



Deutsche Bank AG

## Notes or Securities Linked to an Index

Deutsche Bank AG may from time to time offer and sell notes or securities, as part of our Global Notes Program, Series A (collectively, the “**securities**”), linked to one or more indices or other underlying assets. This underlying supplement describes potential indices to which the securities may be linked, as well as related matters concerning the relationship, if any, between Deutsche Bank AG and the sponsor or publisher of the indices. Additional specific terms of any securities that we offer, including any additions or changes to the terms specified in the product supplement relating to your securities or the description of the index contained in this underlying supplement, will be described in a separate free writing prospectus, term sheet or pricing supplement, which we refer to generally as a “**pricing supplement**.” Any relevant pricing supplement, including any free writing prospectus, should be read in connection with this underlying supplement, the relevant product supplement and the accompanying prospectus and prospectus supplement. If there is any inconsistency between the terms described in the relevant pricing supplement and those described in this underlying supplement or in the accompanying prospectus, prospectus supplement or product supplement, the terms described in the relevant pricing supplement will be controlling.

**Underlying Indices:** The Deutsche Bank Liquid Commodity Indices and The Deutsche Bank Commodity Harvest Indices

Investing in the securities involves risks not associated with an investment in conventional securities. See “Risk Factors” beginning on page 12 of the accompanying prospectus and page PS-5 of the accompanying prospectus supplement, “Risk Factors” in the relevant product supplement and “Selected Risk Considerations” in the relevant pricing supplement for risks related to an investment in the securities.

Neither the Securities and Exchange Commission nor any state securities commissions has approved or disapproved of the securities or passed upon the adequacy or accuracy of this underlying supplement, the accompanying prospectus, prospectus supplement or product supplement or any relevant pricing supplement. Any representation to the contrary is a criminal offense.

The securities are not deposits or savings accounts and are not insured or guaranteed by the Federal Deposit Insurance Corporation or any other U.S. or foreign governmental agency or instrumentality.

July 31, 2015

## ADDITIONAL INFORMATION ABOUT THE SECURITIES

You should read this underlying supplement together with the prospectus dated July 31, 2015, as supplemented by the prospectus supplement dated July 31, 2015, relating to our Series A global notes, of which these securities are a part, and any relevant product supplement and pricing supplement that we may file with the Securities and Exchange Commission (the “**SEC**”) from time to time, which contains a description of the terms of particular categories of securities or the specific terms of your securities.

Our Central Index Key, or CIK, on the SEC website is 0001159508. As used in this underlying supplement, “**we**,” “**us**” or “**our**” refers to Deutsche Bank AG, including, as the context requires, acting through one of its branches.

You should carefully consider, among other things, the risk considerations set forth in accompanying prospectus and prospectus supplement and the relevant product supplement and pricing supplement, as the securities involve risks not associated with conventional debt securities. We urge you to consult your investment, legal, tax, accounting and other advisers before deciding to invest in the securities.

This underlying supplement describes potential indices to which the securities may be linked and the relationship, if any, between Deutsche Bank AG and the sponsor or publisher of the indices. If there is any inconsistency between the terms described in the relevant pricing supplement and those described in this underlying supplement, the terms described in the relevant pricing supplement will be controlling. Any relevant pricing supplement should also be read in connection with this underlying supplement, the relevant product supplement, if any, and the accompanying prospectus and prospectus supplement.

In this underlying supplement, when we refer to the “**securities**,” we mean certain securities or notes that may be offered by Deutsche Bank AG from time to time linked to one or more indices or other underlying assets. Also, references to the “**accompanying prospectus**” and “**prospectus supplement**” mean, respectively, the accompanying prospectus, dated July 31, 2015, of Deutsche Bank AG and the prospectus supplement, dated July 31, 2015, of Deutsche Bank AG, and references to “**relevant product supplement**” refer to the relevant product supplement that we may file from time to time relating to the particular category of your securities. References to the “**relevant pricing supplement**” mean the pricing supplement and any free writing prospectus that describe the specific terms of your securities.

### **Specific Terms Will Be Described in Relevant Pricing Supplements**

The specific terms of your securities will be described in the relevant pricing supplement, including any additions or changes to the terms specified in the relevant product supplement or the description of the indices set forth in this underlying supplement.

TABLE OF CONTENTS

	<u>Page</u>
The Deutsche Bank Liquid Commodity Index.....	US-2
The Deutsche Bank Commodity Harvest Indices .....	US-12
License Agreements .....	US-26

## THE DEUTSCHE BANK LIQUID COMMODITY INDEX

This section of this underlying supplement describes a family of commodity indices that are all based on the Deutsche Bank Liquid Commodity Index (the “**DBLCI**”). Deutsche Bank AG, London Branch (the “**Index Sponsor**”) established the DBLCI in February 2003 (“**DBLCI Base Date**”). The DBLCI tracks the performance of futures contracts relating to six commodities: Crude Oil, New York Harbor Ultra-Low Sulfur Diesel, Aluminum, Gold, Corn and Wheat. The DBLCI Mean Reversion (the “**DBLCI-MR**”) tracks the performance of the commodities underlying DBLCI, but rather than adjusting the representation of each of these commodities in the index on a predetermined schedule, the DBLCI MR systematically adjusts the representation of the six commodities depending on the relative expense of each commodity in the market. The DBLCI Mean Reversion Plus (the “**DBLCI-MR Plus**”) combines the DBLCI-MR’s approach to tracking commodity performance with a momentum strategy that seeks to protect returns from downturns in the commodities market by periodically adjusting a notional investment in the DBLCI-MR. The DBLCI Optimum Yield (the “**DBLCI-OY**”) tracks the same commodities underlying DBLCI, except that the DBLCI-OY tracks the performance of Wheat through a wheat basket index consisting of futures contracts on Wheat traded on three different exchanges. The DBLCI-OY seeks to outperform the DBLCI by generating the maximum implied roll yield by selecting from futures contracts expiring at a range of dates. The **DBLCI-OY Broad** and **DBLCI-OY Balanced** are similar to the DBLCI-OY, but track the performance of futures contracts relating to eight additional commodities. All indices described in this underlying supplement are calculated both on an excess return and a total return basis. These indices are described in more detail below.

### Overview of the DBLCI

The DBLCI is intended to reflect the performance of a basket of futures contracts relating to six commodities (each such futures contract, an “**Exchange Traded Instrument**”) and measures the value of this basket by tracking the closing prices of the Exchange Traded Instruments, adjusted to reflect the relative weight of each commodity in the DBLCI. The commodities comprising the DBLCI (each an “**DBLCI Index Constituent**”) and the notional amounts of each DBLCI Index Constituent included in the DBLCI have been chosen in proportion to historical levels of the world’s production and stocks of the DBLCI Index Constituents. The relative weight of each DBLCI Index Constituent reflected in the DBLCI is variable and is adjusted from time to time.

### Closing Levels of the DBLCI

The DBLCI is calculated on both an “excess return” and “total return” basis. The DBLCI calculated on an excess return basis is called the DBLCI Excess Return. The DBLCI calculated on a total return basis is called the DBLCI Total Return. The Index Sponsor will publish the DBLCI “excess return” closing level for each DBLCI Index Business Day on Bloomberg ticker DBLCMACL <Index> and the DBLCI “total return” closing level for each DBLCI Index Business Day on Bloomberg ticker DBLCMAVL <Index> or any successor thereto and on Deutsche Bank’s website at <http://index.db.com> or any successor thereto. The Index Sponsor will also publish on these websites any adjustments made to the DBLCI. The reference to Deutsche Bank’s website is made for purposes of conveying the foregoing information only, and no other information found at this website is incorporated by reference into this underlying supplement. A “**DBLCI 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 New York City and London, United Kingdom.

#### **Excess Return**

The closing level of the DBLCI on an “excess return” basis (“**DBLCI ER Closing Level**”) is calculated on each DBLCI Index Business Day as the sum of the DBLCI ER Calculation Values for each Exchange Traded Instrument included in the DBLCI on such DBLCI Index Business Day, rounded to six decimal places, with 0.0000005 being rounded upwards.

The “**DBLCI ER Calculation Value**” for an Exchange Traded Instrument on a particular DBLCI Index Business Day is the product of the weight assigned to such Exchange Traded Instrument on such day, referred to as the “**Instrument Amount**,” multiplied by the Closing Price for such day for such Exchange Traded Instrument on the Relevant Exchange.

The Closing Prices and the Relevant Exchanges for the Exchange Traded Instruments are set out under “—Closing Prices of Exchange Traded Instruments” below.

## **Total Return**

The “total return” calculation of the DBLCI reflects a Treasury Bill interest component. The closing level of the DBLCI on a “total return” basis (“**DBLCI TR Closing Level**”) is calculated on each DBLCI Index Business Day as follows:

The DBLCI TR Closing Level on the DBLCI Index Business Day immediately preceding such DBLCI Index Business Day multiplied by the product of (i) the sum of (A) the DBLCI ER Closing Level (as defined above) for such DBLCI Index Business Day divided by the DBLCI ER Closing Level for the DBLCI Index Business Day immediately preceding such DBLCI Index Business Day and (B) the TBill Accrual Factor (as defined below) for such DBLCI Index Business Day and (ii) the sum of (A) 1 and (B) the TBill Accrual Factor for such DBLCI Index Business Day raised to the power of the number of days which are not DBLCI Index Business Days during the period from (but excluding) the DBLCI Index Business Day immediately preceding such DBLCI Index Business Day to (but excluding) such DBLCI Index Business Day.

“**TBill Accrual Factor**” means, in respect of a DBLCI Index Business Day, an amount calculated in accordance with the following formula:

$$(1 - 91/360 \times \text{TBR})^{-1/91} - 1$$

where:

“**TBR**” means the closing three-month Treasury Bill rate appearing on Reuters Page US3MT = RR (or such page or service as may replace Reuters Page US3MT = RR for the purposes of displaying three-month Treasury Bill rates) in respect of the DBLCI Index Business Day immediately preceding such DBLCI Index Business Day (the “**TBill Determination Date**”) or if such rate is not published in respect of the TBill Determination Date, the closing three-month Treasury Bill rate last published prior to the TBill Determination Date.

## **Determining the Instrument Amount**

The Instrument Amount reflects the weight of a particular Exchange Traded Instrument in the DBLCI.

The Instrument Amount for any DBLCI Index Business Day that is neither a day falling within a Recomposition Period (as defined below) nor a DBLCI Rebalancing Day will be the Instrument Amount for the immediately preceding DBLCI Index Business Day that does not fall within a Recomposition Period.

The Instrument Amount for a particular Exchange Traded Instrument will change during each Recomposition Period and on any DBLCI Rebalancing Day. In addition, the Instrument Amount may change in the event of a Market Disruption Event. Each change to the Instrument Amount is described in more detail below.

## **Determining the Instrument Amount During a Recomposition Period**

Because the DBLCI measures the value of the DBLCI Index Constituents by tracking the prices of Exchange Traded Instruments, the methodology of the DBLCI includes provisions that provide for the periodic replacement of Exchange Traded Instruments relating to Crude Oil and New York Harbor Ultra-Low Sulfur Diesel as they approach maturity. This replacement takes place over a period of time, referred to as the “**Recomposition Period**,” to lessen the impact of such replacement on the markets for the DBLCI Index Constituents. Each Recomposition Period normally lasts for five DBLCI Index Business Days. Recomposition occurs monthly (other than in November) during a Recomposition Period for Exchange Traded Instruments relating to Crude Oil and New York Harbor Ultra-Low Sulfur Diesel.

