

# Citi Commodities Curve Beta Enhanced Distributed (DJ-UBSCI<sup>SM</sup> Weighted) Balanced Alpha Derived Indices

- $\hbox{(1) Citi Commodities Curve Beta Enhanced Distributed (DJ-UBSCI}^{SM} \ Weighted) \ Balanced \ Alpha \ Net \ Index \\$
- (2) Citi Commodities Curve Beta Enhanced Distributed (DJ-UBSCI<sup>SM</sup> Weighted) Balanced Alpha 5% Volatility Target Index
- (3) Citi Commodities Curve Beta Enhanced Distributed (DJ-UBSC<sup>SM</sup> Weighted) Balanced Alpha 5% Volatility Target Net Index

#### **Index Conditions**

#### 11 June 2013

#### Part 1

#### General

This document constitutes the "Index Conditions" of each of the following indices (each, an "Index"):

- (1) Citi Commodities Curve Beta Enhanced Distributed (DJ-UBSCI<sup>SM</sup> Weighted)
  Balanced Alpha Net Index (CVICDAE8)
- (2) Citi Commodities Curve Beta Enhanced Distributed (DJ-UBSCI<sup>SM</sup> Weighted)
  Balanced Alpha 5% Volatility Target Index (CCUDDJB5)
- (3) Citi Commodities Curve Beta Enhanced Distributed (DJ-UBSC<sup>SM</sup> Weighted)
  Balanced Alpha 5% Volatility Target Net Index (CVICDAE9).

These Index Conditions are made available by Citigroup Global Markets Limited in its capacity as the Index Sponsor. As at the date of these Index Conditions, Citigroup Global Markets Limited also acts as the Index Calculation Agent, calculating and publishing (in accordance with these Index Conditions) the Index, its Index Level and its Index Published Level. The Index Sponsor may, in its sole discretion and without notice, appoint an alternative Index Calculation Agent at any time, which may be the Index Sponsor or one of its Affiliates.

The Index Calculation Agent shall calculate the Index Level on each Index Business Day. The Index Calculation Agent shall calculate the Index Published Level for each Index Business Day by rounding the Index Level for such Index Business Day to the number of decimal places specified.

The Index Published Level for each Index Business Day shall be published on the Index Ticker, at the Index Valuation Time on the next following Index Business Day. This should be considered the official source for



the Index Published Level and a level obtained from any other source (electronic or otherwise) must be considered unofficial.

The Index Sponsor's determinations in respect of the Index, the methodology of which is described in these Index Conditions, shall be final. Please refer to Part 3 (*Miscellaneous Provisions*) for further information.

Full information in respect of any Index Linked Product is only available on the basis of the combination of these Index Conditions and the confirmation, prospectus or offering document (however described) of the Index Linked Product.

#### Overview of the Indices

Each of the following types of index (each such index, a "**Derived Index**") may be derived from a base index, whether the base index is the Underlying Index specified below or another index which is a Derived Index:

- (1) an index whose level is partially hedged in a particular currency (a "Currency Hedged Index"); or
- (2) an index whose level is adjusted to include fees (a "Fee Inclusive Index"); or
- (3) an index which targets a particular level of volatility (a "Volatility Target Index").

The Citi Commodities Curve Beta Enhanced Distributed (DJ-UBSCI<sup>SM</sup> Weighted) Balanced Alpha Index is the Underlying Index.

The Citi Commodities Curve Beta Enhanced Distributed (DJ-UBSCI<sup>SM</sup> Weighted) Balanced Alpha Net Index is a Fee Inclusive Index which is derived from the Underlying Index.

The Citi Commodities Curve Beta Enhanced Distributed (DJ-UBSCI<sup>SM</sup> Weighted) Balanced Alpha 5% Volatility Target Index is a Volatility Target Index which is derived from the Underlying Index (and is specified under the heading "Volatility Target Index Number 1" below).

The Citi Commodities Curve Beta Enhanced Distributed (DJ-UBSCI<sup>SM</sup> Weighted) Balanced Alpha 5% Volatility Target Index is a Volatility Target Index which is derived from the Citi Commodities Curve Beta Enhanced Distributed (DJ-UBSCI<sup>SM</sup> Weighted) Balanced Alpha Net Index (which is derived from the Underlying Index) (and is specified under the heading "Volatility Target Index Number 2" below).

For the avoidance of doubt, references in these Index Conditions to "the Index" or "an Index" shall be references to each Index the methodology of which is described in these Index Conditions.

The index conditions of the Underlying Index are available from the Index Sponsor.



## **Key Information**

Underlying Index: Citi Commodities Curve Beta Enhanced

Distributed (DJ-UBSCI<sup>SM</sup> Weighted) Balanced

Alpha Index.

Underlying Index Ticker: CCUDDJBA.

