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Underlying Index: The Deutsche Bank Equity Risk Premia 5% VT Portfolio USD — Excess Return Index

Investing in the securities involves risks not associated with an investment in conventional securities. See “Risk Factors” beginning on page 13 of the accompanying prospectus and page PS-5 of the accompanying prospectus supplement, “Risk Factors” in this underlying supplement and 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 commission has approved or disapproved of the securities or passed upon the adequacy or accuracy of this underlying supplement, the accompanying prospectus, prospectus supplement or warrants prospectus supplement, as applicable, 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.

ADDITIONAL INFORMATION ABOUT THE SECURITIES

You should read this underlying supplement together with the prospectus dated April 27, 2016, as supplemented by the prospectus supplement dated July 31, 2015, relating to our Series A global notes, or the warrants prospectus supplement dated July 31, 2015, relating to our warrants, 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. When you read any accompanying prospectus supplement, please note that all references in such supplement to the prospectus dated July 31, 2015, or to any sections therein, should refer instead to the accompanying prospectus dated April 27, 2016 or to the corresponding sections of such prospectus, as applicable, unless otherwise specified or the context otherwise requires.

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 the 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, notes or warrants 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 April 27, 2016, of Deutsche Bank AG and the prospectus supplement, dated July 31, 2015, relating to our Series A global notes, or the warrants prospectus supplement dated July 31, 2015, relating to our warrants, 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.

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THE DEUTSCHE BANK EQUITY RISK PREMIA 5% VT PORTFOLIO USD — EXCESS RETURN INDEX (“PORTFOLIO INDEX”)

SUMMARY

Motivation

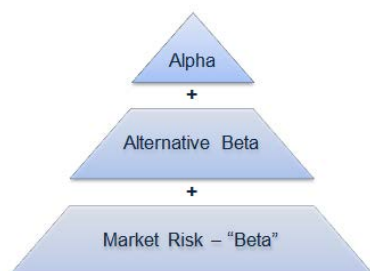
- Investors are increasingly aware of the need to diversify away from traditional assets
 - Traditional portfolios of equities and bonds can be dominated by equity risk in times of market stress
- Alternative investments have become a step toward the solution
 - Allocation to alternative investments can be diversifying, but may require a significant cost to access
 - However, even the “Yale Model,” an investment strategy named after the university endowment, which seeks diversification through allocation to alternative investments — hedge funds, private equity funds, commodities and real estate — proved ineffective during the most recent financial crisis
- Is true diversification fundamentally unachievable?
- Gradually, a new paradigm may be emerging — diversification through investment in risk factors, or risk “premiuma”
 - Old ideas, applied in new ways
 - Capturing liquid, uncorrelated sources of return
 - Logical and well documented strategies
 - Portfolios constructed to maximize diversification benefits

What Do We Mean By Risk Premia?

- A premium generated for taking a certain type of risk
- Persistent source of potential return that can be accessed systematically, also referred to as a risk factor or alternative beta
- Some risk factors represent simple exposure to the excess return of an asset class, such as the equity risk premium or the credit risk premium
- Others represent systematic investment in assets with certain characteristics or trading of related instruments to capture relative value:
 - Equity investment strategies such as value, size and momentum
 - Convertible arbitrage and merger arbitrage strategies
 - Implied/realized volatility strategies
 - Also present beyond the equity space, in strategies such as foreign currency carry and interest rates term structure carry
- Most well-known risk factors have been analyzed extensively in academic and practitioner literature

The Investment Universe: Market Risk, Alternative Beta and Alpha

- The investment universe can be divided into three categories:



- Pure alpha is what is left after market risk and alternative beta are accounted for
 - A valuable manager is one who can provide alpha over and above the various alternative beta
 - A valuable manager should be able to offer market timing expertise
- A high management fee is justifiable for a valuable manager providing pure alpha, while efficient capture of market risk and alternative beta can be achieved without involving managers
- The primary focus of Deutsche Bank's approach is to capture efficient alternative beta in a cost-effective way

