## DEUTSCHE BANK CROCI® SECTORS II USD 5.5% VOLATILITY CONTROL INDEX

The Deutsche Bank CROCI® Sectors II USD 5.5% Volatility Control Index (Bloomberg: [ ] <Index>) (the "**Volatility Control Index**") is a proprietary index of Deutsche Bank AG, London Branch (the "**Index Sponsor**") and is intended to reflect the performance of a dynamic allocation strategy that adjusts the Volatility Control Index's notional exposure between the Deutsche Bank CROCI® Sectors II USD Price Return Index (the "**CROCI Sectors II Index**") and the Deutsche Bank Fed Funds Effective Rate Total Return Index (the "**Fed Funds Index**," and, together with the CROCI Sectors II Index, the "**Underlying Indices**"), with the aim of maintaining a fixed target volatility level of 5.50% each day, calculated by reference to the higher of the twenty- and forty-day realized volatility of the CROCI Sectors II Index. The notional exposure to the CROCI Sectors II Index will generally decrease if the higher of the twenty- and forty-day realized volatility of the CROCI Sectors II Index increases, and will in turn generally increase if such higher realized volatility decreases, subject to a maximum notional exposure to the CROCI Sectors II Index of 100%. If the notional exposure to the CROCI Sectors II Index is under 100%, the remaining notional exposure will be allocated to the Fed Funds Index.

The CROCI Sectors II Index is a proprietary index of Deutsche Bank AG, London Branch and is intended to reflect the price return performance of thirty stocks generally selected from three out of nine industry sectors (excluding financials) in a selection pool of large capitalization stocks in the United States, Europe and Japan. On each monthly selection date, following the applicable stabilization adjustment as described below, the three sectors with the the lowest median CROCI Economic Price Earnings Ratios are identified and the ten stocks with the lowest positive CROCI Economic Price Earnings Ratios are selected from each of these three sectors. The CROCI Economic Price Earnings Ratio is a price earnings ratio calculated based on a proprietary methodology developed by Deutsche Bank AG, which we refer to as the CROCI (Cash Return on Capital Invested) methodology. The CROCI methodology aims to identify "underpriced" companies by making the valuations of various companies more comparable. For the purpose of selecting the "underpriced" sectors or companies, the median CROCI Economic Price Earnings Ratio of each new sector and the CROCI Economic Price Earnings Ratio of each potential new constituent stock are increased by a stabilization factor of 0.10 to reduce sector turnover as well as stock constituent turnover on each monthly selection date. The thirty selected constituent stocks are equally-weighted on each monthly reconstitution date. The performance of the CROCI Sectors II Index will be positive if the selected stocks rise in value, and negative if such stocks decrease in value. The CROCI Sectors II Index is described in more detail under "Deutsche Bank CROCI® Sectors II USD Index" below.

The Fed Funds Index is a proprietary index of Deutsche Bank AG, London Branch and is intended to measure the accrual of a deposit invested at the inter-bank overnight interest rate. The deposit is compounded (reinvested) daily, with a 360-day year convention. The Fed Funds Index is calculated on a total return basis on each calendar day. The Fed Funds Index is described in more detail under "Deutsche Bank Fed Funds Total Return Index" below.

To set the notional exposure to the CROCI Sectors II Index on each Trading Day (as defined below), the Index Calculation Agent will first calculate the target notional exposure to the CROCI Sectors II Index ("**Target Exposure**"), which is equal to the ratio of (i) 5.5% (the "**Target Volatility**") and (ii) the higher of the twenty- and forty-day realized volatility of the CROCI Sectors II Index calculated on the second immediately preceding Trading Day (the "**Realized Volatility**"), subject to a maximum notional

exposure of 100%. The realized twenty-day volatility and realized forty-day volatility on each Trading Day are calculated by reference to the level of the CROCI Sectors II Index on each of the twenty or forty Trading Days (as applicable) in the period ending on and including such Trading Day. Using the higher of the twenty- and forty-day realized volatility of the CROCI Sectors II Index helps the Volatility Control Index better capture any recent increase in volatility of the CROCI Sectors II Index and lessen the impact of any recent decrease in volatility of the CROCI Sectors II Index. Generally, the Target Exposure will increase when the Realized Volatility decreases, and decrease when the Realized Volatility increases. If the Realized Volatility is less than the Target Volatility of 5.5%, the Target Exposure will be capped at 100%.