Index Calculation Agent: Citigroup Global Markets Limited.

Index Sponsor: Citigroup Global Markets Limited.

Index Base Currency: U.S. Dollars.

Index Business Day:

The same business days as specified for the

purposes of the Underlying Index.

Index Valuation Time: 11:00 a.m. (London time).

Frequency of calculation of Index Level: Daily.

The Index was launched by the Index Sponsor on the Index Launch Date. The Index has been calculated by the Index Calculation Agent for the period from the Index Start Date. Any back-testing or similar performance analysis (for the period prior to the Index Start Date) undertaken by any person in respect of the Index for any reason must be considered illustrative only and may be based on assumptions and estimates not used by the Index Calculation Agent when determining the Index Level.



## Index Ticker: Not applicable. Index Launch Date: Not applicable. **Index Start Date** Not applicable. Index Start Level: Not applicable. Rounding: Not applicable. Base Index: Not applicable. Base Index Rounding: Not applicable. Old Currency: Not applicable. FX Observation Time: Not applicable.

Not applicable.

Not applicable.

Currency Hedged Index

FX Source:

FX Rate Ticker:



## Fee Inclusive Index

Commodities Curve Beta Enhanced Distributed (DJ-UBSCI<sup>SM</sup> Weighted) Balanced Alpha Net Index.

Index Ticker: CVICDAE8 < Index>.

The Index Ticker is a Bloomberg Electronic Page.

Index Launch Date: 31 August 2012.

Index Start Date: 31 March 1999.

100. Index Start Level:

3. Rounding:

Base Index: The Underlying Index.

Base Index Rounding: 3.

0.75%. Fee:

Day Count Fraction: Actual/365.



## Volatility Target Index Number 1

	Citi Commodities Curve Beta Enhanced Distributed (DJ-UBSCI <sup>SM</sup> Weighted) Balanced Alpha 5% Volatility Target Index.
Index Ticker:	CCUDDJB5 <index>.</index>
	The Index Ticker is a Bloomberg Electronic Page.
Index Launch Date:	31 August 2012.
Index Start Date:	30 April 1999.
Index Start Level:	100.
Rounding:	3.
Base Index:	The Underlying Index.
Base Index Rounding:	3.
Volatility Target:	5%.
Threshold:	Not applicable.
Maximum Exposure:	250%.
Minimum Exposure:	Not applicable.
Lookback Style:	Non-recursive.
Exposure Basis (N):	Not applicable.
Lookback Period 1 (N):	Not applicable.
Lookback Period 2 (N):	Not applicable.
Lookback Period Basis (N):	Not applicable.
Exposure Basis (D):	Single Lookback Period.
Lookback Period 1 (D):	21.
Lookback Period 2 (D):	Not applicable.
Lookback Period Basis (D):	Not applicable.



#### Volatility Target Index Number 2

Citi Commodities Curve Beta Enhanced Distributed (DJ-UBSCI<sup>SM</sup> Weighted) Balanced Alpha 5% Volatility Target Net Index. Index Ticker: CVICDAE9 < Index>. The Index Ticker is a Bloomberg Electronic Page. Index Launch Date: 31 August 2012. **Index Start Date:** 30 April 1999. 100. Index Start Level: 3. Rounding: Base Index: The Fee Inclusive Index specified in this Data Table: Citi Commodities Curve Beta Enhanced Distributed (DJ-UBSCI<sup>SM</sup> Weighted) Balanced Alpha Net Index. Base Index Rounding: 3. 5%. Volatility Target: Threshold: Not applicable. Maximum Exposure: 250%. Not applicable. Minimum Exposure: Lookback Style: Non-recursive. Exposure Basis (N): Not applicable. Lookback Period 1 (N): Not applicable. Lookback Period 2 (N): Not applicable. Lookback Period Basis (N): Not applicable. Exposure Basis (D): Single Lookback Period. Lookback Period 1 (D): 21. Lookback Period 2 (D): Not applicable. Lookback Period Basis (D): Not applicable.



## Determination of the Index Level and the Index Published Level, and supplementary calculations and determinations

#### 1. Index Level

1.1 The Index Level on the Index Start Date

The Index Level on the Index Start Date shall be the Index Start Level.

1.2 The Index Level on each Index Business Day following the Index Start Date

The Index Level on each Index Business Day "d" (following the Index Start Date) shall be:

- (1) if the Index is a Currency Hedged Index, the Currency Hedged Index Level on d; or
- (2) if the Index is a Fee Inclusive Index, the Fee Inclusive Index Level on d; or
- (3) if the Index is a Volatility Target Index, the Volatility Target Index Level on d.

