of the Index or the value of any Index Linked Product.

# 7. EFFECT OF FEES

The Index Level may include a deduction of notional fees, as described in these Index Conditions. Any such deduction of notional fees will result in the Index underperforming a hypothetical investment portfolio from which no such deduction is made.

#### 8. EFFECT OF NOTIONAL COSTS

The Index Level may include a deduction of notional costs (which may be referred to as a notional cost, charge, spread or similar term), as described in these Index Conditions. Any such deduction of notional costs will result in the Index underperforming a hypothetical investment portfolio from which no such deduction is made.

#### 9. DISRUPTION TO THE INDEX

Certain events may affect the calculation of the Index and the Index Level. These events, which are described elsewhere in these Index Conditions, may have consequences including:

- (1) the Index Calculation Agent following the process described in Part G (Adjustment of dates);
- (2) the Index Calculation Agent exercising certain discretions conferred by these Index Conditions;
- (3) the Index Calculation Agent suspending the calculation, publication and dissemination of the Index and the Index Level;
- (4) the Index Administrator making a modification or change to these Index Conditions; and
- (5) the Index Administrator discontinuing and cancelling the Index.

Unless otherwise stated, the Index Administrator has no obligation to inform any person of the result of any action taken on the occurrence of such events.

The occurrence or existence of Disrupted Days may also result in the calculation, publication and dissemination of the Index being postponed to a later time than as provided in these Index Conditions.

## 10. INDEX ADMINISTRATOR AND THE INDEX CALCULATION AGENT

These Index Conditions confer on the Index Administrator and the Index Calculation Agent a degree of discretion in making certain determinations and calculations, for example in connection with the occurrence of disruptions and adjustments. Although each of the Index Administrator and the Index Calculation Agent will use Expert Judgement in exercising any discretion, the exercise of any such discretion may have an adverse effect on the Index Level and therefore may have an adverse effect on the value of any Index Linked Product. Please see Part L (*Miscellaneous*) for further important disclosure of additional general risks (1) as to the manner in which the Index is determined; (2) that neither the Index Administrator nor the Index Calculation Agent acts as fiduciary; and (3) as to certain conflicts of interest.

# 11. HYPOTHETICAL BACK-TESTED PERFORMANCE INFORMATION IS SUBJECT TO SIGNIFICANT LIMITATIONS

All information regarding the performance of the Index prior to the Index Launch Date is hypothetical and back-tested, as the Index did not exist prior to that time. It is important to understand that hypothetical back-tested Index performance information is subject to significant limitations, in addition to the fact that past performance is never a guarantee of future performance. In particular:

(a) The hypothetical back-tested performance assumed that there were no market disruption events and no extraordinary events affecting Index constituents.

(b) The hypothetical back-tested performance of the Index might look different if it covered a different historical period. The market conditions that existed during the historical period covered by the hypothetical back-tested Index performance information is not necessarily representative of the market conditions that will exist in the future.

Prior to the respective Proxy Switch Dates in respect of certain Constituents, due to the unavailability of certain data sources prior to that time, the back-tested performance of the Index has been calculated using proxies for certain data sources (as set out in Table 4 and the Annex to Part E (*Data*)). These proxy data sources differed from the corresponding data sources and may employ different methodology in certain respects, and as a result the back-tested Index performance information prior to the respective Proxy Switch Dates may not reflect how the Index would have performed had the current data sources been available during that time period.

It is impossible to predict whether the Index will rise or fall. The actual future performance of the Index may bear no relation to the historical or hypothetical back-tested levels of the Index.

# Conflicts of Interest

The following material conflicts of interest may exist in respect of a swap or other over-the-counter derivative transaction (an "Index Swap") which references or is otherwise based on the performance of the Index, where your counterparty to the Index Swap (the "Swap Dealer") is either the Index Administrator, the Index Calculation Agent, an affiliate of the Index Administrator, or an affiliate of the Index Calculation Agent.

#### 1. DISCRETIONS

As discussed above, the Index Administrator and the Index Calculation Agent are entitled to exercise certain discretions in relation to the Index, including but not limited to the determination of index disruption events. Such determinations may adversely affect the level of the Index and therefore the amount payable under the Index Swap.

#### 2. HEDGING

The Swap Dealer expects to hedge its obligations under the Index Swap directly or through one or more of its affiliates. This hedging activity is likely to involve trading in one or more Constituents and Related Instruments. For these purposes, "Related Instruments" shall mean the instruments comprising the Constituents and other instruments (such as futures, options and swaps) with returns linked to the performance of the Index, the Constituents or the instruments comprising the Constituents. This hedging activity could affect the value of the Constituents and therefore the level of the Index, and may result in the Swap Dealer or its affiliates receiving a profit, even if the level of the Index declines.