The Recomposition Period takes place between the 2nd and 6th business day of the month, subject to a Market Disruption Event. Old Exchange Traded Contracts for Crude Oil and New York Harbor Ultra-Low Sulfur Diesel are substituted with new contracts that expire in two months. On each day during the Recomposition Period, new notional holdings are calculated. The calculations for the Instrument Amount leaving the DBLCI and the Instrument Amount entering the DBLCI are different.

The DBLCI ER Calculation Value (in respect of a DBLCI Index Constituent on any DBLCI Index Business Day) during a Recomposition Period is the sum of (i) the product of (A) the Existing Instrument Amount for such DBLCI Index Constituent for such DBLCI Index Business Day and (B) the closing price for such DBLCI Index Constituent for such DBLCI Index Business Day and (ii) the product of (A) the New Instrument Amount for such DBLCI Index Constituent for such DBLCI Index Business Day and (B) the closing price for such DBLCI Index Constituent for such DBLCI Index Business Day.

The “**Existing Instrument Amount**” for each of the DBLCI Index Business Days over the Recomposition Period is a fraction of the preceding DBLCI Index Business Day’s Existing Instrument Amount. Beginning with the first DBLCI Index Business Day within the Recomposition Period, the Existing Instrument Amount is, in sequence, 80%, 75%, 2/3, 50%, and 0% for the fifth DBLCI Index Business Day of the Period.

The “**New Instrument Amount**” for each of the DBLCI Index Business Days over the Recomposition Period is the sum of the (i)(A) product of the Recomposition DBLCI ER Closing Level and the New Instrument Percentage on that DBLCI Index Business Day, divided by (B) the Closing Price for such DBLCI Index Constituent on the DBLCI Index Business Day and (ii) the New Instrument Amount in respect of the preceding DBLCI Index Business Day during the Recomposition Period.

The “**New Instrument Percentage**” for each of the DBLCI Index Business Days over the Recomposition Period equals 100% minus the Existing Instrument Amount. Beginning with the first DBLCI Index Business Day within the Recomposition Period, the New Instrument Amount is, in sequence, 20%, 25%, 1/3, 50%, and 100% for the fifth DBLCI Index Business Day of the Period.

The “**Recomposition DBLCI ER Closing Level**” is the product of the Existing Instrument Amount and Closing Price of such DBLCI Index Constituent on a particular DBLCI Index Business Day.

### **Determining the Instrument Amount on a DBLCI Rebalancing Day**

The DBLCI is rebalanced on an annual basis on the 6th business day of November, subject to extension in the event of a Market Disruption Event, to rebalance its composition to the DBLCI Index Base Weight. New Gold, Aluminum, Corn, and Wheat Exchange Traded Instruments with an expiry in December of the following year are selected as the futures contracts. On each day during the DBLCI Rebalancing Period, new notional holdings are calculated.

The DBLCI ER Calculation Value is identical to the Recomposition Period excess return calculation above.

The Existing Instrument Amount and New Instrument Percentage calculations for each of the DBLCI Index Business Days over the DBLCI Rebalancing Period are identical to the Existing Instrument Amount and New Instrument Percentage calculations during the Recomposition Period.

The “**New Instrument Amount**” for each of the DBLCI Index Business Days over the DBLCI Rebalancing Period is the sum of the (i)(A) product of the Rebalancing DBLCI ER Closing Level, the New Instrument Percentage on that DBLCI Index Business Day, and the DBLCI Index Base Weight for such DBLCI Index Constituent divided by (B) the Closing Price for Such DBLCI Index Constituent on the DBLCI Index Business Day and (ii) the New Instrument Amount in respect of the preceding DBLCI Index Business Day during the DBLCI Rebalancing Period.

The “**Rebalancing DBLCI ER Closing Level**” on a particular DBLCI Index Business Day is the sum of the values calculated for each DBLCI Index Constituent as the product of (i) the Existing Instrument Amount for the preceding DBLCI Index Business Day and (ii) the Closing Price for the DBLCI Index Constituent on that particular DBLCI Index Business Day.

“**DBLCI Index Base Weight**” means the weightings assigned to each DBLCI Index Constituent on the DBLCI Base Date being:

- in respect of Crude Oil, 35.00%;
- in respect of New York Harbor Ultra-Low Sulfur Diesel, 20.00%;
- in respect of Aluminum, 12.50%;
- in respect of Gold, 10.00%;
- in respect of Corn, 11.25%; and
- in respect of Wheat, 11.25%.

### **Market Disruption Events and Force Majeure Events**

If the Index Sponsor is required on a DBLCI Index Business Day to calculate the Closing Price for any Exchange Traded Instrument in a different manner than set forth above under “—Closing Prices of Exchange Traded Instruments,”

due to the occurrence or continuance of an event, other than a Force Majeure Event, then such event will be a **“Market Disruption Event”** with respect to such Exchange Traded Instrument.

The Index Sponsor will not calculate the closing level of the DBLCI (or the related indices) in the event of an event or circumstance (including, without limitation, a systems failure, natural or man-made disaster, Act of God, armed conflict, act of terrorism, riot or labor disruption or any similar intervening circumstance) that is beyond the reasonable control of the Index Sponsor and that the Index Sponsor determines, in its discretion, affects the DBLCI Index Constituent (a **“Force Majeure Event”**). If a Force Majeure Event occurs on a DBLCI Index Business Day, the Index Sponsor may, in its discretion, take one or more of the following actions: (i) make such determinations and/or adjustments as it considers appropriate to determine the closing level; or (ii) defer publication of information relating to the DBLCI (or the related indices) until the next DBLCI Index Business Day on which it determines that no Force Majeure Event exists.

## **THE DEUTSCHE BANK LIQUID COMMODITY INDEX—MEAN REVERSION™**

### **Overview of the DBLCI-MR and DBLCI-MR Plus**

#### ***DBLCI-MR***

The DBLCI-MR invests in the same six commodities as the DBLCI and the listed instruments are rolled using the same mechanism as the DBLCI. Unlike the DBLCI, the DBLCI-MR undertakes no annual rebalancing. Instead, the weights of the commodities in the DBLCI are systematically adjusted depending on the relative expense of each commodity in the market. The individual weights are reset every time any one of the commodities undergoes a trigger event. The Instrument Amount is linked to the ratio between a one-year and five-year moving average price. Relatively expensive commodities have lower weights; conversely, relatively inexpensive commodities have higher weights.

#### **Determining the Instrument Amount on a DBLCI Rebalancing Day**

The methodology of the DBLCI-MR employs a process of dynamically increasing the Instrument Amount of an Exchange Traded Instrument when its price is historically low, and decreasing the amount when its price is historically high instead of rebalancing annually. Such increases or decreases for a particular Instrument Amount are effected on **“DBLCI Rebalancing Days,”** which occur when one-year average prices for an Exchange Traded Instrument diverge five percent or more when compared to the five-year average prices for that Exchange Traded Instrument.

If, on a DBLCI Rebalancing Day, the short-term average prices for Exchange Traded Instruments relating to a DBLCI Index Constituent exceed the long-term average prices for such instruments by approximately five percent or more, then the DBLCI-MR rebalancing methodology calls for a reduced weight being assigned to such Exchange Traded Instruments. Conversely, if the short-term average prices are below their long-term averages by approximately five percent or more, then the DBLCI-MR rebalancing methodology calls for increased weight being assigned to such Exchange Traded Instruments.

#### ***DBLCI-MR Plus***

The DBLCI-MR Plus combines the DBLCI-MR's approach to investing in commodities with a momentum strategy that seeks to protect returns from downturns in the commodities market. Like the DBLCI-MR, the DBLCI-MR Plus does not undergo annual rebalancing. Instead, on each Weight Rebalancing Date, the DBLCI-MR Plus is allocated between the DBLCI-MR and Treasury Bills based on relative performance over the previous twelve months, as described below.

### **Index Holding and Rebalancing**

The **“Index Holding”** is the proportion of the DBLCI-MR Plus invested in the DBLCI-MR at a relevant time. A new Index Holding is calculated monthly on each Weight Calculation Date and takes effect on the Weight Rebalance Date immediately following such Weight Calculation Date.

The Index Holding in respect of a DBLCI Index Business Day will be calculated as follows:

- (a) if the relevant DBLCI Index Business Day is not a Weight Rebalance Date, the Index Holding in respect of the relevant DBLCI Index Business Day will be the Index Holding on the DBLCI Index Business Day immediately preceding the relevant DBLCI Index Business Day; or
- (b) if the relevant DBLCI Index Business Day is a Weight Rebalance Date, the Index Holding in respect of the relevant DBLCI Index Business Day will be the quotient of (i) the product of (x) the Index Weight for the Weight Calculation Date immediately preceding the relevant DBLCI Index Business Day, and (y) the DBLCI ER

Closing Level on the Weight Calculation Date immediately preceding the relevant DBLCI Index Business Day (as numerator) and (ii) the DBLCI ER Closing Level of the DBLCI-MR (as defined below) on the Weight Calculation Date immediately preceding the relevant DBLCI Index Business Day (as denominator).

The Index closing level on each DBLCI Index Business Day is equal to the DBLCI TR Closing Level of the Index on such day.

**“Index Weight”** means, in respect of a Weight Calculation Date, the quotient of (a) the sum of the Performance Indicators greater than zero calculated in respect of such Weight Calculation Date (as numerator) and (b) 12 (as denominator).

**“Indicator Evaluation Dates”** mean, in respect of a Weight Calculation Date, the 6th Business Day of each of the twelve calendar months preceding the month of such Weight Calculation Date.

**“Performance Indicator”** means, in respect of a Weight Calculation Date, each value calculated as (a) the quotient of (i) the Underlying DBLCI ER Closing Level on such Weight Calculation Date (as numerator) and (ii) the Underlying DBLCI ER Closing Level for each Indicator Evaluation Date for such Weight Calculation Date minus (b) one.

**“Weight Calculation Date”** means the 6th DBLCI Index Business Day of each calendar month.

**“Weight Rebalance Date”** means the 8th DBLCI Index Business Day of each calendar month.

### **Closing Levels of the DBLCI-MR and DBLCI-MR Plus**

The DBLCI-MR and DBLCI-MR Plus are calculated on both an “excess return” and “total return” basis in a manner identical to the DBLCI. The DBLCI-MR and DBLCI-MR Plus calculated on an excess return basis are called the DBLCI-MR Excess Return and DBLCI-MR Plus Excess Return. The DBLCI-MR and DBLCI-MR Plus calculated on a total return basis are called the DBLCI-MR Total Return and DBLCI-MR Plus Total Return.

The Index Sponsor will publish the DBLCI-MR “excess return” closing level for each DBLCI Index Business Day on Bloomberg ticker DBLCMMCL <Index> and the DBLCI-MR “total return” closing level for each DBLCI Index Business Day on Bloomberg ticker DBLCMMVL <Index> or any successor thereto and on Deutsche Bank’s website at <http://index.db.com> or any successor thereto.

The Index Sponsor will publish the DBLCI-MR Plus “excess return” closing level for each DBLCI Index Business Day on Bloomberg ticker DBLCMPUE <Index> and the DBLCI-MR Plus “total return” closing level for each DBLCI Index Business Day on Bloomberg ticker DBLCMPUT <Index> or any successor thereto and on Deutsche Bank’s website at <http://index.db.com> or any successor thereto.