#### 2. Index Published Level

The Index Published Level on each Index Business Day "d" shall be an amount determined by the Index Calculation Agent equal to the Index Level for d rounded to the Rounding number of decimal places. If no Rounding number of decimal places is specified, then the Index Published Level on d shall be an amount determined by the Index Calculation Agent for d in accordance with paragraph 1.2 of Part 3 (*Miscellaneous Provisions*).

#### 3. Base Index Level

The Base Index Level on an Index Business Day "d" shall be the closing level of the Base Index on d determined by the Index Calculation Agent with reference to either (1) if the Base Index is the Underlying Index, the Underlying Index Ticker; or (2) if the Base Index is a Derived Index, the determinations made by the Index Calculation Agent under these Index Conditions, rounded (if a Base Index Rounding number of decimal places is specified) to the Base Index Rounding number of decimal places.

Where both (1) a Rounding number of decimal places is specified in respect of a Base Index which is a Derived Index (the "Relevant Base Index"); and (2) a Base Index Rounding number of decimal places is specified for the purposes of another Derived Index (of which such Relevant Base Index is the Base Index) (the "Relevant Derived Index"), and such numbers of decimal places differ, for the avoidance of doubt such Base Index Rounding number of decimal places shall be used for the purposes of using the Base Index Level of such Relevant Base Index for the purposes of determining the Relevant Derived Index.



## Section A Currency Hedged Index

### 1. Currency Hedged Index Level

The Currency Hedged Index Level on each Index Business Day "d" (following the Index Start Date) shall be an amount determined by the Index Calculation Agent in accordance with the formula set out below:

where:

" $\mathbf{CHI_d}$ " shall mean the Currency Hedged Index Level on d.

"CHI<sub>m</sub>" shall mean the Currency Hedged Index Level on the last Index Business Day

to occur in the calendar month immediately preceding the calendar month in

which d occurs.

"BIR<sub>d</sub>" shall mean the Base Index Return in respect of d.

"FX<sub>d</sub>" shall mean the FX Rate in respect of d.

"FX<sub>m</sub>" shall mean the FX Rate in respect of the last Index Business Day to occur in

the calendar month immediately preceding the calendar month in which d

occurs.

#### 2. FX Rate

- 2.1 "FX Rate" shall mean, in respect of a day, the rate for the notional exchange of the Old Currency into the Index Base Currency as at the FX Observation Time on such day, as provided by the FX Source. If an FX Rate Ticker is specified, the FX Rate shall be determined by the Index Calculation Agent with reference to the FX Rate Ticker.
- 2.2 "**FX Observation Time**" shall mean the time specified as such in the Data Table.

"FX Rate Ticker" shall mean the Electronic Page specified as such in the Data Table.

"FX Source" shall mean the provider of foreign exchange rates specified as such in the Data Table, any successor to such person, or any alternative provider of foreign exchange rates designated by the Index Calculation Agent.

"Old Currency" shall mean the currency specified as such in the Data Table.



#### **3. Base Index Return (month-to-date)**

"Base Index Return" shall mean, in respect of an Index Business Day "d", an amount determined by the Index Calculation Agent in accordance with the formula set out below.

where:

"BIR<sub>d</sub>" shall mean the Base Index Return on d.

"BIL<sub>d</sub>" shall mean the Base Index Level on d.

"BIL<sub>m</sub>" shall mean the Base Index Level on the last Index Business Day to occur in

the calendar month immediately preceding the calendar month in which d

occurs.



## Section B Fee Inclusive Index

#### 1. Fee Inclusive Index Level

The Fee Inclusive Index Level on each Index Business Day "d" (following the Index Start Date) shall be an amount determined by the Index Calculation Agent in accordance with the formula set out below:

where:

"FIIL<sub>d</sub>" shall mean the Fee Inclusive Index Level on d.

"FIIL<sub>d-1</sub>" shall mean the Fee Inclusive Index Level on the Index Business Day

immediately preceding d.

"BIR<sub>d</sub>" shall mean the Base Index Change in respect of d.

"Fee" shall mean the rate specified as such in the Data Table.

"Day Count Fraction" shall mean either:

(1) (if "Actual/365" is specified in the Data Table adjacent to the heading "Day Count Fraction") the number of calendar days from (but excluding) the Index Business Day immediately preceding d to (and including) d divided by 365; or

- (2) (if "Actual/360" is specified in the Data Table adjacent to the heading "Day Count Fraction") the number of calendar days from (but excluding) the Index Business Day immediately preceding d to (and including) d divided by 360; or
- (3) (if "Actual/Actual" is specified in the Data Table adjacent to the heading "Day Count Fraction") the number of calendar days from (but excluding) the Index Business Day immediately preceding d to (and including) d divided by 365 (or, if any portion of the period comprising such number of calendar days falls in a leap year, (a) the number of calendar days in such period falling in a leap year divided by 366 plus (b) the number of calendar days in such period not falling in a leap year divided by 365); or
- (4) such other fraction as specified in the Data Table adjacent to the heading "Day Count Fraction").