#### 3. TRADING ACTIVITIES

The Swap Dealer and its affiliates expect to engage in trading activities related to the Index, the Constituents and Related Instruments, for their own account or for the account of customers, and may exercise remedies or take other action with respect to their interests as they deem appropriate. These trading activities could affect the level of the Index and therefore the value of the Index Swap.

#### 4. INDEX FEE

If a fee is deducted in the calculation of the level of the Index (an "Index Fee"), the Swap Dealer or its affiliates may receive a payment in addition to any fee payable under the Index Swap. For example, if the Swap Dealer hedges its obligations under the Index Swap by investing (directly or

through one of its affiliates) in the Constituents in the same notional amounts as the Index Swap, the amount received by the Swap Dealer in respect of its hedge may exceed the amount payable under the Index Swap by the amount of the Index Fee.

#### 5. NOTIONAL TRANSACTION COSTS

If notional transaction costs are deducted in the calculation of the level of the Index ("Notional Transaction Costs"), the Swap Dealer or an affiliate may receive a payment in addition to any fee payable under the Index Swap. For example, if the Swap Dealer hedges its exposure under the Index Swap by investing (directly or through one of its affiliates) in the Constituents, and the Notional Transaction Costs exceed the actual cost incurred by the Swap Dealer in adjusting its hedge, the amount received by the Swap Dealer in respect of its hedge may exceed the amount payable under the Index Swap by some or all of the amount of the Notional Transaction Costs.

#### 6. VALUATIONS

If the Index references notional over-the-counter swaps or other notional over-the-counter transactions, the terms and prices of such notional transactions may be determined by the Index Calculation Agent, based on its view of the prevailing terms and prices for similar transactions in the relevant markets, which may differ from the views of other market participants. Persons involved in making such determinations may have interests which conflict with your interests, and the Index Calculation Agent will not take the Index Swap or your interests into consideration when making such determinations.

#### 7. UNAVAILABILITY OF THE INDEX

In the event that the determination and publication of the Index is suspended or discontinued, or the level of the Index is not available for another reason, the calculation agent of the Index Swap may be required to determine the level of the Index pursuant to the terms of the Index Swap.

## 8. LICENSING FEE

If the Index includes a Constituent which is an index sponsored by the Swap Dealer or an affiliate of the Swap Dealer (a "**Sub-Index**"), the potential conflicts discussed above may exist in respect of that Sub-Index. If the Index or a Sub-Index is based on a methodology licensed from the Swap Dealer or an affiliate of the Swap Dealer, the Swap Dealer or its affiliate (as relevant) may receive a licensing fee based on the notional amount of the Index Swap.

# 9. SHARING PAYMENTS

Payments received by the Swap Dealer under the Index Swap, or by the Swap Dealer or its affiliates in connection with the Index, may be shared with third parties.

THE LIST OF RISK FACTORS OUTLINED IN THIS PART K IS NOT INTENDED TO BE EXHAUSTIVE. ANY EVALUATION OF INDEX LINKED PRODUCTS SHOULD BE MADE ONLY AFTER SEEKING ADVICE FROM INDEPENDENT PROFESSIONAL ACCOUNTING, FINANCIAL, INVESTMENT, LEGAL, REGULATORY, TAX AND OTHER ADVISORS.

# Part L: Miscellaneous

#### 1. CALCULATIONS AND DETERMINATIONS

#### 1.1 Calculations

Unless otherwise specified in the Index Conditions, the Index Calculation Agent will perform all calculations, determinations, rebalancings and adjustments (together, "Calculations") in respect of the Index. Neither the Index Calculation Agent nor the Index Administrator will have any responsibility for errors made in good faith or omissions in Calculations or other actions as provided in these Index Conditions.

The Calculations of the Index Calculation Agent shall be performed by it in accordance with these Index Conditions, acting in its sole, absolute and unfettered discretion, but in good faith and in a commercially reasonable manner (having regard in each case to the criteria stipulated in these Index Conditions and, where relevant, on the basis of information provided to or obtained by employees or officers of the Index Calculation Agent responsible for making relevant Calculations). All Calculations shall, in the absence of manifest error, be final, conclusive and binding on any user of the Index, including any holder of, or counterparty to, an Index Linked Product.

# 1.2 Rounding

Subject as provided in these Index Conditions, any amount, currency amount, level, percentage, price, rate or value ("Amount") calculated by the Index Calculation Agent shall be rounded to such number of decimal points and in such manner as the Index Calculation Agent determines is appropriate, acting in a commercially reasonable manner.