Identifying Risk Factors

- When identifying risk factors for investment, it is important that they meet several criteria:
 - **Explainable:** Risk factors should have a strong basis for existence
 - **Persistent:** There must be a rationale for the persistence of the risk factor
 - **Attractive risk/return:** It is important for risk factors to have attractive return characteristics in isolation
 - **Unique:** In the portfolio framework it is important to find uncorrelated sources of return – risk factors should exhibit low correlations to traditional market betas and to other risk factors being considered for investment
 - **Accessible:** Risk factors must be accessible at a level of cost that is sufficiently low to avoid dilution of the return
- The explanations for why a premium exists can generally be placed into one of the following:
 - *Risk-Based:* The premium is a compensation for taking on a systematic risk
 - *Behavioral:* The premium occurs due to persistent behavior of investors in the market place
 - *Structural:* The premium results from industry structure, constraints or targets
- Often more than one of the categories apply to any one risk factor, and sometimes all three categories are applicable

Implementing Risk Factors

- The key to efficient risk factor implementation is taking a disciplined and systematic approach — skill lies in designing strategies that are simple and robust
- Deutsche Bank's approach is to isolate factors that meet the following criteria:
 - *Fully transparent:* Strategies are systematic and work within well-defined rules
 - *Liquid:* Strategies are designed to allow cost-efficient entry and exit to investors with no lock-ups
 - *Cost efficient:* A well-defined systematic approach allows efficient transactions costs
- Portfolio construction then involves combining a range of these return generators that are designed to capture different sources of risk premium
- By creating a portfolio of liquid risk factors it is possible to build a more diversified portfolio, thereby reducing drawdown risk and improving risk-adjusted returns

Equity Risk Factors: Examples

- Deutsche Bank has surveyed a universe of well documented equity risk factors
- Value
 - The concept of value investing is founded on the belief that cheap stocks outperform expensive stocks in the long-run. The landmark Fama-French paper from 1992 identified a systematic approach to value investing
 - An example of traditional measures of value are ratios such as Price-to-Earnings (P/E) and Enterprise Value (EV)-to-Earnings before Interest, Taxes and Amortization (EBITA) where investment are made into companies that are viewed as cheap

- Growth
 - Growth investing involves investing in stocks whose earnings are expected to grow at an above-average rate as compared to their industry or overall market
 - Examples of measuring growth include 12-month trailing Earnings-per-Share (EPS) growth, long-term EPS growth, current P/E vs. 5Y P/E and 12-month trailing dividend growth
- Quality
 - In reporting seasons, earnings quantity tends to get the most attention — in reality though the quality of earnings is a better gauge of future earnings performance
 - Accruals — the difference between cash and accounting earnings — can be a good inverse measure of earnings quality. Accrual earnings have been less reliable than cash earnings because they involve subjective judgments regarding the period in which revenues and expenses are recognized
 - Academic research by Richard Sloan (1996) has highlighted that earnings performance related to accruals exhibits lower persistence than earnings attributed to cash flow
- Momentum
 - Prior stock returns have been shown to have explanatory power — this temporal pattern in prices is referred to as momentum
 - Jegadeesh and Titman (1993) show that a strategy that simultaneously buys past winners and sells past losers generates significant abnormal returns over holding periods of 3- to 12-months
- Size
 - The Fama-French (1992) paper argues that investors have historically received additional returns by investing in stocks of companies with relatively small market capitalization
- Low Beta/Volatility
 - Historical long term studies by Baker and Haugen show that low volatility and low beta portfolios can offer a combination of high average returns coupled with low drawdowns
 - Beta is a number that is often used to describe the relationship between a specific asset's return and the market's return as a whole
 - Explanations for structural alpha in low-risk stocks appear to be rooted in irrational investor behavior leading to market inefficiency
 - Metrics used to monetize the low risk factor include realized volatility and market beta