#### 2. Base Index Return

"Base Index Return" shall mean, in respect of an Index Business Day "d", an amount determined by the Index Calculation Agent in accordance with the formula set out below.



where:

"BIR<sub>d</sub>" shall mean the Base Index Return on d.

"BIL<sub>d</sub>" shall mean the Base Index Level on d.

"BIL $_{d-1}$ " shall mean the Base Index Level on the Index Business Day immediately

preceding d.



## Section C Volatility Target Index

### 1. Volatility Target Index Level

The Volatility Target Index Level on each Index Business Day "d" (following the Index Start Date) shall be an amount determined by the Index Calculation Agent in accordance with the formula set out below:

where:

"VTIL<sub>d</sub>" shall mean the Volatility Target Index Level on d.

"VTIL<sub>d-1</sub>" shall mean the Volatility Target Index Level on the Index Business Day

immediately preceding d.

"Units<sub>d-1</sub>" shall mean the Number of Units on the Index Business Day immediately

preceding d.

The Number of Units is determined in accordance with paragraph 2 below.

"BIL<sub>d</sub>" shall mean the Base Index Level on d.

"BIL<sub>d-1</sub>" shall mean the Base Index Level on the Index Business Day immediately

preceding d.

## 2. Determination of the Number of Units

The Number of Units on each Index Business Day "d" (following the Index Start Date) shall be either:

- (1) (if a Threshold is specified) if both
  - (a) d is a Scheduled Transacting Day; and
  - (b) the absolute difference between the Exposure on the Index Business Day immediately preceding d and the Target Exposure on d is equal to or greater than the Threshold,

an amount determined by the Index Calculation Agent in accordance with the formula set out at paragraph 3 below; or

- (2) (if a Threshold is not specified) if d is a Scheduled Transacting Day, an amount determined by the Index Calculation Agent in accordance with the formula set out at paragraph 3 below; or
- (3) otherwise an amount equal to the Number of Units on the Index Business Day immediately preceding d.

"Scheduled Transacting Day" shall mean a day on which the exchange, on which each commodity futures contract with reference to which the Base Index is determined, whether directly (because without limitation such commodity futures contract is a constituent of the Base Index or the Base Index is otherwise determined with reference to such commodity futures contract) or indirectly



(because without limitation such commodity futures contract is a constituent of an index which is a constituent of an index which is a constituent of the Base Index), is scheduled to be open and is open for its regular trading session, notwithstanding such exchange closing prior to its scheduled weekday closing time, without regard to after-hours trading or other trading outside the hours of its regular trading session.

"Threshold" shall mean the percentage specified as such in the Data Table.

#### 3. Formula for the Number of Units

The Number of Units on a relevant Index Business Day "d" shall be an amount determined by the Index Calculation Agent in accordance with the formula set out below:

where:

"Units<sub>d</sub>" shall mean the Number of Units on d.

"VTIL<sub>d</sub>" shall mean the Volatility Target Index Level on d.

"Exposure<sub>d</sub>" shall mean the Exposure on d.

The Exposure is determined in accordance with paragraph 4 below.

"BIL<sub>d</sub>" shall mean the Base Index Level on d.

## 4. Exposure

## 4.1 Index Start Date

The Exposure on the Index Start Date shall be a percentage equal to the Target Exposure on the Index Start Date.

4.2 Each Index Business Day following the Index Start Date

The Exposure on each Index Business Day "d" (following the Index Start Date) shall be either:

- (1) (if a Threshold is specified) either (a) if the absolute difference between the Target Exposure on d and the Exposure on the Index Business Day immediately preceding d is equal to or greater than the Threshold, a percentage equal to the Target Exposure on d; or (b) otherwise, a percentage equal to the Exposure on the Index Business Day immediately preceding d; or
- (2) (if a Threshold is not specified) a percentage equal to the Target Exposure on d.

## 5. Target Exposure

5.1 Subject to the following sentence, the Target Exposure on each Index Business Day "d" (following the Initial Period) shall be a percentage determined by the Index Calculation Agent in accordance with paragraph 5.2 below.

If the Denominator is 0, then the Target Exposure on d shall be equal to the Maximum Exposure.



5.2 The Target Exposure on d shall be equal to the Numerator on d *divided by* the Denominator on d, subject (if a Minimum Exposure is specified) to a minimum equal to the Minimum Exposure and (if a Maximum Exposure is specified) a maximum equal to the Maximum Exposure.