## **THE DEUTSCHE BANK LIQUID COMMODITY INDEX—OPTIMUM YIELD™**

### **Overview of the DBLCI-OY**

Prior to the close of trading on February 16, 2012, the DBLCI-OY invested in the same six commodities as the DBLCI. Instead of tracking the performance of Wheat through Exchange Traded Instruments related to Wheat traded on the Board of Trade of the City of Chicago, Inc. (“**CBOT**”), following the close of trading on February 16, 2012, DBLCI-OY tracks the performance of Wheat through the Deutsche Bank Liquid Commodity Index—Optimum Yield Wheat Basket Index USD Excess Return (Symbol: DBLCOWUE) (the “**Wheat Basket Index**”), consisting of a basket of three Exchange Traded Instruments related to Wheat traded on CBOT, the Kansas City Board of Trade (“**KCBT**”) and the Minneapolis Grain Exchange, Inc. (“**MGEX**”), respectively (the “**Wheat Basket**”). The Wheat Basket Index is rebalanced annually so that the Exchange Traded Instruments related to Wheat on CBOT, KCBT and MGEX will be weighted equally upon each annual rebalancing day.

Like the DBLCI, the DBLCI-OY is rebalanced annually. The DBLCI-OY’s “Optimum Yield” component employs a rules based approach when the DBLCI-OY rolls from one futures contract to another. Rather than selecting the new Exchange Traded Instrument based on a pre-defined schedule, the DBLCI-OY rolls to a successor Exchange Traded Instrument from a list of tradable Exchange Traded Instruments set to expire within the next 13 months in a manner that seeks to generate the maximum implied roll yield. In this way, the DBLCI-OY seeks to maximize the potential roll benefits in backwardated markets and minimize the loss from rolling down the curve in contango markets.

On the first day of each month that is a business day in New York, each Exchange Traded Instrument currently in the DBLCI-OY is tested for continued inclusion in the DBLCI-OY based on the month in which the contract delivery of the

underlying DBLCI Index Constituent can start. If, on such date, the delivery month is the next month, a new contract is selected. For each DBLCI Index Constituent, the new Exchange Traded Instrument selected will be the contract with the maximum implied roll yield based on the closing price for each eligible contract. An **“Eligible Contract”** is any contract having a delivery month: (i) no sooner than the month after the delivery month of the commodity futures contract currently in the DBLCI-OY, and (ii) no later than the 13th month after the applicable first New York business day. If two contracts have the same roll yield, the contract with the minimum number of months to the month of expiration is selected.

### **Overview of the DBLCI-OY Broad and Balanced**

The DBLCI-OY Broad is identical to the DBLCI-OY except that it tracks the performance of futures contracts relating to eight additional commodities, drawn from the energy, precious metals, industrial metals and agricultural sectors. The DBLCI-OY Balanced has the same underlying constituents as the DBLCI-OY Broad, but the energy sector weight is reduced from 55% of the DBLCI-OY Broad to 35%. Following the close of trading on February 16, 2012, both the DBLCI-OY Broad and the DBLCI-OY Balanced track the performance of Wheat through the Wheat Basket Index.

The **“DBLCI Index Base Weight”** for the DBLCI-OY Broad is:

- in respect of WTI Crude Oil, 12.375%;
- in respect of Brent Crude Oil, 12.375%;
- in respect of New York Harbor Ultra-Low Sulfur Diesel, 12.375%;
- in respect of RBOB Gasoline, 12.375%;
- in respect of Aluminum, 4.167%;
- in respect of Zinc, 4.167%;
- in respect of Copper, 4.167%;
- in respect of Sugar, 5.625%;
- in respect of Natural Gas, 5.500%;
- in respect of Gold, 8.000%;
- in respect of Silver, 2.000%;
- in respect of Corn, 5.625%;
- in respect of Wheat/Wheat Basket, 5.625%; and
- in respect of Soybeans, 5.625%.

The **“DBLCI Index Base Weight”** for the DBLCI-OY Balanced is:

- in respect of WTI Crude Oil, 7.875%;
- in respect of Brent Crude Oil, 7.875%;
- in respect of New York Harbor Ultra-Low Sulfur Diesel, 7.875%;
- in respect of RBOB Gasoline, 7.875%;
- in respect of Aluminum, 6.000%;
- in respect of Zinc, 6.000%;
- in respect of Copper, 6.000%;
- in respect of Sugar, 7.500%;
- in respect of Natural Gas, 3.500%;

- in respect of Gold, 13.600%;
- in respect of Silver, 3.400%;
- in respect of Corn, 7.500%;
- in respect of Wheat/Wheat Basket, 7.500%; and
- in respect of Soybeans, 7.500%.

### **Closing Levels of the DBLCI-OY, DBLCI-OY Broad and DBLCI-OY Balanced**

The DBLCI-OY, DBLCI-OY Broad and DBLCI-OY Balanced are calculated on both an “excess return” and “total return” basis in a manner identical to the DBLCI. The DBLCI-OY, DBLCI-OY Broad and DBLCI-OY Balanced calculated on an excess return basis are called the DBLCI-OY Excess Return, DBLCI-OY Broad Excess Return and DBLCI-OY Balanced Excess Return. The DBLCI-OY, DBLCI-OY Broad and DBLCI-OY Balanced calculated on a total return basis are called the DBLCI-OY Total Return, DBLCI-OY Broad Total Return and DBLCI-OY Balanced Total Return.

The Index Sponsor will publish the DBLCI-OY “excess return” closing level for each DBLCI Index Business Day on Bloomberg ticker DBLCOYER <Index> and the DBLCI-OY “total return” closing level for each DBLCI Index Business Day on Bloomberg ticker DBLCOYTR <Index> or any successor thereto and on Deutsche Bank’s website at <http://index.db.com> or any successor thereto.

The Index Sponsor will publish the DBLCI-OY Broad “excess return” closing level for each DBLCI Index Business Day on Bloomberg ticker DBLCBRER <Index> and the DBLCI-OY Broad “total return” closing level for each DBLCI Index Business Day on Bloomberg ticker DBLCBRTR <Index> or any successor thereto and on Deutsche Bank’s website at <http://index.db.com> or any successor thereto.

The Index Sponsor will publish the DBLCI-OY Balanced “excess return” closing level for each DBLCI Index Business Day on Bloomberg ticker DBLCBBER <Index> and the DBLCI-OY Balanced “total return” closing level for each DBLCI Index Business Day on Bloomberg ticker DBLCBBTR <Index> or any successor thereto and on Deutsche Bank’s website at <http://index.db.com> or any successor thereto.

### **Closing Prices of Exchange Traded Instruments**

The methodology used to obtain the “**Closing Price**” for an Exchange Traded Instrument varies depending on the commodity underlying such Exchange Traded Instrument and is determined as follows:

#### ***Crude Oil Closing Price***

The Closing Price on a DBLCI Index Business Day for an Exchange Traded Instrument relating to Crude Oil will be its price at the regular close of the principal trading session on such day on the New York Mercantile Exchange or its successor (“**NYMEX**”), expressed in U.S. dollars per barrel of Crude Oil, as published by NYMEX for that DBLCI Index Business Day or, if in the determination of the Index Sponsor, a price is not available on such DBLCI Index Business Day, the price as published by NYMEX for the immediately preceding DBLCI Index Business Day for which a price is available.

#### ***New York Harbor Ultra-Low Sulfur Diesel Closing Price***

The Closing Price on a DBLCI Index Business Day for an Exchange Traded Instrument relating to New York Harbor Ultra-Low Sulfur Diesel will be its price at the regular close of the principal trading session on such day on NYMEX, expressed in U.S. dollars per U.S. gallon of New York Harbor Ultra-Low Sulfur Diesel, as published by NYMEX for that DBLCI Index Business Day or, if in the determination of the Index Sponsor, a price is not available on such DBLCI Index Business Day, the price as published by NYMEX for the immediately preceding DBLCI Index Business Day for which a price is available.

#### ***Aluminum Closing Price***

The Closing Price on a DBLCI Index Business Day for an Exchange Traded Instrument relating to Aluminum will be its price at the regular close of the principal trading session on such day on The London Metal Exchange or its successor (“**LME**”), re-expressed in U.S. dollars per metric ton of Aluminum, as published by LME or its successor for that DBLCI Index Business Day or, if in the determination of the Index Sponsor, a price is not available on such DBLCI Index

Business Day, the price as published by LME or its successor for the immediately preceding DBLCI Index Business Day for which a price is available.

### ***Gold Closing Price***

The Closing Price on a DBLCI Index Business Day for an Exchange Traded Instrument relating to Gold will be its price at the regular close of the principal trading session on such day on the Commodity Exchange Inc., New York or its successor ("**COMEX**"), expressed in U.S. dollars per troy ounce of Gold, as published by COMEX for that DBLCI Index Business Day or, if in the determination of the Index Sponsor, a price is not available on such DBLCI Index Business Day, the price as published by COMEX for the immediately preceding DBLCI Index Business Day for which a price is available.

### ***Corn Closing Price***

The Closing Price on a DBLCI Index Business Day for an Exchange Traded Instrument relating to Corn will be its price at the regular close of the principal trading session on such day on CBOT, expressed in U.S. dollars per bushel of Corn, as published by CBOT for that DBLCI Index Business Day or, if in the determination of the Index Sponsor, a price is not available on such DBLCI Index Business Day, the price as published by CBOT for the immediately preceding DBLCI Index Business Day for which a price is available.

### ***Wheat Closing Price (for DBLCI, DBLCI-MR and DBLCI-MR Plus)***

The Closing Price on a DBLCI Index Business Day for an Exchange Traded Instrument relating to Wheat will be its price at the regular close of the principal trading session on such day on CBOT, expressed in U.S. dollars per U.S. bushel of Wheat of the grades deliverable in respect of the relevant Exchange Traded Instrument in accordance with the rules of CBOT, as published by CBOT for that DBLCI Index Business Day or, if in the determination of the Index Sponsor, a price is not available on such DBLCI Index Business Day, the price as published by CBOT for the immediately preceding DBLCI Index Business Day for which a price is available.

### ***Wheat Basket Closing Price (for DBLCI-OY, DBLCI-OY Broad and DBLCI-OY Balanced)***

Prior to the close of trading on February 16, 2012, the Closing Price on a DBLCI Index Business Day for an Exchange Traded Instrument relating to Wheat was calculated as set forth above. Following the close of trading on February 16, 2012, the performance of Wheat is tracked through the Wheat Basket Index.

### ***WTI Crude Oil Closing Price***

The Closing Price on a DBLCI Index Business Day for an Exchange Traded Instrument relating to WTI Crude Oil will be the price at the regular close of the principal trading session on such day on the NYMEX of such Exchange Traded Instrument, expressed in U.S. dollars per barrel of WTI Crude Oil, as published by NYMEX for that DBLCI Index Business Day or, if in the determination of the Index Sponsor a price is not available on such DBLCI Index Business Day, the price as published by NYMEX for the immediately preceding DBLCI Index Business Day for which a price is available.

### ***Brent Crude Oil Closing Price***

The Closing Price on a DBLCI Index Business Day for an Exchange Traded Instrument relating to Brent Crude Oil will be the price at the regular close of the principal trading session on such day on the IntercontinentalExchange, Inc. or its successor ("**ICE**") of such Exchange Traded Instrument, expressed in U.S. dollars per barrel of Brent Crude Oil, as published by ICE for that DBLCI Index Business Day or, if in the determination of the Index Sponsor a price is not available on such DBLCI Index Business Day, the price as published by ICE for the immediately preceding DBLCI Index Business Day for which a price is available.