The Index Calculation Agent will then compare the Target Exposure with the notional exposure to the CROCI Sectors II Index on the immediately preceding Trading Day (the "**Previous Exposure**"). If the Target Exposure is higher or lower than the Previous Exposure, but by no more than 10%, the notional exposure to the CROCI Sectors II Index on such Trading Day will be set to equal the Target Exposure. If the Target Exposure is greater than or less than the Previous Exposure by more than 10%, the notional exposure to the CROCI Sectors II Index on such Trading Day will only be increased or decreased from the Previous Exposure, respectively, by 10%. As a result, the change to the notional exposure to the CROCI Sectors II Index on any Trading Day will stay in a range between +10% to -10%. The notional exposure to the Fed Funds Index is the difference between 100% and the notional exposure to the CROCI Sectors II Index on such Trading Day.

By way of example, if on a Trading Day the twenty-day realized volatility of the CROCI Sectors II Index was 7% and the forty-day realized volatility of the CROCI Sectors II Index was 6%, the Realized Volatility would be 7% and the Target Exposure would be 78.57% (5.50% *divided by* 7%). If the Previous Exposure to the CROCI Sectors II Index was 80%, because the Target Exposure is lower than the Previous Exposure by less than 10%, the notional exposure to the CROCI Sectors II Index would be reduced to equal the Target Exposure of 78.57% and the notional exposure to the Fed Funds Index would be increased from 20% to 21.43%. If the Previous Exposure was 90%, because the Target Exposure is less than the Previous Exposure by more than 10%, the notional exposure to the CROCI Sectors II Index would be reduced by only 10% to 80% and the notional exposure to the Fed Funds Index would be increased from 10% to 20%. If the Previous Exposure was 50%, because the Target Exposure is greater than the Previous Exposure by more than 10%, the notional exposure to the CROCI Sectors II Index would be increased by only 10% to 60% and the notional exposure to the Fed Funds Index would be reduced from 50% to 40%.

Because the notional exposure to the CROCI Sectors II Index can neither be increased or decreased by more than 10% nor exceed 100% on any Trading Day, the Volatility Control Index may not be able to maintain the Target Volatility of 5.50% at all times. If the Realized Volatility of the CROCI Sectors II Index increases significantly causing the Target Exposure to be less than the Previous Exposure by more than 10%, the Volatility Control Index will have a target volatility level higher than 5.50%. Similarly, if the Realized Volatility of the CROCI Sectors II Index decreases significantly causing the Target Exposure to be greater than the Previous Exposure by more than 10%, the Volatility Control Index will have a target volatility level lower than 5.50%. Furthermore, if the Realized Volatility is less than 5.50%, the Volatility Control Index may have a 100% exposure to the CROCI Sectors II Index, but a target volatility level less than 5.50%.



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The Volatility Control Index has been calculated by Deutsche Bank AG, London Branch (the "**Index Calculation Agent**") on a live basis since [ ], 2015 (the "**Index Live Date**") and has been retrospectively calculated using historical data and the same methodology as described herein since [February 29, 1996] (the "**Index Commencement Date**"). Therefore, the Volatility Control Index has very limited performance history and no actual investment which allowed tracking of the performance of the Volatility Control Index was possible before the Index Live Date. Furthermore, the index methodology of the Volatility Control Index was designed, constructed and tested using historical market data and based on knowledge of factors that may have affected its performance. Any returns prior to the Index Live Date were achieved by means of a retroactive application of the back-tested index methodology designed with the benefit of hindsight. The actual performance of the Volatility Control Index may bear little relation to the retrospectively calculated performance of the Volatility Control Index if the market behaves differently than it has in the past. The Index Sponsor will calculate the level of the Volatility Control Index (the "**Index Closing Level**") on each Index Business Day as described below under "*Calculation of the Index Closing Level.*" The Index Closing Level on the Index Commencement Date was set at 1,000.

An "**Index Business Day**" means a day (other than a Saturday or Sunday) on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealings in foreign exchange and foreign currency deposits) in London.

A "**Trading Day**" means any day other than a Saturday or Sunday on which each of the London Stock Exchange, New York Stock Exchange, Euronext Paris Stock Exchange and Tokyo Stock Exchange is scheduled to be open for its usual trading session.