#### 5.3 Numerator

- (1) If the Lookback Style is "Non-recursive", then the Numerator on d shall be equal to the Volatility Target.
- (2) If the Lookback Style is "Recursive", then the Numerator on d shall be determined in accordance with the applicable of sub-paragraphs (a) to (e) below.
  - (a) Where recursion on d is not possible due to insufficient data

#### If either:

- (i) (A) the Exposure Basis (N) is "Single Lookback Period"; and (B) the number of Index Business Days from (and including) the Index Start Date to (but excluding) d is less than Lookback Period 1 (N) + 1; or
- (ii) (A) the Exposure Basis (N) is "Highest", "Lowest" or "Mean"; (B) the Lookback Period Basis is "Overlapping"; and (C) the number of Index Business Days from (and including) the Index Start Date to (but excluding) d is less than the higher of (x) Lookback Period 1 (N) + 1; and (y) Lookback Period 2 (N) + 1; or
- (iii) (A) the Exposure Basis (N) is "Highest", "Lowest" or "Mean"; (B) the Lookback Period Basis is "Consecutive"; and (C) the number of Index Business Days from (and including) the Index Start Date to (but excluding) d is less than Lookback Period 1 (N) + 1 *plus* Lookback Period 2 (N) + 1,

then the Numerator on d shall be equal to the Volatility Target.

(b) Single Lookback Period

If the Exposure Basis (N) is "Single Lookback Period", then the Numerator on d shall be equal to the Volatility Target *multiplied by* 2, *minus* the Realized Volatility of the Volatility Target Index on the Index Business Day immediately preceding d over an Observation Period equal to Lookback Period 1 (N).

(c) Highest

If the Exposure Basis (N) is "Highest", then the Numerator on d shall be equal to the Volatility Target *multiplied by* 2, *minus* the higher of (i) the Realized Volatility of the Volatility Target Index on the Index Business Day immediately preceding d over an Observation Period equal to Lookback Period 1 (N); and (ii) either (A) (if the Lookback Period Basis is "Overlapping") the Realized Volatility of the Volatility Target Index on the Index Business Day immediately preceding d over an Observation Period equal to Lookback Period 2 (N); or (B) (if the Lookback Period Basis is "Consecutive") the Realized Volatility of the Volatility Target Index on the Index Business Day which is the Consecutive number of Index Business Days preceding d over an Observation Period equal to Lookback Period 2 (N).



#### (d) Lowest

If the Exposure Basis (N) is "Lowest", then the Numerator on d shall be equal to the Volatility Target *multiplied by* 2, *minus* the lower of (i) the Realized Volatility of the Volatility Target Index on the Index Business Day immediately preceding d over an Observation Period equal to Lookback Period 1 (N); and (ii) either (A) (if the Lookback Period Basis is "Overlapping") the Realized Volatility of the Volatility Target Index on the Index Business Day immediately preceding d over an Observation Period equal to Lookback Period 2 (N); or (B) (if the Lookback Period Basis is "Consecutive") the Realized Volatility of the Volatility Target Index on the Index Business Day which is the Consecutive number of Index Business Days preceding d over an Observation Period equal to Lookback Period 2 (N).

#### (e) Mean

If the Exposure Basis (N) is "Mean", then the Numerator on d shall be equal to the Volatility Target *multiplied by* 2, *minus* the arithmetic mean of (i) the Realized Volatility of the Volatility Target Index on the Index Business Day immediately preceding d over an Observation Period equal to Lookback Period 1 (N); and (ii) either (A) (if the Lookback Period Basis (N) is "Overlapping") the Realized Volatility of the Volatility Target Index on the Index Business Day immediately preceding d over an Observation Period equal to Lookback Period 2 (N); or (B) (if the Lookback Period Basis is "Consecutive") the Realized Volatility of the Volatility Target Index on the Index Business Day which is the Consecutive number of Index Business Days preceding d over an Observation Period equal to Lookback Period 2 (N).

#### 5.4 Denominator

The Denominator on d shall be determined in accordance with the applicable of sub-paragraphs (1) to (4) below.

#### (1) Single Lookback Period

If the Exposure Basis (D) is "Single Lookback Period", then the Denominator on d shall be equal to the Realized Volatility of the Base Index on the Index Business Day immediately preceding d over an Observation Period equal to Lookback Period 1.

#### (2) Highest

If the Exposure Basis (D) is "Highest", then the Denominator on d shall be equal to the higher of (a) the Realized Volatility of the Base Index on the Index Business Day immediately preceding d over an Observation Period equal to Lookback Period 1 (D); and (b) either (i) (if the Lookback Period Basis (D) is "Overlapping") the Realized Volatility of the Base Index on the Index Business Day immediately preceding d over an Observation Period equal to Lookback Period 2 (D); or (ii) (if the Lookback Period Basis (D) is "Consecutive") the Realized Volatility of the Base Index on the Index Business Day which is the Consecutive number of Index Business Days preceding d over an Observation Period equal to Lookback Period 2 (D).