Equity Risk Factors: Investment Choices

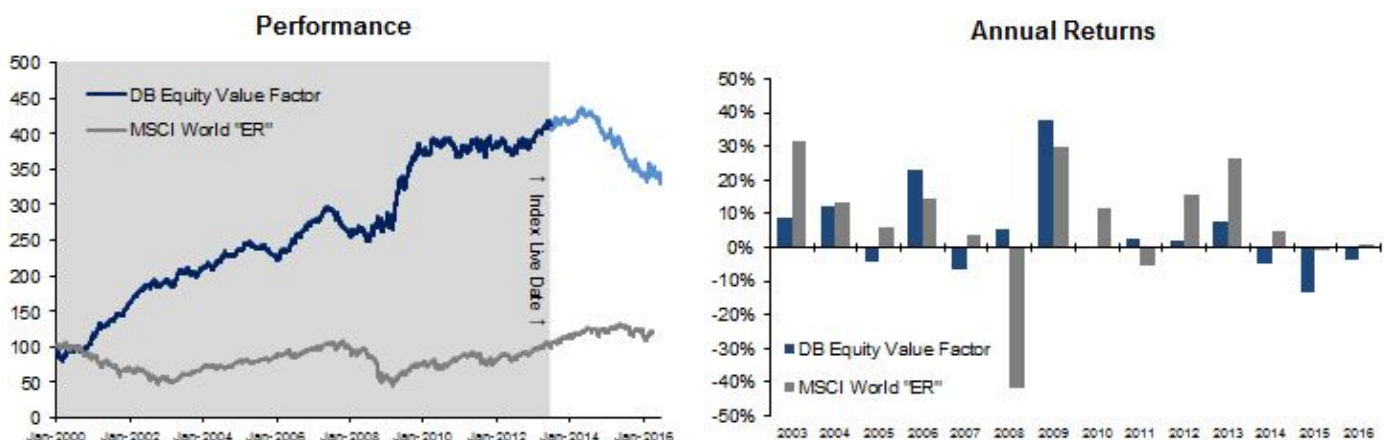
- The following risk factors in particular have been found to generally display persistent and attractive risk-return characteristics:
 - Value
 - Low Beta
 - Quality
 - Momentum
- Investors can look at investing in risk factors in multiple ways
- One option would be to look at each individual risk factor
 - Assess an existing portfolio for specific risk factor exposures
 - Use individual risk factors to address over- or under-exposures in the portfolio
- Another option is to allocate to a basket of investible risk factors
 - The investor may benefit from low correlation between factors in the basket
 - The correlation of the basket to the existing portfolio may also be low

Historical Performance of the Risk Premium Indices and the Portfolio Index

Calculation of the Portfolio Index began on October 22, 2013, and the calculation of the Deutsche Bank Equity Sector-Neutral Value Factor — USD — Excess Return Index (the “**Value Factor Index**”), the Deutsche Bank Equity Sector-Neutral Quality Factor — USD — Excess Return Index (the “**Quality Factor Index**”), the Deutsche Bank Equity Low Beta Turnover Control Factor — USD — Excess Return Index (the “**Low Beta Factor Index**”) and the Deutsche Bank Equity Risk-Adjusted Momentum Factor — USD — Excess Return Index (the “**Momentum Factor Index**”) (each, a “**Risk Premium Index**”) began on July 1, 2013. Therefore, both the Portfolio Index and the Risk Premium Indices have limited performance history and no actual investment which allowed tracking of the performance of the Portfolio Index or the Risk Premium Indices was possible before their respective inception dates. The performance of the Portfolio Index prior to October 22, 2013 shown in this underlying supplement has been retrospectively calculated using historical data and the same methodologies as described herein except that the levels of each Risk Premium Index prior to its respective live date were calculated by the sponsor of the Portfolio Index (as defined in “Description of Index Methodology” below) based on historical stock prices (adjusted to reflect historical corporate events) provided by dbGrade which uses FAME (database). Such adjustments to the historical stock prices provided by dbGrade may be different from the adjustments for corporate events set forth below in the description of each Risk Premium Index, and the levels of the Portfolio Index prior to October 22, 2013 may have been lower had the adjustments for corporate events set forth in the description of each Risk Premium Index been applied. Although the sponsor of the Portfolio Index believes that these retrospective calculations fairly represent how these indices would have performed before their respective live dates, the Portfolio Index and the Risk Premium Indices did not, in fact, exist prior to their respective live dates. Furthermore, the index methodologies of the Portfolio Index and each of the Risk Premium Indices underlying the Portfolio Index were designed, constructed and tested using historical market data and based on knowledge of factors that may have possibly affected their performance. The returns prior to their respective live dates were achieved by means of a retroactive application of such back-tested index methodologies designed with the benefit of hindsight. It is impossible to predict whether the Portfolio Index and the Risk Premium Indices will rise or fall. The actual performance of these indices may bear little relation to their retrospectively calculated performance. The performance of any securities based on such indices would have been lower than such indices as a result of fees and/or costs associated with the securities.