### ***RBOB Gasoline Closing Price***

The Closing Price on a DBLCI Index Business Day for an Exchange Traded Instrument relating to RBOB Gasoline will be the price at the regular close of the principal trading session on such day on NYMEX of such Exchange Traded Instrument, expressed in U.S. dollars per U.S. gallon of RBOB Gasoline, as published by NYMEX for that DBLCI Index Business Day or, if in the determination of the Index Sponsor a price is not available on such DBLCI Index Business Day, the price as published by NYMEX for the immediately preceding DBLCI Index Business Day for which a price is available.

### ***Zinc Closing Price***

The Closing Price on a DBLCI Index Business Day for an Exchange Traded Instrument relating to Zinc will be the price at the regular close of the principal trading session on such day on LME of such Exchange Traded Instrument, re-expressed in U.S. dollars per metric ton of Zinc, as published by LME for that DBLCI Index Business Day or, if in the determination of the Index Sponsor a price is not available on such DBLCI Index Business Day, the price as published by LME for the immediately preceding DBLCI Index Business Day for which a price is available.

### ***Copper Closing Price***

The Closing Price on a DBLCI Index Business Day for an Exchange Traded Instrument relating to Copper will be the price at the regular close of the principal trading session on such day on LME of such Exchange Traded Instrument, re-expressed in U.S. dollars per metric ton of Copper, as published by LME for that DBLCI Index Business Day or, if in the determination of the Index Sponsor a price is not available on such DBLCI Index Business Day, the price as published by LME for the immediately preceding DBLCI Index Business Day for which a price is available.

### ***Sugar Closing Price***

The Closing Price on a DBLCI Index Business Day for an Exchange Traded Instrument relating to Sugar will be the price at the regular close of the principal trading session on such day on the Intercontinental Exchange, Inc. or its successor ("ICE") of such Exchange Traded Instrument, expressed in U.S. dollars per metric ton of Sugar #11, as published by ICE for that DBLCI Index Business Day or, if in the determination of the Index Sponsor a price is not available on such DBLCI Index Business Day, the price as published by CBOT for the immediately preceding DBLCI Index Business Day for which a price is available.

### ***Natural Gas Closing Price***

The Closing Price on a DBLCI Index Business Day for an Exchange Traded Instrument relating to Natural Gas will be the price at the regular close of the principal trading session on such day on NYMEX of such Exchange Traded Instrument, expressed in U.S. dollars per Million British Thermal Units of Natural Gas, as published by NYMEX for that DBLCI Index Business Day or, if in the determination of the Index Sponsor a price is not available on such DBLCI Index Business Day, the price as published by NYMEX for the immediately preceding DBLCI Index Business Day for which a price is available.

### ***Silver Closing Price***

The Closing Price on a DBLCI Index Business Day for an Exchange Traded Instrument relating to Silver will be the price at the regular close of the principal trading session on such day on the COMEX of such Exchange Traded Instrument, expressed in U.S. dollars per troy ounce of Silver, as published by COMEX for that DBLCI Index Business Day or, if in the determination of the Index Sponsor a price is not available on such DBLCI Index Business Day, the price as published by COMEX for the immediately preceding DBLCI Index Business Day for which a price is available.

### ***Soybeans Closing Price***

The Closing Price on a DBLCI Index Business Day for an Exchange Traded Instrument relating to Soybeans will be the price at the regular close of the principal trading session on such day on CBOT of such Exchange Traded Instrument, expressed in U.S. dollars per U.S. bushel of Soybeans, as published by CBOT for that DBLCI Index Business Day or, if in the determination of the Index Sponsor a price is not available on such DBLCI Index Business Day, the price as published by CBOT for the immediately preceding DBLCI Index Business Day for which a price is available.

### ***Corrections To Closing Prices For Exchange Traded Instruments***

The Index Sponsor will adjust the Closing Price for the relevant Exchange Traded Instrument to reflect any corrections to such Closing Price that have been published by the Relevant Exchange prior to 11:00 p.m. (London time) on the DBLCI Index Business Day immediately following the DBLCI Index Business Day to which the closing price relates, or, if the publication time of any such Closing Price is amended by the Relevant Exchange, such other time as the Sponsor may determine and publish as a replacement for 11:00 p.m. (London time).

The “**Relevant Exchange**” for each Exchange Traded Instrument is:

- (a) in respect of Crude Oil, NYMEX;
- (b) in respect of New York Harbor Ultra-Low Sulfur Diesel, NYMEX;
- (c) in respect of Aluminum, LME;
- (d) in respect of Gold, COMEX;
- (e) in respect of Corn, CBOT;
- (f) in respect of Wheat\*, CBOT;
- (g) in respect of WTI Crude Oil, NYMEX;
- (h) in respect of Brent Crude Oil, ICE;
- (i) in respect of RBOB Gasoline, NYMEX;
- (j) in respect of Zinc, LME;
- (k) in respect of Copper, LME;
- (l) in respect of Sugar, ICE;
- (m) in respect of Natural Gas, NYMEX;
- (n) in respect of Silver, COMEX; and
- (o) in respect of Soybeans, CBOT.

\*Following the close of trading on February 16, 2012, the DBLCI-OY, DBLCI-OY Broad and DBLCI-OY Balanced track the performance of Wheat through the Wheat Basket Index, which consists of a basket of three Exchange Traded Instruments related to Wheat traded on CBOT, KCBT and MGEX.

### **Change in the Methodology of the Indices**

The Index Sponsor may modify the methodology used to determine all indices described in this section of the underlying supplement as it deems appropriate if the Index Sponsor is of the view that such change is required in light of fiscal, market, regulatory, juridical or financial circumstances (including, but not limited to, any changes to or any suspension or termination of or any other events affecting any DBLCI Index Constituent or an Exchange Traded Instrument). The Index Sponsor will publish notice of any such modification or change and the effective date thereof as described above.

## THE DEUTSCHE BANK COMMODITY HARVEST INDICES

This section of this underlying supplement describes a family of commodity indices, each of which employs a variation of a commodity neutral outperformance strategy. This family of commodity indices includes the Deutsche Bank Commodity Harvest Index™—S&P GSCI™ (“**Commodity Harvest Index—S&P**”), the Deutsche Bank Commodity Harvest Index™ (“**Commodity Harvest Index—S&P Light Energy**”), and the Deutsche Bank Commodity Harvest Index—Bloomberg Commodity (“**Commodity Harvest Index—Bloomberg Commodity**”), each a “**Commodity Harvest Index**” and collectively the “**Commodity Harvest Indices**.” The Index Sponsor began publication of the Commodity Harvest Indices on December 17, 2007.

Each Commodity Harvest Index employs a commodity neutral outperformance strategy by reflecting the return of holding a long position in a booster index and a short position in a benchmark index. Each booster index represents a long commodity exposure and seeks to outperform its respective benchmark index by virtue of its construction methodology (as described further below).

Each Commodity Harvest Index is calculated on either an excess return basis or on a total return basis. Additionally, certain Commodity Harvest Indices are available with an embedded fee and are therefore calculated on an after-cost basis. The Deutsche Bank Commodity Harvest-3.5 Index™ (referred to herein as the “**Commodity Harvest ER Target Volatility 3.5 Index—S&P Light Energy**” or the “**3.5 Target Volatility Index**”) and the Deutsche Bank Commodity Harvest-10 Index™ (referred to herein as the “**Commodity Harvest ER Target Volatility 10 Index—S&P Light Energy**” or the “**10 Target Volatility Index**”) (each, a “**Target Volatility Index**,” and together, the “**Target Volatility Indices**”) track the Commodity Harvest Index—S&P Light Energy but use a dynamic allocation strategy to maintain a fixed target volatility level.

The following table summarizes certain characteristics of each Commodity Harvest Index:

	<b>Commodity Harvest Index</b>	<b>Booster Index (Long Position)</b>	<b>Benchmark Index (Short Position)</b>	<b>Excess Return</b>	<b>Total Return</b>	<b>Target Volatility</b>	<b>After Cost</b>
1)	Deutsche Bank Commodity Harvest Index™—S&P GSCI™ Excess Return ("Commodity Harvest ER Index—S&P")	S&P Booster	S&P GSCI	X			
2)	Deutsche Bank Commodity Harvest Index™ – S&P GSCI™ Total Return ("Commodity Harvest TR Index—S&P")	S&P Booster	S&P GSCI		X		
3)	Deutsche Bank Commodity Harvest Index™—Excess Return ("Commodity Harvest ER Index—S&P Light Energy")	S&P Light Energy Booster	S&P GSCI Light Energy	X			
4)	Deutsche Bank Commodity Harvest Index™—Total Return ("Commodity Harvest TR Index—S&P Light Energy")	S&P Light Energy Booster	S&P GSCI Light Energy		X		
5)	Deutsche Bank Commodity Harvest Index™—After Cost Excess Return ("Commodity Harvest ER After Cost Index—S&P Light Energy")	S&P Light Energy Booster	S&P GSCI Light Energy	X			X
6)	Deutsche Bank Commodity Harvest Index™—After Cost Total Return ("Commodity Harvest TR After Cost Index—S&P Light Energy")	S&P Light Energy Booster	S&P GSCI Light Energy		X		X
7)	Deutsche Bank Commodity Harvest—3.5 Index™ Excess Return ("Commodity Harvest ER Target Volatility 3.5 Index—S&P Light Energy")	N/A	N/A	X		X	
8)	Deutsche Bank Commodity Harvest—10 Index™ Excess Return ("Commodity Harvest ER Target Volatility 10 Index—S&P Light Energy")	N/A	N/A	X		X	
9)	Deutsche Bank Commodity Harvest—10 Index™ USD Excess Return ("Commodity Harvest ER After Cost Target Volatility 10 Index—S&P Light Energy")	N/A	N/A	X		X	X
10)	Deutsche Bank Commodity Harvest™—Bloomberg Commodity™ Excess Return ("Commodity Harvest ER Index – Bloomberg Commodity ")	Bloomberg Commodity Booster	Bloomberg Commodity	X			
11)	Deutsche Bank Commodity Harvest™—Bloomberg Commodity™ Total Return ("Commodity Harvest TR Index—Bloomberg Commodity ")	Bloomberg Commodity Booster	Bloomberg Commodity		X		

## Overview of the Commodity Harvest Indices

The closing levels for each Commodity Harvest Index will be calculated on an excess return basis (see “Calculation of each Commodity Harvest Index—Excess Return Calculation”), and such variations of the Commodity Harvest Indices will be referred to herein as:

- (i) with respect to the Commodity Harvest Index—S&P, the **“Commodity Harvest ER Index—S&P;”**
- (ii) with respect to the Commodity Harvest Index—S&P Light Energy, the **“Commodity Harvest ER Index—S&P Light Energy;”** and
- (iii) with respect to the Commodity Harvest Index—Bloomberg Commodity, the **“Commodity Harvest ER Index—Bloomberg Commodity.”**

The closing levels for each Commodity Harvest Index will also be calculated on a total return basis (see “Calculation of each Commodity Harvest Index—Total Return Calculation”), and such variations of the Commodity Harvest Indices will be referred to herein as:

- (i) with respect to the Commodity Harvest Index—S&P, the **“Commodity Harvest TR Index—S&P;”**
- (ii) with respect to the Commodity Harvest Index—S&P Light Energy, the **“Commodity Harvest TR Index—S&P Light Energy;”** and
- (iii) with respect to the Commodity Harvest Index—Bloomberg Commodity, the **“Commodity Harvest TR Index—Bloomberg Commodity.”**

The DB Commodity Harvest After Cost Index (the **“Commodity Harvest ER After Cost Index—S&P Light Energy”**) tracks the Commodity Harvest ER Index—S&P Light Energy and contains an embedded fee of 0.60% *per annum*. The **“Commodity Harvest TR After Cost Index—S&P Light Energy”** tracks the Commodity Harvest TR Index—S&P Light Energy and contains an embedded fee of 0.60% *per annum*.