#### (3) Lowest

If the Exposure Basis (D) is "Lowest", then the Denominator on d shall be equal to the lower of (a) the Realized Volatility of the Base Index on the Index Business Day immediately preceding d over an Observation Period equal to Lookback Period 1 (D); and (b) either (i) (if the Lookback Period Basis (D) is "Overlapping") the Realized Volatility of the Base Index on the



Index Business Day immediately preceding d over an Observation Period equal to Lookback Period 2 (D); or (ii) (if the Lookback Period Basis (D) is "Consecutive") the Realized Volatility of the Base Index on the Index Business Day which is the Consecutive number of Index Business Days preceding d over an Observation Period equal to Lookback Period 2 (D).

#### (4) *Mean*

If the Exposure Basis (D) is "Mean", then the Denominator on d shall be equal to the arithmetic mean of (a) the Realized Volatility of the Base Index on the Index Business Day immediately preceding d over an Observation Period equal to Lookback Period 1 (D); and (b) either (i) (if the Lookback Period Basis (D) is "Overlapping") the Realized Volatility of the Base Index on the Index Business Day immediately preceding d over an Observation Period equal to Lookback Period 2 (D); or (ii) (if the Lookback Period Basis is "Consecutive") the Realized Volatility of the Base Index on the Index Business Day which is the Consecutive number of Index Business Days preceding d over an Observation Period equal to Lookback Period 2 (D).

- 5.5 "Consecutive" shall mean (if applicable) a number equal to Lookback Period 1 + 1.
  - "**Denominator**" shall mean the amount determined in accordance with paragraph 5.4 above.
  - "Exposure Basis (D)" shall mean the method of calculation specified as such in the Data Table.
  - "Exposure Basis (N)" shall mean the method of calculation specified as such in the Data Table.
  - "Lookback Period 1 (D)" shall mean the number specified as such in the Data Table.
  - "Lookback Period 2 (D)" shall mean the number (if any) specified as such in the Data Table.
  - "Lookback Period 1 (N)" shall mean the number specified as such in the Data Table.
  - "Lookback Period 2 (N)" shall mean the number (if any) specified as such in the Data Table.
  - "Lookback Style" shall mean the method of determination specified as such in the Data Table.
  - "Maximum Exposure" shall mean the percentage specified as such in the Data Table.
  - "Minimum Exposure" shall mean the percentage specified as such in the Data Table.
  - "Numerator" shall mean the amount determined in accordance with paragraph 5.3 above.
  - "Observation Period" shall mean the number of Index Business Days specified in the applicable of sub-paragraphs (1) to (4) of paragraph 5.3 or paragraph 5.4 (as relevant).
  - "Realized Volatility" shall mean the percentage determined in accordance with paragraph 6 below.
  - "Volatility Target" shall mean the percentage specified as such in the Data Table.
- 6. Realized Volatility (of the Volatility Target Index or the Base Index, as applicable)

The Realized Volatility of the Volatility Target Index or the Base Index, as applicable (the "**Relevant Index**") on an Index Business Day "**d**" over the applicable Observation Period shall be an amount determined by the Index Calculation Agent in accordance with the formula set out below:



where:

" $\sigma_d$ " shall mean the Realized Volatility of the Relevant Index on d.

"opd" shall mean each Index Business Day from (and including) OPSD to (and

including) d.

"OPSD" shall mean the Index Business Day which is the Observation Period – 1

number of Index Business Day preceding d.

"RIR<sub>opd</sub>" shall mean the Relevant Index Return on opd.

"RIR<sub>mean</sub>" shall mean the arithmetic mean of the Relevant Index Return on each Index

Business Day from (and including) OPSD to (and including) d.

## 7. Relevant Index Return

"Relevant Index Return" shall mean, in respect of an Index Business Day "d", an amount determined by the Index Calculation Agent in accordance with the formula set out below.

where:

"**RIR**<sub>d</sub>" shall mean the Relevant Index Return on d.

"RIL<sub>d</sub>" shall mean either (1) (if the Relevant Index is the Volatility Target Index) the

Volatility Target Index Level on d; or (2) (if the Relevant Index is the Base

Index) the Base Index Level on d.

"**RIL**<sub>d-1</sub>" shall mean either (1) (if the Relevant Index is the Volatility Target Index) the

Volatility Target Index Level on the Index Business Day immediately preceding d; or (2) (if the Relevant Index is the Base Index) the Base Index

Level on the Index Business Day immediately preceding d.



## Extraordinary Event

### 1. Extraordinary Event

"Extraordinary Event" shall mean, in respect of the Underlying Index, the Underlying Index Sponsor:

- (1) fails to publish the level of such index; or
- (2) announces that it will make a material change in the formula for or method of calculating such index or in any other way materially modifies such index, other than a modification prescribed in such formula or method to maintain such index in the event of changes in the constituents of such index, the weightings (if any) of such index, or other routine events; or
- (3) permanently cancels such index.