In this underlying supplement, various performance-related statistics, such as index return and volatility, among others, of the Portfolio Index and the Risk Premium Indices are compared with those of the MSCI World “ER,” which is the cumulative daily return of the MSCI World Total Return Net USD Index over the Fed Funds Effective Rate. Such comparisons are for information purposes only. No assurance can be given that any such index will outperform the MSCI World “ER” in the future. Similarly, no assurance can be given that the relative volatility levels of such indices and MSCI World “ER” will remain the same in the future.

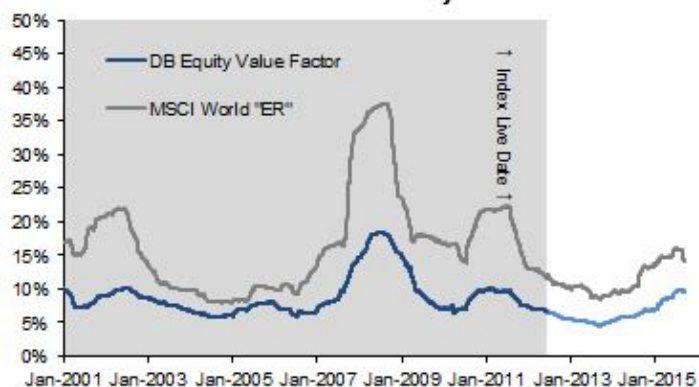
Equity Value Factor Index (BBG: DBGLSNVU)



Performance Analysis

	DB Equity Value Factor	MSCI World "ER"
Jan 6, 2000 - Sep 30, 2016		
Return Over Period	251.4%	28.7%
Annualized Return	7.8%	1.5%
Volatility ¹	9.4%	16.9%
Sharpe Ratio ²	0.8	0.1
Max. Drawdown	-25.4%	-59.0%
Start Date	April 10, 2014	October 12, 2007
End Date	July 6, 2016	March 9, 2009
Monthly Returns		
% Positive	60.0%	57.0%
Best	13.8%	11.2%
Worst	-9.9%	-19.0%
Correlation to Fador		0.09

12-Month Volatility

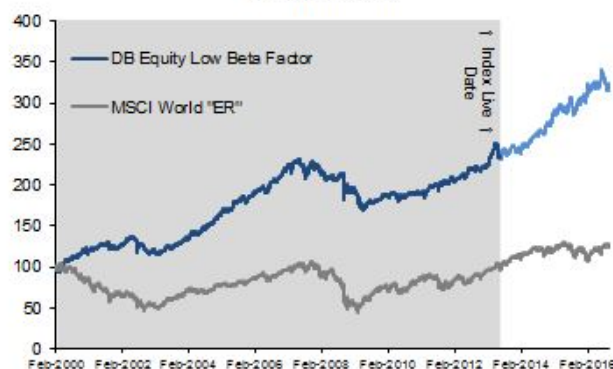


¹ Volatility refers to the annualized volatility of the index, as calculated from daily returns of the index.

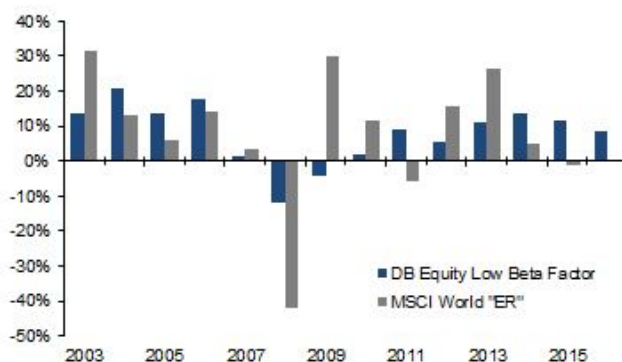
² Sharpe Ratio is a measure for risk-adjusted return, calculated in this underlying supplement by taking an index's annualized return and dividing it by such index's volatility (as a measurement for risk)

Equity Low Beta Factor Index (BBG: DBGLSTBU)