The closing level of the Commodity Harvest ER After Cost Index—S&P Light Energy is calculated by taking the level of the Commodity Harvest ER Index—S&P Light Energy and deducting the 0.60% annual fee ratably on each Commodity Harvest Index Business Day. The level of the Commodity Harvest TR After Cost Index—S&P Light Energy is calculated by taking the level of the Commodity Harvest ER After Cost Index—S&P Light Energy and applying the TBill Accrual Factor as set forth below (see “Calculation of each Commodity Harvest Index—Total Return Calculation”).

## Constituent Indices of the Commodity Harvest Index

Each Commodity Harvest Index reflects a notional long position taken in a booster index and a notional short position taken in a benchmark index. With respect to the Commodity Harvest Index—S&P, the booster index is the Deutsche Bank Commodity Booster—S&P GSCI™ (the **“S&P Booster Index”**) (a **“Booster Index”**) and the benchmark index is the S&P GSCI™ Index (a **“Benchmark Index”**). With respect to the Commodity Harvest Index—S&P Light Energy, the booster index is the Deutsche Bank Commodity Booster—S&P GSCI™ Light Energy Index™ (the **“S&P Light Energy Booster Index”**) (a **“Booster Index”**) and the benchmark index is the S&P GSCI™ Light Energy Index (a **“Benchmark Index”**). With respect to the Commodity Harvest Index—Bloomberg Commodity, the booster index is the Bloomberg Commodity Booster Index (a **“Booster Index”**) and the benchmark index is the Bloomberg Commodity Index™ (a **“Benchmark Index”**). Each Booster Index and Benchmark Index is also referred to herein as a **“Commodity Harvest Constituent Index.”**

### The Booster Indices

The Booster Indices are sponsored by Deutsche Bank AG, London Branch. Each Booster Index represents a long commodity exposure and seeks to outperform its respective Benchmark Index by selecting constituent commodity futures contracts using the futures contract rolling methodology of the DBLCI-OY Balanced (see The DB Liquid Commodity Index—The Deutsche Bank Liquid Commodity Index—Optimum Yield) and assigning them the same weights as those commodity futures contracts have in the respective Benchmark Index. For livestock and those commodities in the respective Benchmark Index for which there is no corresponding DBLCI-OY Balanced constituent commodity, the respective Benchmark Index weight for that commodity is assigned to the corresponding S&P GSCI™ single commodity index in the case of the S&P Booster Index and S&P Light Energy Booster Index, or the Bloomberg Commodity sub-index in the case of the Bloomberg Commodity Booster Index, thereby offsetting their exposure in the respective Commodity

Harvest Index. The commodity futures contracts included in the DBLCI-OY Balanced are outlined above in “The Deutsche Bank Liquid Commodity Index—Overview of the DBLCI-OY Broad and Balanced.”

The DBLCI-OY Balanced employs a rule-based approach when it “rolls” from one futures contract to another for each constituent commodity. Rather than select the new futures contract for a constituent commodity based on a predefined schedule (e.g., monthly), as does the S&P GSCI™ Light Energy Index, the DBLCI-OY Balanced rolls to that futures contract (from the list of tradable futures contracts which expire in the next thirteen months), which seeks to generate the maximum implied roll yield. The DBLCI-OY Balanced aims to maximize the potential roll benefits in backwardated markets and minimize the loss from rolling down the curve in contango markets.

If the price of a futures contract is greater than the spot price, the market is in contango. If the price of a futures contract is below the spot price, the market is in backwardation. In a contango market, as the time to expiry of a futures contract decreases, the price generally will tend toward the spot price. Assuming a flat spot price, this results in the price of the futures contract falling. The opposite is true for a market in backwardation. Thus, a contango market will tend to impact negatively the level of an index while a market in backwardation will tend to impact positively the level of an index.

For each index constituent in the S&P Booster Index, S&P Light Energy Booster Index and the Bloomberg Commodity Booster Index, the selected futures contract is rolled to a new contract when the existing contract is close to expiry. The Booster Indices re-weight on an annual basis after the new respective Benchmark Index weights have been announced.

## **The Benchmark Indices**

### **The S&P GSCI™ Index**

The S&P GSCI™ Index is designed as a benchmark for investment in the commodity markets and as a measure of commodity market performance over time. In order to accomplish these objectives, the S&P GSCI™ Index is calculated primarily on a world production-weighted basis and comprises the principal physical commodities that are the subject of active, liquid futures contracts markets. There is no limit on the number of contracts that may be included in the S&P GSCI™ Index; any contract that satisfies the eligibility criteria and the other conditions specified in this S&P GSCI™ Index Methodology as published by Standard & Poor’s will be included. This feature is intended to enhance the suitability of the S&P GSCI™ Index as a benchmark for commodity market performance and to reflect general levels of price movements and inflation in the world economy.

As of June 30, 2015, the following commodity futures contracts were included in the S&P GSCI™ Index.

<b>Commodity (Contract)</b>	<b>Trading Facility</b>	<b>Bloomberg Ticker</b>
Aluminum.....	London Metal Exchange	LA
Cattle (Feeder).....	Chicago Mercantile Exchange	FC
Cattle (Live) .....	Chicago Mercantile Exchange	LC
Cocoa .....	ICE Futures U.S.	CC
Coffee .....	ICE Futures U.S.	KC
Corn.....	Chicago Board of Trade	C
Cotton #2 .....	ICE Futures U.S.	CT
Copper .....	Commodity Exchange—COMEX	LP
Gold .....	Commodity Exchange—COMEX	GC
Lead.....	London Metal Exchange	LL
Lean Hogs .....	Chicago Mercantile Exchange	LH
Natural Gas.....	New York Mercantile Exchange	NG
Nickel.....	London Metal Exchange	LN
Oil (Heating).....	New York Mercantile Exchange	HO
Oil (Brent Crude).....	ICE Futures Europe	CO
Oil (Gasoil).....	ICE Futures Europe	QS
Oil (Crude) .....	New York Mercantile Exchange	CL
RBOB Gasoline .....	New York Mercantile Exchange	XB
Silver.....	Commodity Exchange—COMEX	SI
Soybeans.....	Chicago Board of Trade	S
Sugar #11 .....	ICE Futures U.S.	SB
Wheat (Chicago).....	Chicago Board of Trade	W
Wheat (Kansas).....	Chicago Board of Trade	KW
Zinc.....	London Metal Exchange	LX

## **The S&P GSCI™ Light Energy Index**

The S&P GSCI™ Light Energy Index (the “**S&P Light Energy Index**”) is comprised of the same commodity futures contracts as the S&P GSCI™ Index but with those weights for contracts in the energy sector having been divided by 4.

Because the weights of energy-related S&P GSCI™ Index commodities are reduced in the S&P Light Energy Index relative to the S&P GSCI™ Index, the relative weights of the remaining S&P GSCI™ Index commodities are necessarily increased. As a result, although the S&P Light Energy Index contains all of the S&P GSCI™ Index commodities that are included in the S&P GSCI™ Index, they are not world-production weighted in the same manner as the S&P GSCI™ Index. The S&P Light Energy Index and the S&P GSCI™ Index are calculated and maintained by Standard & Poor's (“**S&P**”), a division of The McGraw-Hill Companies, Inc. (“**McGraw-Hill**”). On July 2, 2012, McGraw-Hill and CME Group Inc. (“**CME Group**”), the 90% owner of the CME Group and Dow Jones & Company, Inc. joint venture that owns the Dow Jones Indexes business, formed a new joint venture, S&P Dow Jones Indices, which owns the S&P Indices business and the Dow Jones Indexes business.

## **The Bloomberg Commodity Index<sup>SM</sup>**

The Bloomberg Commodity Index<sup>SM</sup> (the “Bloomberg Commodity Index”) was established in July 1998 to provide a liquid and diversified benchmark for commodities. In order to accomplish these objectives, the Bloomberg Commodity Index is designed to provide weights that reflect economic significance, diversification, continuity, and liquidity. To determine its component weightings the Bloomberg Commodity Index relies primarily on liquidity data, or the relative amount of trading activity of a particular commodity. To balance the index beyond world production weighting, the Bloomberg Commodity Index weights are also determined by several rules designed to ensure diversified commodity exposure as disproportionate weighting of any particular commodity or sector may increase volatility. With respect to diversification, the Bloomberg Commodity Index does not allow related groups of commodities (e.g. energy or precious metals) to constitute more than 33% of the index, and no single commodity may constitute less than 2% or more than 15% of the Bloomberg Commodity Index. The Bloomberg Commodity Index Oversight Committee and the Bloomberg Commodity Index Advisory Committee meet annually to determine the composition of the index in accordance with its index methodology established in the Bloomberg Methodology as published by its Index Sponsor Bloomberg Finance L.P.

On July 1, 2014, Bloomberg became responsible for the governance, calculation, distribution and licensing of the Bloomberg Commodity Index. The Bloomberg Commodity Index was renamed from the Dow Jones–UBS Commodity Index<sup>SM</sup> to the Bloomberg Commodity Index<sup>SM</sup> and the ticker changed from “DJUBS” to “BCOM.” UBS Securities LLC has maintained its ownership, but will have no role in any aspect of index governance or calculation.

As of June 30 2015, the following commodity futures contracts were included in the Bloomberg Commodity Index.

<b>Commodity (Contract)</b>	<b>Trading Facility</b>	<b>Bloomberg Ticker</b>
Aluminum .....	London Metal Exchange	BCOMAL
Brent Crude Oil.....	ICE Futures Europe	BCOMCO
Chicago Wheat.....	Chicago Board of Trade	BCOMWH
Coffee .....	ICE Futures U.S.	BCOMKC
COMEX Copper .....	Commodity Exchange—COMEX	BCOMHG
Corn .....	Chicago Board of Trade	BCOMCN
Cotton .....	ICE Futures U.S.	BCOMCT
Gold .....	Commodity Exchange—COMEX	BCOMGC
ULS Diesel .....	New York Mercantile Exchange	BCOMHO
Kansas City Wheat .....	Chicago Board of Trade	BCOMKW
Lean Hogs .....	Chicago Mercantile Exchange	BCOMLH
Live Cattle .....	Chicago Mercantile Exchange	BCOMLC
Natural Gas .....	New York Mercantile Exchange	BCOMNG
Nickel.....	London Metal Exchange	BCOMNI
RBOB Gasoline .....	ICE Futures Europe	BCOMRB
Silver .....	Commodity Exchange—COMEX	BCOMSI
Soybean Meal .....	Chicago Board of Trade	BCOMSM
Soybean Oil.....	Chicago Board of Trade	BCOMBO
Soybeans .....	Chicago Board of Trade	BCOMSY
Sugar.....	ICE Futures U.S.	BCOMSB
WTI Crude Oil.....	New York Mercantile Exchange	BCOMCL
Zinc.....	London Metal Exchange	BCOMZS

## Calculation of Each Commodity Harvest Index

The Index Sponsor will calculate the closing level of each Commodity Harvest Index on an “excess return” basis (the **“Commodity Harvest ER Closing Level”**) and on a “total return” basis (the **“Commodity Harvest TR Closing Level”**) on the basis of changes in the excess return levels for the respective Benchmark Index and Booster Index and apply such changes to a notional amount.

Each Commodity Harvest Index has been calculated back to a base date (the **“Commodity Harvest Base Date”**) of August 4, 1997. On the Commodity Harvest Base Date, each Commodity Harvest ER Closing Level and Commodity Harvest TR Closing Level was 100.