## 2. Following an Extraordinary Event

If an Extraordinary Event occurs in respect of the Underlying Index, then:

- (1) the Index Calculation Agent may suspend the calculation, publication and dissemination of the Index, the Index Level and the Index Published Level until the first succeeding Index Business Day on which such Extraordinary Event does not occur or continue to occur; and/or
- (2) the Index Calculation Agent may select a replacement for the Underlying Index which has substantially similar characteristics to the Underlying Index, having regard to the manner in which the Underlying Index is used in the calculation of the Index, in which case (a) the Index Calculation Agent will determine the effective date of such replacement; and (b) the Index Sponsor will make such adjustment or adjustments to these Index Conditions as it determines appropriate to account for the effect on the Index of such replacement; and/or
- (3) the Index Sponsor may discontinue and cancel the Index.

#### 3. Successor Underlying Index and Successor Underlying Index Sponsor

If the Underlying Index is:

- (1) not calculated and announced by the Underlying 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 and method of calculation as used in the calculation of the Underlying Index,

then in each case that index shall be deemed to be the Underlying Index with effect from the date determined by the Index Calculation Agent, and the Index Sponsor may make such adjustment or adjustments to these Index Conditions as it determines appropriate to account for the effect on the Index of such change.



## Part 2 General Definitions

- "Affiliate" shall mean, in respect of any person, any entity controlled (directly or indirectly) by such person, any entity which controls (directly or indirectly) such person or any entity (directly or indirectly) under common control with such person. 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.
- "Base Index" shall mean, in respect of either of a Currency Hedged Index, a Fee Inclusive Index or a Volatility Target Index, the index specified in respect of such Currency Hedged Index, a Fee Inclusive Index or a Volatility Target Index (as relevant) in the Data Table.
- "Base Index Level" shall mean, in respect of a Base Index, the level of such Base Index.
- "Base Index Rounding" shall mean the number specified as such in the Data Table.
- "Base Index Sponsor" shall mean, in respect of a Base Index, the corporation or other entity which (1) is responsible for setting and reviewing the rules and procedures and methods of calculations and adjustments, if any, relating to such Base Index; and (2) announces (directly or through an agent) the level of such Base Index on a regular basis.
- "Citi" shall mean Citigroup Inc. and its Affiliates.
- "Currency Hedged Index" shall have the meaning given to it under the heading "Overview of the Index".
- "Currency Hedged Index Level" shall mean, in respect of a Currency Hedged Index, the level of such Currency Hedged Index.
- "Data Table" shall mean the table set out under the heading "Key Information".
- "Derived Index" shall have the meaning given to it under the heading "Overview of the Index".
- "Electronic Page" shall mean, in respect of an index, instrument or rate (as relevant) (1) the electronic page or source specified in respect of such index, instrument or rate (as relevant); or (2) 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 (3) any alternative electronic page or source designated by the Index Calculation Agent.
- "Fee Inclusive Index" shall have the meaning given to it under the heading "Overview of the Index".
- "Fee Inclusive Index Level" shall mean, in respect of a Fee Inclusive Index, the level of such Fee Inclusive Index.
- "Index Base Currency" shall mean the currency specified as such in the Data Table.
- "Index Business Day" shall have the meaning given to it in the Data Table.
- "Index Calculation Agent" shall mean the person specified as such in the Data Table and appointed by the Index Sponsor, any successor to such person, or any alternative calculation agent appointed by the Index Sponsor.
- "Index Launch Date" shall mean the date specified as such in the Data Table.



- "Index Level" shall mean, in respect of an Index Business Day, the closing level of the Index 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 to the performance of the Index.
- "Index Published Level" shall mean, in respect of an Index Business Day, the published level of the Index on such Index Business Day. The Index Published Level shall be an amount expressed in the Index Base Currency.
- "Index Sponsor" shall mean the person specified as such in the Data Table or any successor to or assignee of such person.
- "Index Start Date" shall mean the date specified as such in the Data Table.
- "Index Start Level" shall mean the Index Level on the Index Start Date, as specified in the Data Table.
- "Index Table" shall mean the table set out at the Appendix to these Index Conditions.
- "Index Ticker" shall mean the Electronic Page in respect of the Index, specified as such in the Data Table.
- "Index Valuation Time" shall mean the time specified as such in the Data Table, or such time approximate thereto as the Index Calculation Agent determines, or such other time as the Index Sponsor determines to be the Index Valuation Time.
- "Rounding" shall mean the number specified as such in the Data Table.
- "Underlying Index" shall mean the index specified as such in the Data Table.
- "Underlying Index Calculation Agent" shall mean, in respect of the Underlying Index, the corporation or other entity which is responsible for performing all calculations, determinations, rebalancing and adjustments in respect of such Underlying Index, including calculating the level of such Underlying Index.
- "Underlying Index Sponsor" shall mean, in respect of the Underlying Index, the corporation or other entity which (1) is responsible for setting and reviewing the rules and procedures and methods of calculations and adjustments, if any, relating to such Underlying Index; and (2) announces (directly or through an agent) the level of such Underlying Index on a regular basis.
- "Underlying Index Ticker" shall mean, in respect of the Underlying Index, the Electronic Page specified in respect of such Underlying Index in the Data Table.
- "Volatility Target Index" shall have the meaning given to it under the heading "Overview of the Index".
- "Volatility Target Index Level" shall mean, in respect of a Volatility Target Index, the level of such Volatility Target Index.