## 1.3 Use of estimates

The Index Calculation Agent will perform the Calculations described in these Index Conditions using the information, data sources or factors specified in these Index Conditions and any Amount (together, "Information") and may perform any Calculation and any action required in respect of these Index Conditions in any sequence. However, in the event that the Index Calculation Agent is not able to obtain or use any necessary Information, then (after using reasonable endeavours and after applying any fallback provision specified in these Index Conditions in respect of the relevant Calculation) the Index Calculation Agent may, but shall not be obliged to, use its estimate (made using Expert Judgement) of the relevant Information in performing such Calculation, should the Index Calculation Agent determine that such estimate is reasonably necessary in order to give effect to any provision or to perform any Calculation necessary under these Index Conditions.

#### 1.4 No verification of Information

Although the Index Calculation Agent will obtain Information for inclusion in the Index or for use in performing any Calculation under these Index Conditions from sources that the Index Calculation Agent considers reliable (including databases maintained by the Index Calculation Agent or its Affiliates, and public sources such as Bloomberg and Reuters), the Index Calculation Agent will not publish or independently verify such Information.

#### 1.5 Corrections

Subject to any Correction Period specified, if the Index Calculation Agent becomes aware that any Information used by it in connection with any Calculation under these Index Conditions has subsequently been corrected or adjusted, then the Index Calculation Agent (1) if the Correction Period does not include a Rebalancing Date, shall use such corrected or adjusted Information and as a consequence make any further Calculation that it determines necessary or desirable in order to give effect to or to reflect such corrected or adjusted Information, including without limitation any redenomination, exchange or conversion of any currency into a successor currency; or (2) if the Correction Period includes a Rebalancing Date, may, but shall not be obliged to, use such corrected or adjusted Information, and in exercising any such discretion, will act in good faith and in a commercially reasonable manner which is consistent with the primary objective of the Index.

"Rebalancing Date" for the purposes of this paragraph means (1) in respect of a VR Constituent, a VR Constituent Weight Reset Date, a RoRo Rebalancing Date, a Sub-Index Reset Date, or a Roll Date, (2) in respect of the JGB Index or the Citi GMRI Index, a RoRo Rebalancing Date or a Sub-Index Reset Date and (3) in respect of the CitiFX<sup>SM</sup> Active Short Strategy (USDJPY) Index, a Sub-Index Reset Date.

#### 1.6 Reliance

In performing any Calculation under these Index Conditions, the Index Calculation Agent may rely upon the opinion of any person who appears to it as being competent to value any asset or instrument of any class, or to perform any other calculation or determination, by reason of any appropriate relevant professional qualification or experience.

#### 1.7 Dates and times of calculations

Notwithstanding that certain Calculations under these Index Conditions may be expressed to be "as at", "as of", "in respect of" or "on", or any synonym of each such phrase, a certain date or time, the Index Calculation Agent may perform such Calculation in respect of such date or time after such date or time.

# 1.8 Not acting as fiduciary or agent

In performing any Calculation or other action in connection with these Index Conditions, each of the Index Administrator and the Index Calculation Agent will act as principal and not as agent of any other person. Neither the Index Administrator nor the Index Calculation Agent owes any duty of care or any fiduciary duty to any investor in any Index Linked Product or to any other person. Each Calculation and other action performed in connection with these Index Conditions by the Index Administrator or the Index Calculation Agent is performed in reliance on this provision and is subject to this provision.

If through performing any such Calculation or other action the Index Administrator or the Index Calculation Agent is rendered an agent or fiduciary of another person under applicable law, then (at the option of the Index Administrator or the Index Calculation Agent, as relevant) the rights and obligations of the Index Administrator or the Index Calculation Agent to perform such Calculation or other action may be suspended (or, if already performed, the application of such Calculation or other action may be suspended) until such time when such Calculation or other action can be performed either by the Index Administrator or the Index Calculation Agent as principal and not as an agent or fiduciary or by an appropriate third party who is both willing and able to perform such Calculation or other action.

#### 1.9 Ambiguities, errors and omissions in these Index Conditions

Although these Index Conditions are intended to be comprehensive, it is possible that ambiguities, errors and omissions may arise in certain circumstances. The Index Administrator will resolve, using Expert Judgement, any such ambiguity, error or omission, and may amend these Index Conditions to reflect the resolution of such ambiguity, error or omission.

# 1.10 Expert Judgement

Each of the Index Administrator and the Index Calculation Agent, as relevant, shall exercise any discretion and make any determination in respect of the Index by using a standard of judgement ("Expert Judgement") which shall consist of (1) acting in good faith and in a commercially reasonable manner; (2) to the extent practicable, reflecting the commercial objective of the Index and market practice; and (3) to the extent practicable, promoting consistency in the exercise of discretions and the making of determinations in respect of both the Index and other indices in respect of which it acts, as relevant, as index administrator or index calculation agent.