**“Closing Level”** means, in respect of a Commodity Harvest Index Business Day, each of the Commodity Harvest ER Closing Level and the Commodity Harvest TR Closing Level, in each case for such Commodity Harvest Index Business Day.

**“Commodity Harvest Index Business Day”** means a day (other than a Saturday or Sunday):

- (a) 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 New York City; and
- (b) on which the exchange for each underlying commodities futures contract is open.

**“Index Valuation Time”** means 11:00 pm (London time) on each Commodity Harvest Index Business Day or, if the publication time of any Commodity Harvest ER Constituent Calculation Value is amended, such other time as the Index Sponsor may determine and announce to be the Index Valuation Time for such Commodity Harvest Index.

### *Excess Return Calculation*

For each Commodity Harvest Index, the Commodity Harvest ER Closing Level on each Commodity Harvest Index Business Day is calculated by the Index Sponsor as the sum of (A) the Commodity Harvest ER Closing Level for such Commodity Harvest Index for the Commodity Harvest Index Business Day immediately preceding the relevant Commodity Harvest Index Business Day and (B) the sum of the values calculated for each Commodity Harvest Constituent Index for such Commodity Harvest Index Business Day as the product of (i) the Commodity Harvest ER Constituent Calculation Value for the relevant Commodity Harvest Constituent Index for the relevant Commodity Harvest Index Business Day less the Commodity Harvest ER Constituent Calculation Value for the relevant Commodity Harvest Constituent Index for the Commodity Harvest Index Business Day immediately preceding the relevant Commodity Harvest Index Business Day and (ii) the Commodity Harvest ER Constituent Calculation Value Amount for the relevant Commodity Harvest Constituent Index for the Commodity Harvest Index Business Day immediately preceding the relevant Commodity Harvest Index Business Day and rounding the result to six decimal places with 0.0000005 being rounded upwards. The minimum Commodity Harvest ER Closing Level for each Commodity Harvest Index is 0.

**“Commodity Harvest ER Constituent Calculation Value”** means, subject to the occurrence of a Commodity Harvest Constituent Index Adjustment Event as described below, in respect of a Commodity Harvest Index Business Day and:

- (i) the S&P Booster Index, the closing level of the S&P Booster Index, calculated on an “excess return” basis, in respect of such Commodity Harvest Index Business Day (or, if such day is not a Valid Date for such Commodity Harvest Constituent Index, in respect of the Valid Date immediately preceding such Commodity Harvest Index Business Day) in respect of the S&P Booster Index;
- (ii) the S&P GSCI™ Index, the S&P GSCI™ Index Excess Return as published on Bloomberg Screen SPGCCIP <Index> Page or any successor thereto in respect of such Commodity Harvest Index Business Day (or, if such day is not a Valid Date for such Commodity Harvest Constituent Index, in respect of the Valid Date immediately preceding such Commodity Harvest Index Business Day) in respect of the S&P GSCI™ Index;
- (iii) the S&P Light Energy Booster Index, the closing level of the S&P Light Energy Booster Index, calculated on an “excess return” basis, in respect of such Commodity Harvest Index Business Day (or, if such day is not a Valid Date for such Commodity Harvest Constituent Index, in respect of the Valid Date immediately preceding such Commodity Harvest Index Business Day) in respect of the S&P Light Energy Booster Index;
- (iv) the S&P Light Energy Index, the S&P GSCI™ Light Energy Index (CPW4) Excess Return as published on Bloomberg Screen SPGSLEP <Index> Page or any successor thereto in respect of such Commodity Harvest

Index Business Day (or, if such day is not a Valid Date for such Commodity Harvest Constituent Index, in respect of the Valid Date immediately preceding such Commodity Harvest Index Business Day) in respect of the S&P Light Energy Index;

- (v) the Bloomberg Commodity Booster Index, the closing level of the Bloomberg Commodity Booster Index, calculated on an “excess return” basis, in respect of such Commodity Harvest Index Business Day (or, if such day is not a Valid Date for such Commodity Harvest Constituent Index, in respect of the Valid Date immediately preceding such Commodity Harvest Index Business Day) in respect of the Bloomberg Commodity Booster Index; and
- (vi) the Bloomberg Commodity Index, the Bloomberg Commodity Index Bloomberg Commodity Excess Return as published on Bloomberg Screen Bloomberg Commodity <Index> Page or any successor thereto in respect of such Commodity Harvest Index Business Day (or, if such day is not a Valid Date for such Commodity Harvest Constituent Index, in respect of the Valid Date immediately preceding such Commodity Harvest Index Business Day) in respect of the Bloomberg Commodity Index.

As of the Commodity Harvest Base Date, the Commodity Harvest ER Constituent Calculation Value in respect of

- (i) the S&P Booster Index was 100;
- (ii) the S&P GSCI™ Index was 501.2317;
- (iii) the S&P Light Energy Booster Index was 100;
- (iv) the S&P Light Energy Index was 432.53540000;
- (v) the Bloomberg Commodity Booster Index was 100; and
- (vi) the Bloomberg Commodity Index was 123.651.

**“Commodity Harvest ER Constituent Calculation Value Amount”** means, in respect of a Commodity Harvest Constituent Index:

- (i) in respect of the Commodity Harvest Base Date and:
  - (a) the S&P Booster Index, 1;
  - (b) the S&P GSCI™ Index, -0.19950853;
  - (c) the S&P Light Energy Booster Index, 1;
  - (d) the S&P Light Energy Index, -0.23119495;
  - (e) the Bloomberg Commodity Booster Index, 1; and
  - (f) the Bloomberg Commodity Index, -0.80872779;
- (ii) in respect of each Commodity Harvest Index Business Day falling after the Commodity Harvest Base Date (other than the first Commodity Harvest Index Business Day falling after a Commodity Harvest Rebalancing Date), the Commodity Harvest ER Constituent Calculation Value Amount in respect of the Commodity Harvest Index Business Day immediately preceding such Commodity Harvest Index Business Day; and
- (iii) in respect of the first Commodity Harvest Index Business Day falling after a Commodity Harvest Rebalancing Date, the Commodity Harvest ER Constituent Calculation Value Amount for such Commodity Harvest Rebalancing Date.

#### *Total Return Calculation*

For each Commodity Harvest Index calculated on a total return basis, the Commodity Harvest TR Closing Level is calculated on each Commodity Harvest Index Business Day by the Index Sponsor and is equal to the Commodity Harvest TR Closing Level of such Commodity Harvest Index on the Commodity Harvest Index Business Day immediately preceding such Commodity Harvest Index Business Day multiplied by the sum of (i) the Commodity Harvest ER Closing Level for such Commodity Harvest Index Business Day divided by the Commodity Harvest ER Closing Level for the

Commodity Harvest Index Business Day immediately preceding such Commodity Harvest Index Business Day and (ii) the sum of (a) 1 and (b) the TBill Accrual Factor for such Commodity Harvest Index Business Day, such sum raised to the power of 1 plus the number of days which are not Commodity Harvest Index Business Days during the period from (but excluding) the Commodity Harvest Index Business Day immediately preceding such Commodity Harvest Index Business Day to (but excluding) such Commodity Harvest Index Business Day minus (iii) 1.

“**TBill Accrual Factor**” means, in respect of a Commodity Harvest Index Business Day, an amount calculated by the Index Sponsor in accordance with the following formula:

$$(1 - 91/360 \times \text{TBR})^{(-1/91)} - 1$$

where:

“**TBR**” means the closing three-month Treasury Bill rate appearing on Reuters Page US3MT = RR (or such page or service as may replace Reuters Page US3MT = RR for the purposes of displaying three-month Treasury Bill rates) in respect of the Commodity Harvest Index Business Day immediately preceding such Commodity Harvest Index Business Day (the “**TBill Determination Date**”) or if such rate is not published in respect of the TBill Determination Date, the closing three-month Treasury Bill rate last published prior to the TBill Determination Date.

### **Commodity Harvest Rebalancing**

The Commodity Harvest ER Constituent Calculation Value Amount in respect of each Commodity Harvest Constituent Index will be rebalanced based on the performance of the relevant Commodity Harvest Index on each Commodity Harvest Rebalancing Date to result in net notional long and short positions in the Commodity Harvest Constituent Indices that equal zero, in accordance with the provisions set forth below (such procedure a “**Commodity Harvest Rebalancing**”).

The Commodity Harvest ER Constituent Calculation Value Amount in respect of each Commodity Harvest Constituent Index in relation to a Commodity Harvest Rebalancing Date is equal to (A) the product of (i) the Commodity Harvest ER Closing Level for such Commodity Harvest Index Business Day and (ii) the Index Weight for such Commodity Harvest Constituent Index, divided by (B) the Commodity Harvest ER Constituent Calculation Value for such Commodity Harvest Constituent Index for such Commodity Harvest Index Business Day.

“**Commodity Harvest Index Weight**” means the weightings assigned to each Commodity Harvest Constituent Index on the Commodity Harvest Base Date being:

- (a) in respect of the S&P Booster Index, 100%;
- (b) in respect of the S&P GSCI™ Index, -100% (minus 100%);
- (c) in respect of the S&P Light Energy Booster Index, 100%;
- (d) in respect of the S&P Light Energy Index, -100% (minus 100%);
- (e) in respect of the DBUBS Booster Index, 100%; and
- (f) in respect of the DBUBS Index, -100% (minus 100%).

“**Commodity Harvest Rebalancing Date**” means the tenth Commodity Harvest Index Business Day (the “**Scheduled Commodity Harvest Rebalancing Date**”) in each calendar month; provided that if the Scheduled Commodity Harvest Rebalancing Date is not a Valid Date in respect of any Commodity Harvest Constituent Index, the Commodity Harvest Rebalancing Date, subject to the occurrence of a Commodity Harvest Constituent Index Adjustment Event, will be the next occurring Commodity Harvest Index Business Day which is a Valid Date in respect of all Constituent Indices.

“**Scheduled Publication Day**” means, in respect of a Commodity Harvest Constituent Index, a day on which the Commodity Harvest ER Constituent Calculation Value in respect of such Commodity Harvest Constituent Index is (or but for the occurrence of a Commodity Harvest Constituent Index Disruption Event or Force Majeure Event would have been) published.

“**Valid Date**” means, in respect of a Commodity Harvest Constituent Index, a day which is a Scheduled Publication Day and a day in respect of which a Commodity Harvest Constituent Index Disruption Event has not occurred.

## Corrections to Commodity Harvest ER Constituent Calculation Values / Disruption Events

In calculating the Closing Levels, the Index Sponsor will consider subsequent corrections to any Commodity Harvest ER Constituent Calculation Values published by the relevant Commodity Harvest Constituent Index Sponsor in respect of the relevant Commodity Harvest Constituent Index prior to the Index Valuation Time on the Valid Date for the relevant Commodity Harvest Constituent Index immediately following the twelfth Commodity Harvest Index Business Day to which the relevant Closing Level relates but not thereafter.