## Part 3 Miscellaneous Provisions

#### 1. Calculations and determinations

#### 1.1 General

The Index Calculation Agent will perform all calculations, determinations, rebalancings and adjustments (together, "Calculations") in respect of the Index (which terms shall include for the purposes of this Part 3 each index the methodology of which is described in these Index Conditions).

Neither the Index Calculation Agent nor the Index Sponsor 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 the Counterparty.

Although these Index Conditions are intended to be comprehensive, it is possible that ambiguities, errors and omissions may arise in certain circumstances. The Index Sponsor will resolve, acting in good faith and in a commercially reasonable manner, any such ambiguity, error or omission, and may amend these Index Conditions to reflect the resolution of such ambiguity, error or omission in a manner which is consistent with the commercial objective of the Index.

## 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 places 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 in good faith and in a commercially reasonable manner) 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 as provided in these Index Conditions, 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 may, but shall not be obliged to, 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.

#### 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 *Not acting as fiduciary or agent*

In performing any Calculation or other action in connection with these Index Conditions, each of the Index Calculation Agent and the Index Sponsor will act as principal and not as agent of any other person. Neither the Index Calculation Agent nor the Index Sponsor owes any duty of care or any fiduciary duty to any person. Each Calculation and other action performed in connection with these Index Conditions by the Index Calculation Agent or the Index Sponsor is performed in reliance on this provision and is subject to this provision.

If through performing any such Calculation or other action the Index Calculation Agent or the Index Sponsor is rendered an agent or fiduciary of another person under applicable law, then (at the option of the Index Calculation Agent or the Index Sponsor, as relevant) the rights and obligations of the Index Calculation Agent or the Index Sponsor 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 Calculation Agent or the Index Sponsor 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.

### 1.8 Dates and times of calculations

Notwithstanding that certain Calculations under these Index Conditions may be expressed to be "on" or "as at" a certain date or time, the Index Calculation Agent may in its discretion perform such Calculation in respect of such date or time after such date or time.

#### 2. Notional exposure

The Index reflects a particular method by which the performance of the indices, instruments and rates (each, a "Component") used to determine the Index and the Index Level is analyzed, and any exposure to a Component will be purely notional and will only exist in the books and records of the Index Sponsor and the Index Calculation Agent.



#### 3. Conflicts of interest

Citi entities perform various roles in connection with the Index and the Transaction described in the Confirmation, and conflicts of interest may arise for any such entity as a consequence of any role it performs in connection with the Index or the Transaction described in the Confirmation or as a consequence of its activities more generally.

During the normal course of their business, the Index Sponsor, the Index Calculation Agent, any of their respective Affiliates, directors, officers, employees, representatives, delegates and agents (each, for these purposes, a "Relevant Person") may enter into, promote, offer or sell securities or contracts (whether or not structured) linked to the Index and/or any Component. 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 Component; (2) invest in or engage in transactions with or on behalf of other persons relating to the Index and/or any Component; (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 Component; (4) have an investment banking or commercial relationship with the issuer of any Component and have access to information from such issuer; or (5) publish research in respect of any Component. Such activity may or may not affect the Index Level, but the Counterparty 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.

#### 4. Disclaimer

No Relevant Person makes any express or implied representation or warranty as to (1) the advisability of purchasing or entering into the Transaction described in the Confirmation; (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) legal, tax, regulatory, financial or accounting advice.

Neither the Index Calculation Agent nor the Index Sponsor is under any obligation to continue to calculate, publish or disseminate the Index, the Index Level, or the Index Published Level.

## 5. Intellectual property

The Index and these Index Conditions are the Index Sponsor's proprietary and confidential material. No person may reproduce or disseminate the information contained in these Index Conditions, the Index, the Index Level or the Index Published Level without the prior written consent of the Index Sponsor. These Index Conditions are not intended for distribution to or use by any person in a jurisdiction where such distribution is prohibited by applicable law and regulation.

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