In using Expert Judgement to exercise any discretion or to make any determination, the Index Administrator shall be subject to the oversight of the Index Governance Committee, whose role is described at paragraph 4 (*Index Governance*). In using Expert Judgement to exercise any discretion or to make any determination, the Index Calculation Agent shall be subject to the oversight of the Index Administrator. The Index Governance Committee will review any such use of Expert Judgement in extraordinary circumstances. Each of the Index Administrator and the Index Calculation Agent shall (as relevant) (1) maintain records of any such use of Expert Judgement; and (2) publish a concise explanation of the extent to which and the basis upon which Expert Judgement was so used.

#### 1.11 Errors in Calculations

It is possible that errors in Calculations may arise in certain circumstances. The Index Administrator may determine, using Expert Judgement, to restate the Index Level for each day affected by an error in a Calculation.

# 2. CONFLICTS OF INTEREST

Citi entities perform various roles in connection with the Index and Index Linked Products, and conflicts of interest may arise for any such entity as a consequence of any role it performs in connection with the Index or any Index Linked Product or as a consequence of its activities more generally.

During the normal course of their business, the Index Administrator, the Index Calculation Agent, any of their respective Affiliates, directors, officers, employees, representatives, delegates and agents (each, for the purposes of this Part L, a "Relevant Person") may enter into, promote, offer or sell securities or contracts (whether or not structured) linked to the Index and/or any Constituent. Any Relevant Person may at any time (1) have long or short principal positions or actively trade (whether or not through making markets to its clients) positions in or relating to the Index or any Constituent; (2) invest in or engage in transactions with or on behalf of other persons relating to the Index and/or any Constituent; (3) undertake hedging transactions (for the purposes of any security or contract) which may adversely affect the level, price or rate or other factor underlying the Index and/or any Constituent; (4) have an investment banking or commercial relationship with the issuer of any Constituent and have access to information from any such issuer; or (5) publish research in respect of any Constituent or the issuer of any Constituent. Such activity may or may not affect the Index Level, but potential investors and counterparties should be aware that a conflict of interest may arise when a person acts in more than one capacity, and such conflict of interest may affect (whether in a positive manner or a negative manner) the Index Level.

#### 3. DISCLAIMER

No Relevant Person makes any express or implied representation or warranty as to (1) the advisability of purchasing or entering into any Index Linked Product; (2) the levels of the Index at any particular date or time; (3) the results to be obtained from the use of the Index or any datum included in these Index Conditions for any purpose; or (4) any other matter. Each Relevant Person hereby expressly disclaims, to the fullest extent permitted by applicable law, all warranties of accuracy, completeness, merchantability or fitness for a particular purpose with respect to the Index and any information contained in these Index Conditions. No Relevant Person will have any liability (direct or indirect, special, punitive, consequential or otherwise) to any person even if notified of the possibility of damages.

These Index Conditions have been prepared solely for the purposes of information and nothing in these Index Conditions constitutes (1) an offer to buy or to sell any security or contract, to participate in any transaction or to adopt any investment strategy; or (2) accounting, financial, investment, legal, tax or regulatory advice. Any decision to purchase any Index Linked Product should be based on the information contained in the associated prospectus or offering document (however described). In the case of a prospectus or offering document which contains provisions under the heading "Risk Factors", "Investment Considerations" or the equivalent, please refer to these provisions for a discussion of the factors that must be considered in connection with an investment in the security or contract described therein.

Neither the Index Calculation Agent nor the Index Administrator is under any obligation to continue to calculate, publish or disseminate the Index or the Index Level.

#### 4. INDEX GOVERNANCE

The Index Administrator has ultimate control over the development, the operation and the publication of the Index, including the performance of any Calculation, the exercise of any discretion, the making of any determination, and all administrative processes required to perform these functions (together, the "Index Activity"). Notwithstanding that certain parts of the Index Activity may be performed by persons other than the Index Administrator, the Index Administrator has overall responsibility for all parts of the Index Activity, subject to this Part L (*Miscellaneous*).

The Index Administrator maintains oversight over the Index Activity through its Index Governance Committee. The Index Governance Committee fulfils its role of ensuring accountability and providing oversight through (1) reviewing and challenging all parts of the Index Activity, in accordance with its charter and its written policies and procedures; and (2) conducting an annual review of the Index to determine whether it continues to be an accurate and reliable representation of the economic realities of the relevant interest or market.

#### 5. INTELLECTUAL PROPERTY

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# Part M: Notices

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