**Calculation of the Index Closing Level**

The Index Calculation Agent will calculate the Index Closing Level on each Index Business Day based on the performances of the CROCI Sectors II Index and the Fed Fund Index on such Index Business Day and their respective notional exposure on the immediately preceding Trading Day. The Index Closing Level is calculated using the following formula:

$$ICL_{(t)} = ICL_{(t-1)} \times (E_{(t)} \times (CSIL_{(t)} / CSIL_{(t-1)} - 1) + (1 - E_{(t)}) \times (FFIL_{(t)} / FFIL_{(t-1)} - 1) + 1)$$

Where:

| | | |
|---|---|---|
| $ICL_{(t)}$ | = | the Index Closing Level on the relevant Index Business Day |
| $ICL_{(t-1)}$ | = | the Index Level on the immediately preceding Index Business Day |
| $E_{(t)}$ | = | the notional exposure to the CROCI Sectors II Index on the immediately preceding Trading Day |
| $CSIL_{(t)}$ | = | the closing level of the CROCI Sectors II Index on such Index Business Day |
| $CSIL_{(t-1)}$ | = | the closing level of the CROCI Sectors II Index on the immediately preceding Index Business Day |
| $FFIL_{(t)}$ | = | the closing level of the Fed Fund Index on such Index Business Day |
| $FFIL_{(t-1)}$ | = | the closing level of the Fed Fund Index on the immediately preceding |



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Index Business Day

The Volatility Control Index has been calculated by the Index Calculation Agent on a live basis since the Index Live Date. The Index Sponsor will publish the Index Closing Level on Bloomberg page "[ ] <Index>" or on any successor to such page or service as selected by the Index Sponsor from time to time at its reasonable discretion, and on the Index Sponsor's website under the heading "*CROCI® Sectors II USD 5.5% Volatility Control Index*."

**Underlying Index Events and their Consequences**[1]

*Successor Index to an Underlying Index*

If an Underlying Index is (i) not calculated and announced by the sponsor of such Underlying Index (which includes any of such sponsor's agents performing any relevant role for such Underlying Index) but is calculated and announced by a successor sponsor acceptable to the Index Sponsor, then such successor sponsor will be deemed to have replaced the previous sponsor of such Underlying Index or (ii) replaced by a successor index using, in the determination of the Index Sponsor, the same or a substantially similar formula for and method of calculation as used in the calculation of the sponsor of such Underlying Index, then such successor index (the "**Successor Underlying Index**") will be deemed to have replaced such Underlying Index.

*[Underlying Index Events and their Consequences*

Upon the occurrence of any Underlying Index Event, the Index Sponsor will determine, in its reasonable discretion, whether the occurrence or existence of such Underlying Index Event has a material effect on any Index Closing Level or the Volatility Control Index. If the Index Sponsor determines that the occurrence or existence of an Underlying Index Event has a material effect on any Index Closing Level or the Volatility Control Index, the Index Sponsor will:

(i) calculate the relevant Index Closing Level on such Index Business Day using, in lieu of a published level for the Underlying Index for which such Underlying Index Event has occurred, a level of such Underlying Index as determined by the Index Sponsor in accordance with the formula for and method of calculating such Underlying Index last in effect prior to the occurrence of the relevant Underlying Index Event [but using only those reference assets or bases that composed such Underlying Index immediately prior to such Underlying Index Event][2];

(ii) make any adjustment to the Volatility Control Index which it determines appropriate to account for the relevant Underlying Index Event and which may include, without limitation, selecting a Successor Underlying Index for such Underlying Index;

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[1] DB: In the DB drafted index description provided, why did you limit this section to only apply to the CROCI Sectors II Index?

[2] DB: Please confirm that, if you were to avail yourself of this right, you intend to calculate a level of the CROCI Sectors II Index without reconstituting it. Also, what do you mean by "bases"?



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(iii) determine that no Index Closing Level will be calculated on such Index Business Day; and/or

(iv) permanently cease to calculate and publish the relevant Index Closing Level and cancel the Volatility Control Index.

"**Underlying Index Event**" means an Underlying Index Cancellation, Underlying Index Disruption or Underlying Index Modification.

"**Underlying Index Cancellation**" means that at any relevant time the sponsor of an Underlying Index or any successor sponsor permanently cancels such Underlying Index and no Successor Underlying Index exists.

"**Underlying Index Disruption**" means that at any relevant time the sponsor of an Underlying Index or any successor sponsor fails to calculate such Underlying Index and/or publish the levels of such Underlying Index on any day on which the levels of such Underlying Index were scheduled to be published..