If, in respect of a Commodity Harvest Index Business Day and a Commodity Harvest Constituent Index:

- (i) a Commodity Harvest Constituent Index Disruption Event has occurred in relation to the relevant Commodity Harvest Constituent Index (a **"Disruption Affected Commodity"**);
- (ii) pursuant to the provisions set forth below under the heading "Commodity Harvest Constituent Index Adjustment Event" the Index Sponsor has either:
  - (a) calculated the relevant Closing Level for the Disruption Affected Commodity by reference to the Commodity Harvest ER Constituent Calculation Value of the Disruption Affected Commodity for the immediately preceding Valid Date; or
  - (b) deferred publication of the information relating to the affected Commodity Harvest Index; and
- (iii) the relevant Index Disruption Event has continued for no longer than nine successive Commodity Harvest Index Business Days,

then on the day on which such Commodity Harvest Constituent Index Disruption Event ceases to exist (or, if such day is not a Commodity Harvest Index Business Day, on the immediately succeeding Commodity Harvest Index Business Day) (such day, the **"Index Disruption Event End Date"**), the Index Sponsor may, in its sole and absolute discretion, calculate or recalculate, as the case may be, the Commodity Harvest ER Constituent Calculation Value in respect of the Disruption Affected Commodity and each Commodity Harvest Index Business Day in respect of which such Index Disruption Event occurred (each such day, a **"Disruption Affected Day"**) as if the Commodity Harvest ER Constituent Calculation Value for the Disruption Affected Commodity on each such Disruption Affected Day was the Commodity Harvest ER Constituent Calculation Value for the Disruption Affected Commodity in respect of the Index Disruption Event End Date.

### Commodity Harvest Constituent Index Adjustment Event

If a Commodity Harvest Constituent Index Disruption Event occurs in relation to a Commodity Harvest Constituent Index on any Scheduled Publication Day, the Index Sponsor may, in its sole and absolute discretion, either:

- (i) calculate the relevant Closing Level by reference to the Commodity Harvest ER Constituent Calculation Value of the relevant Commodity Harvest Constituent Index on the immediately preceding Valid Date for a period of up to ten successive Scheduled Publication Days; or
- (ii) defer publication of the information relating to the affected Commodity Harvest Index for a period of up to ten successive Scheduled Publication Days; or
- (iii) select a Successor Commodity Harvest Constituent Index in respect of such Commodity Harvest Constituent Index; or
- (iv) calculate the relevant Closing Level using, in lieu of a published Commodity Harvest ER Constituent Calculation Value for that Commodity Harvest Constituent Index, the level for that Commodity Harvest Constituent Index calculated on an "excess return" basis as at the Index Valuation Time on the relevant Commodity Harvest Index Business Day as determined by the Index Sponsor in accordance with the formula for and method of calculating that Commodity Harvest Constituent Index last in effect prior to the failure but only using those contracts or commodities that comprised that Commodity Harvest Constituent Index prior to that Commodity Harvest Constituent Index Adjustment Event; or
- (v) permanently cancel the affected Commodity Harvest Index and the publication of Closing Levels relating to such Commodity Harvest Index.

In the case of (i) or (ii) above, if a Commodity Harvest Constituent Index Disruption Event in relation to the relevant Commodity Harvest Constituent Index continues for the period of ten successive Scheduled Publication Days as referred

to therein, on the expiry of such period the provisions of (iii), (iv) or (v) above will apply, as selected by the Index Sponsor in its sole and absolute discretion.

If a Commodity Harvest Constituent Index Cancellation or Commodity Harvest Constituent Index Modification occurs in relation to a Commodity Harvest Constituent Index, the Index Sponsor will on the day on which such Commodity Harvest Constituent Index Modification or Commodity Harvest Constituent Index Cancellation occurs (or, if such day is not a Commodity Harvest Index Business Day, on the immediately succeeding Commodity Harvest Index Business Day), in its discretion, either:

- (a) select a Successor Commodity Harvest Constituent Index in respect of such Commodity Harvest Constituent Index; or
- (b) calculate the relevant Closing Level using, in lieu of a published Commodity Harvest ER Constituent Calculation Value for that Commodity Harvest Constituent Index, the level for that Commodity Harvest Constituent Index calculated on an “excess return” basis as at the Index Valuation Time on the relevant Commodity Harvest Index Business Day as determined by the Index Sponsor in accordance with the formula for and method of calculating that Commodity Harvest Constituent Index last in effect prior to the change or cancellation but only using those contracts or commodities that comprised that Commodity Harvest Constituent Index prior to that Commodity Harvest Constituent Index Adjustment Event; or
- (c) permanently cancel the affected Commodity Harvest Index and the publication of Closing Levels relating to such Commodity Harvest Index.

**“Commodity Harvest Constituent Index Adjustment Event”** means, in respect of a Commodity Harvest Constituent Index, a Commodity Harvest Constituent Index Disruption Event, a Commodity Harvest Constituent Index Cancellation or a Commodity Harvest Constituent Index Modification.

**“Commodity Harvest Constituent Index Cancellation”** means, in respect of a Commodity Harvest Constituent Index, on or prior to a Commodity Harvest Index Business Day the relevant Commodity Harvest Constituent Index Sponsor permanently cancels the Commodity Harvest Constituent Index and no Successor Commodity Harvest Constituent Index exists.

**“Commodity Harvest Constituent Index Disruption Event”** means, in respect of a Commodity Harvest Constituent Index, on a Scheduled Publication Day the relevant Commodity Harvest Constituent Index Sponsor fails to calculate and announce a Commodity Harvest ER Constituent Calculation Value.

**“Commodity Harvest Constituent Index Sponsor”** means, in respect of a Commodity Harvest Constituent Index, the corporation or other entity that (a) is responsible for setting and reviewing the rules and procedures and the methods of calculation and adjustments, if any, related to such Commodity Harvest Constituent Index and (b) announces (directly or through an agent) the Commodity Harvest ER Constituent Calculation Value of the relevant Commodity Harvest Constituent Index.

**“Commodity Harvest Constituent Index Modification”** means, in respect of a Commodity Harvest Constituent Index, on or prior to a Commodity Harvest Index Business Day the relevant Commodity Harvest Constituent Index Sponsor makes or announces that it will make a material change in the formula for or the method of calculating a relevant Commodity Harvest Constituent Index or in any other way materially modifies that Commodity Harvest Constituent Index (other than a modification prescribed in that formula or method to maintain that Commodity Harvest Constituent Index in the event of changes in the constituent contracts or commodities and other routine events).

**“Successor Commodity Harvest Constituent Index”** means, in respect of a Commodity Harvest Constituent Index, if a Commodity Harvest Constituent Index is (A) not calculated and announced by the relevant Commodity Harvest Constituent Index Sponsor but is calculated and announced by a successor sponsor acceptable to the Index Sponsor, or (B) 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 that Commodity Harvest Constituent Index then, in each case that index will be deemed to be the relevant Commodity Harvest Constituent Index.

### **Force Majeure Event**

If a Force Majeure Event occurs on a Commodity Harvest Index Business Day, the Index Sponsor may in its discretion:

- (i) make such determinations and/or adjustments to the affected Commodity Harvest Index as it considers appropriate to determine any Closing Level on any such Commodity Harvest Index Business Day; and/or
- (ii) defer publication of any Closing Level of the affected Commodity Harvest Index until the next Commodity Harvest Index Business Day on which it determines that no Force Majeure Event exists; and/or
- (iii) permanently cancel publication of the Closing Levels of the affected Commodity Harvest Index.

**“Force Majeure Event”** means an event or circumstance (including, without limitation, a systems failure, natural or man-made disaster, act of God, armed conflict, act of terrorism, riot or labor disruption or any similar intervening circumstance) that is beyond the reasonable control of the Index Sponsor and the Index Sponsor determines affects the Commodity Harvest Index or any Commodity Harvest Constituent Index.

## **THE DEUTSCHE BANK COMMODITY HARVEST TARGET VOLATILITY INDICES**

### **Overview of the Deutsche Bank Commodity Harvest Target Volatility Indices**

The Deutsche Bank Commodity Harvest-3.5 Index™ (referred to herein as the **“Commodity Harvest ER Target Volatility 3.5 Index—S&P Light Energy”** or the **“3.5 Target Volatility Index”**) and the Deutsche Bank Commodity Harvest-10 Index™ (referred to herein as the **“Commodity Harvest ER Target Volatility 10 Index—S&P Light Energy”** or the **“10 Target Volatility Index”**), each a **“Target Volatility Index”** and together the **“Target Volatility Indices,”** are intended to reflect the effect of a dynamic allocation strategy in respect of the Commodity Harvest ER Index—S&P Light Energy (referred to below as the **“Base Index”**) based on a fixed target volatility level and the realized volatility of the Base Index over a defined period.

The Target Volatility Indices have been calculated back to a base date (the **“TV Base Date”**) of November 4, 1997. For the purposes of this description, **“TV Closing Level”** means, in respect of a Commodity Harvest Index Business Day, each of the TV Commodity Harvest ER Closing Levels (as defined below) for such Commodity Harvest Index Business Day. On the TV Base Date each of the TV Closing Levels was 100.

### **The 3.5 Target Volatility Index**

The 3.5 Target Volatility Index uses an allocation strategy that aims to maintain a target volatility of 3.5% in the Base Index. Whereas the Base Index has no controls for volatility, the 3.5 Target Volatility Index dynamically controls the exposure to the Base Index in order to target realized volatility of 3.5%.

Rebalancing occurs monthly to reset the participation of the 3.5 Target Volatility Index in the Base Index, based upon a comparison of the actual volatility experienced by the Base Index over the previous three months to the respective target volatility. Notional participation in the Base Index increases when the realized volatility of the Base Index over the previous three months has gone down, and notional participation decreases when the realized volatility of the Base Index has gone up. The maximum participation of the 3.5 Target Volatility Index in the Base Index is 300%.

If, at the TV Rebalancing Date (as defined below), the actual volatility experienced by the Base Index over the previous three months is 3.5%, the participation of the 3.5 Target Volatility Index in the Base Index will be 100%. If, at the TV Rebalancing Date, the actual volatility experienced by the Base Index over the previous three months is less than 3.5%, the participation of the 3.5 Target Volatility Index in the Base Index will be reset to a level greater than 100%, but no greater than 300%. To maintain the target volatility of 3.5%, the 3.5 Target Volatility Index attempts to compensate for such lower historical volatility in the Base Index by increasing participation going forward. Conversely, if, at the TV Rebalancing Date, the actual volatility experienced by the Base Index over the previous three months is greater than 3.5%, the participation of the 3.5 Target Volatility Index in the Base Index will be reset to a level less than 100%. In this scenario, to maintain the target volatility of 3.5%, the 3.5 Target Volatility Index attempts to compensate for such higher historical volatility in the Base Index by decreasing participation going forward, which will be reassessed at the following TV Rebalancing Date.

By way of example, if the realized volatility of the Base Index for a given three-month period is 1.75% (equal to 50% of the target volatility of 3.5%), the participation of the 3.5 Target Volatility Index in the Base Index will be reset to 200%, and the investor will have 200% exposure to the performance of the Base Index. Conversely, if the realized volatility of the Base Index for a given three-month period is 7.0% (equal to 200% of the target volatility of 3.5%), the participation of the 3.5 Target Volatility Index in the Base Index will be reset to 50%, and the investor will have 50% exposure to the performance of the Base Index.

The closing levels for the 3.5 Target Volatility Index will be calculated on an excess return basis (the “**3.5 TV ER Index**”) (see “Methodology of the Target Volatility Indices—Excess Return Calculation”).

## The 10 Target Volatility Index

The 10 Target Volatility Index uses an allocation strategy that aims to maintain a target volatility of 10% in the Base Index. Whereas the Base Index has no controls for volatility, the 10 Target Volatility Index dynamically controls the exposure to the Base Index in order to target realized volatility of 10%.

Rebalancing occurs monthly to reset the participation of the 10 Target Volatility Index in the Base Index, based upon a comparison of the actual volatility experienced by the Base Index over the previous three months to the respective target volatility. Notional participation in the Base Index increases when the realized volatility of the Base Index over the previous three months has gone down, and notional participation decreases when the realized volatility of the Base Index has gone up. The maximum participation of the 10 Target Volatility Index in the Base Index is 500%.

If, at the TV Rebalancing Date (as defined below), the actual volatility experienced by the Base Index over the previous three months is 10%, the participation of the 10 Target Volatility Index in the Base Index will be 100%. If, at the TV Rebalancing Date, the actual volatility experienced by the Base Index over the previous three months is less than 10%, the participation of the 10 Target Volatility Index in the Base Index will be reset to a level greater than 100%, but no greater than 500%. To maintain the target volatility of 10%, the 10 Target Volatility Index attempts to compensate for such lower historical volatility in the Base Index by increasing participation going forward. Conversely, if, at the TV Rebalancing Date, the actual volatility experienced by the Base Index over the previous three months is greater than 10%, the participation of the 10 Target Volatility Index in the Base Index will be reset to a level less than 100%. In this scenario, to maintain the target volatility of 10%, the 10 Target Volatility Index attempts to compensate for such higher historical volatility in the Base Index by decreasing participation going forward, which will be reassessed at the following TV Rebalancing Date.

By way of example, if the realized volatility of the Base Index for a given three-month period is 5.0% (equal to 50% of the target volatility of 10%), the participation of the 10 Target Volatility Index in the Base Index will be reset to 200%, and the investor will have 200% exposure to the performance of the Base Index. Conversely, if the realized volatility of the Base Index for a given three-month period is 20.0% (equal to 200% of the target volatility of 10%), the participation of the 10 Target Volatility Index in the Base Index will be reset to 50%, and the investor will have 50% exposure to the performance of the Base Index.

The closing levels for the 10 Target Volatility Index will be calculated on an excess return basis (the “**10 TV ER Index**”) (see “Methodology of the Target Volatility Indices—Excess Return Calculation”).

The Deutsche Bank Commodity Harvest—10 USD (referred to herein as the “**Commodity Harvest ER After Cost Target Volatility 10 Index—S&P Light Energy**” or the “**10 TV ER After Cost Index**”) uses the Commodity Harvest ER After Cost Index—S&P Light Energy, which contains an embedded fee of 0.60% *per annum*, as its base index. The participation of the 10 TV ER After Cost Index is therefore calculated based on the historical volatility of the Commodity Harvest ER After Cost Index—S&P Light Energy (as base index), and the level of the 10 TV ER After Cost Index reflects a leveraged position (based on the participation) in the Commodity Harvest ER After Cost Index—S&P Light Energy (as base index). Because the participation of the 10 TV ER After Cost can be as high as 500%, the embedded fee for such indices can be as high as 3.00% *per annum* during any period in which the leverage is 500%.

## Methodology of the Target Volatility Indices

### *Participation in the Base Index*

The level of notional participation of each Target Volatility Index in the Base Index is referred to herein as the “**Allocation.**” The Allocation, in respect of a TV Rebalancing Date (as defined below), is an amount expressed as a percentage equal to:

$$\text{Min} \left( \text{Maximum Participation}, \frac{\text{Target Volatility}}{3\text{m Realised Volatility (T)}} \right)$$

Where:

“Maximum Participation” for the 3.5 Target Volatility Index is 300% and for the 10 Target Volatility Index is 500%;

“Target Volatility” for the 3.5 Target Volatility Index is 3.5% and for the 10 Target Volatility Index is 10%; and

“3m Realized Volatility (T)” is the 3m Realized Volatility calculated on the relevant TV Rebalancing Date.

Rebalancing occurs on the 10<sup>th</sup> Commodity Harvest Index Business Day of each calendar month (the “**TV Rebalancing Date**”). To calculate the Allocation on the TV Rebalancing Date, the Index Sponsor uses the Commodity Harvest ER Closing Level of the Base Index on the 8<sup>th</sup> Commodity Harvest Index Business Day of each calendar month (the “**TV Calculation Date**”).

“**3m Realized Volatility**” means, in respect of a TV Rebalancing Date, the three-month realized return volatility of the Base Index for the relevant Realized Volatility Calculation Period (as defined below) calculated in accordance with the following formula:

$$\sqrt{252} \times \sqrt{\frac{\sum_{j=1}^{nbd(T)} (\text{Return}(t_j))^2}{nbd(T)}}$$

Where:

“nbd(T)” means, in respect of the relevant TV Calculation Date, the number of Commodity Harvest Index Business Days in the relevant Realized Volatility Calculation Period; and

“Return (t<sub>j</sub>)” means the log return of the Base Index on the j<sup>th</sup> Commodity Harvest Index Business Day in the relevant Realized Volatility Calculation Period, calculated as follows:

$$\ln \left( \frac{\text{Index}(t_j)}{\text{Index}(t_{j-1})} \right)$$

Where:

“ln” means the natural log function;

“Index (t<sub>j</sub>)” means the Commodity Harvest ER Closing Level of the Base Index on the j<sup>th</sup> Commodity Harvest Index Business Day in the relevant Realized Volatility Calculation Period; and

“Index (t<sub>j-1</sub>)” means the Commodity Harvest ER Closing Level of the Base Index on the Commodity Harvest Index Business Day immediately preceding the j<sup>th</sup> Commodity Harvest Index Business Day in the relevant Realized Volatility Calculation Period.

“**Realized Volatility Calculation Period**” means, in respect of a TV Calculation Date, the period from (but excluding) the TV Calculation Date falling in the third calendar month prior to the month in which the TV Calculation Date falls to (and including) the TV Calculation Date.

#### Excess Return Calculation

The Index Sponsor will calculate a closing level for each Target Volatility Index on an “excess return” basis. The excess return calculation reflects the daily percentage that the Base Index has changed as compared to its Commodity Harvest ER Closing Level on the last TV Rebalancing Date. This percentage change is weighted by the current Allocation of the respective Target Volatility Index to the Base Index. The minimum closing level for each Target Volatility Index is 0.

Subject to any TV Index Adjustment Event (as defined below), the closing level of each Target Volatility Index calculated on an excess return basis (the “**TV ER Closing Level**”) on each Commodity Harvest Index Business Day is calculated by the Index Sponsor as the product of (A) the TV ER Closing Level on the TV Rebalancing Date immediately

preceding such Commodity Harvest Index Business Day and (B) the sum of (i) 1 and (ii) the product of (x) the Allocation on the TV Rebalancing Date immediately preceding such Commodity Harvest Index Business Day and (y) (a) the quotient of (i) the Commodity Harvest ER Closing Level of the Base Index on such Commodity Harvest Index Business Day (as numerator) and (ii) the Commodity Harvest ER Closing Level of the Base Index on the TV Rebalancing Date immediately preceding such Commodity Harvest Index Business Day less (b) 1.

Expressed as a formula:

$$TV(t) = TV(m(t)) \times \left( 1 + Allocation(m(t)) \times \left( \frac{Index(t)}{Index(m(t))} - 1 \right) \right)$$

Where:

“TV(t)” is the TV ER Closing Level of each Target Volatility Index for the relevant Commodity Harvest Index Business Day;

“TV (m(t))” is the TV ER Closing Level of each Target Volatility Index on the TV Rebalancing Date immediately preceding the relevant Commodity Harvest Index Business Day;

“Allocation (m(t))” is the Allocation on the TV Rebalancing Date immediately preceding the relevant Commodity Harvest Index Business Day;

“Index (t)” means the Commodity Harvest ER Closing Level of the Base Index on the relevant Commodity Harvest Index Business Day; and

“Index (m(t))” means the Commodity Harvest ER Closing Level of the Base Index on the TV Rebalancing Date immediately preceding the relevant Commodity Harvest Index Business Day.

#### *Corrections to the Commodity Harvest ER Closing Level*

In calculating the TV Closing Levels, the Index Sponsor shall have regard to subsequent corrections to the Commodity Harvest ER Closing Level of the Base Index in the period up to and including the Index Valuation Time on the third Commodity Harvest Index Business Day following the Commodity Harvest Index Business Day to which the TV Closing Levels relate but not thereafter.

#### *TV Index Adjustment Event*

A “**TV Index Adjustment Event**” may occur if a Base Index Disruption Event occurs in relation to the Base Index on any Base Index Scheduled Publication Day, in which case the Index Sponsor may, in its sole and absolute discretion, either:

- (i) calculate the TV Closing Levels by reference to the Closing Level of the Base Index on the immediately preceding Valid Date for a period of up to ten successive Base Index Scheduled Publication Days; or
- (ii) select a Successor Base Index in respect of the Base Index; or
- (iii) permanently cancel the affected Target Volatility Index and the publication of the TV Closing Levels relating to such Target Volatility Index.

In the case of (i) above, if a Base Index Disruption Event continues for the period of ten successive Base Index Scheduled Publication Days as referred to therein, on the expiry of such period the provisions of (ii) or (iii) above shall apply, as selected by the Index Sponsor in its sole and absolute discretion.

If a Base Index Cancellation or Base Index Modification occurs, the Index Sponsor will on the day on which such Base Index Modification or Base Index Cancellation occurs (or, if such day is not a Commodity Harvest Index Business Day, on the immediately succeeding Commodity Harvest Index Business Day), in its discretion, either (a) select a Successor Base Index in respect of the Base Index; or (b) permanently cancel the affected Target Volatility Index and the publication of the TV Closing Levels relating to such Target Volatility Index or (c) make such determinations and/or adjustments to the terms of this description of such Target Volatility Index as it considers appropriate to determine the TV Closing Levels on any such day.

For the purposes of this description:

**“Base Index Disruption Event”** means, in respect of the Base Index, on a Base Index Scheduled Publication Day the Index Sponsor fails to calculate and announce a Closing Level.

**“Base Index Scheduled Publication Day”** means, in respect of the Base Index, a day on which the Commodity Harvest ER Closing Level is (or but for the occurrence of a Base Index Disruption Event or Force Majeure Event (as defined above) would have been) published.

**“Base Index Cancellation”** means, in respect of the Base Index, on or prior to a Commodity Harvest Index Business Day the Index Sponsor permanently cancels the Base Index and no Successor Base Index exists.

**“Base Index Modification”** means, in respect of the Base Index, on or prior to a Commodity Harvest Index Business Day the Index Sponsor makes or announces that it will make a material change in the formula for or the method of calculating the Base Index or in any other way materially modifies the Base Index (other than a modification prescribed in that formula or method to maintain the Base Index in the event of changes in the constituent contracts or commodities and other routine events).

**“Successor Base Index”** means, in respect of the Base Index, if the Base Index is (A) not calculated and announced by the Index Sponsor but is calculated and announced by a successor sponsor acceptable to the Index Sponsor, or (B) 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 Base Index then, in each case, that index will be deemed to be the Base Index for the purposes of determining the Commodity Harvest ER Closing Level.

**“Valid Date”** means a day which is a Base Index Scheduled Publication Day and a day in respect of which a Base Index Disruption Event has not occurred.

### **Index Sponsor**

All determinations made by the Index Sponsor will be made by it in good faith and in a commercially reasonable manner by reference to such factors as the Index Sponsor deems appropriate and will be final, conclusive and binding in the absence of manifest error.

### **Change in the Methodology of the Indices**

The Index Sponsor may modify the methodology used to determine all indices described in this section of the underlying supplement as it deems appropriate if the Index Sponsor is of the view that such change is required in light of fiscal, market, regulatory, juridical or financial circumstances (including, but not limited to, any changes to or any suspension or termination of or any other events affecting any Commodity Harvest Constituent Index). The Index Sponsor will publish notice of any such modification or change and the effective date thereof as described above.

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