"**Underlying Index Modification**" means that at any relevant time the sponsor of an Underlying Index or any successor sponsor makes or announces that it will make a material change in the formula for or the method of calculating such Underlying Index or in any way materially modifies or adjusts such Underlying Index (other than modification prescribed in its formula or method to maintain such Underlying Index, or permitted changes in its constituents and/or other routine events).][3, 4]

**Index Sponsor**

All determinations made by the Index Sponsor and Index Calculation Agent in respect of the Volatility Control Index will be made by it in good faith and in a commercially reasonable manner by reference to such factors as the Index Sponsor and Index Calculation Agent, respectively, deem appropriate and will be final, conclusive and binding in the absence of manifest error. The Index Sponsor may delegate and/or transfer any of its obligations or functions under the terms of the Volatility Control Index to one or more third parties as it deems appropriate from time to time. The Index Calculation Agent may only delegate and/or transfer any of its obligations or functions under the terms of the Volatility Control Index with the express written permission of the Index Sponsor. **For information regarding the sponsors and calculation agents of the CROCI Sectors II Index and the Fed Funds Index, please see the relevant sections under "Deutsche Bank CROCI® Sectors II USD Index" and "Deutsche Bank Fed Funds Total Return Index" below.**

[3] DB: If you change the reconstitution of the CROCI Sectors II Index from monthly to quarterly, would you consider such change as being non-material and thus not consider it an Underlying Index Modification?

[4] Still need to discuss whether to include disruptions from CROCI Sectors II Index and Fed Funds Index in this section.

**Change in Methodology of the Volatility Control Index and Termination**

In calculating and determining the level of the Volatility Control Index, the Index Sponsor will, subject as provided below, employ the methodology described herein and its application of such methodology will be conclusive and binding. While the Index Sponsor currently employs the above described methodology to calculate the Volatility Control Index, no assurance can be given that market, regulatory, judicial, financial, fiscal or other circumstances (including, but not limited to, any changes to or any suspension or termination of any constituent of the Volatility Control Index or any other events affecting transactions on the same or similar terms to any described herein) will not arise that would, in the view of the Index Sponsor, necessitate or make desirable a modification of or change to such methodology.

Accordingly:

(i) The Index Sponsor will be entitled to make such modifications and/or changes as it, in its reasonable discretion, deems appropriate, including (without limitation):

(i) to correct any manifest error or proven error contained in the methodology described herein; and/or

(ii) to cure, correct or supplement any contradictory or defective provision contained in the methodology described herein; and/or

(iii) if market, regulatory, juridical, financial, fiscal or other circumstances arise, which were not foreseeable by the Index Sponsor as at the Index Live Date and such circumstances have not been deliberately caused by the Index Sponsor and such circumstances would, in the determination of the Index Sponsor, necessitate or make desirable such a modification or change of the methodology described herein (including, but without limitation, a change in the frequency of calculation of any Index Closing Level) in order for the Volatility Control Index to continue being calculated and determined notwithstanding the relevant circumstances. In deciding what is necessary, the Index Sponsor will consider and/or take into account what the Index Sponsor determines to be the intended strategy of the Volatility Control Index.

(ii) Further, and without limitation to the above provisions, the Index Sponsor will be entitled to make such modifications and/or changes as it in its reasonable discretion deems appropriate:

(i) to preserve the intended strategy of the Volatility Control Index where such modification and/or change is of a formal, minor or technical nature; and/or

(ii) if market, regulatory, juridical, financial, fiscal or other circumstances arise, which were not foreseen by the Index Sponsor as at the Index Live Date and such circumstances have not been deliberately caused by the Index Sponsor and in the determination of the Index Sponsor, such modifications and/or changes would assist in maintaining the intended strategy of the Volatility Control Index and/or would



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ensure that the Volatility Control Index can continue to be calculated and determined by the Index Sponsor in light of such circumstances.

In making such modifications however the Index Sponsor will (i) ensure that such modifications or changes will result in a methodology that, in the Index Sponsor's determination, is consistent in its intended strategy with the methodology described herein and (ii) limit any such modification or change to the terms of the Volatility Control Index and/or method of calculating the Index Closing Level. The Index Sponsor may, in its discretion, at any time and without notice, terminate the calculation and publication of the Volatility Control Index.



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