Performance



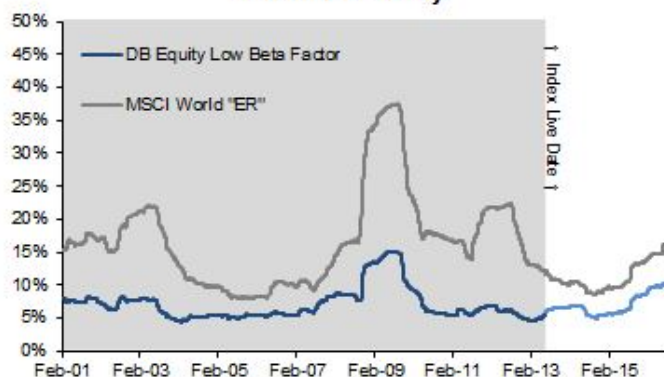
Annual Returns



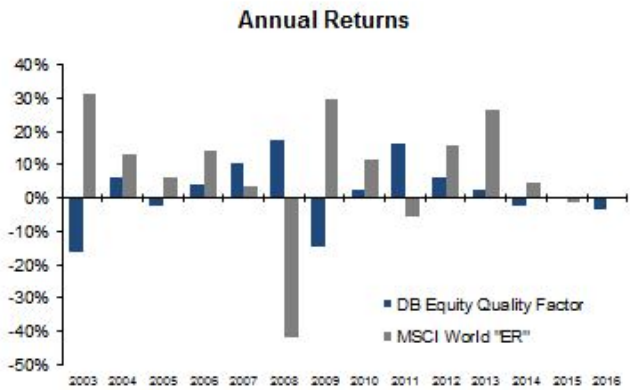
Performance Analysis

	DB Equity Low Beta Factor	MSCI World "ER"
Feb 7, 2000 - Sep 30, 2016		
Return Over Period	218.5%	26.4%
Annualized Return	7.2%	1.4%
Volatility	7.5%	17.0%
Sharpe Ratio	1.0	0.1
Max. Drawdown	-26.9%	-59.0%
Start Date		
End Date	May 8, 2009	March 9, 2009
Monthly Returns		
% Positive	67.9%	56.6%
Best	5.1%	11.2%
Worst	-7.3%	-19.0%
Correlation to Fador		0.33

12-Month Volatility

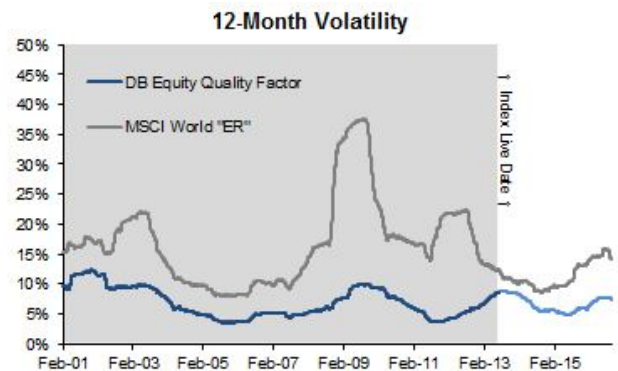


Equity Quality Factor Index (BBG: DBGLSNQU)

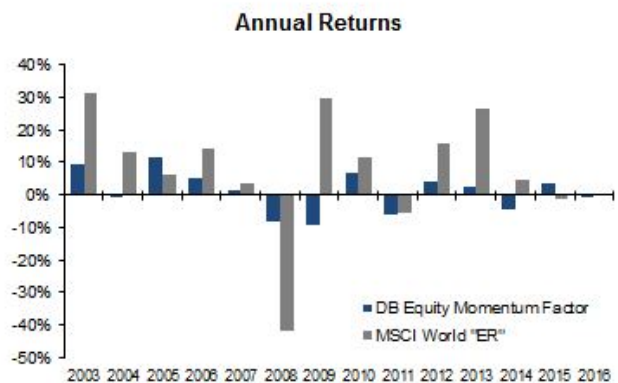


Performance Analysis

	DB Equity Quality Factor	MSCI World "ER"
	Feb 7, 2000 - Sep 30, 2016	
Return Over Period	80.4%	26.4%
Annualized Return	3.6%	1.4%
Volatility	7.3%	16.9%
Sharpe Ratio	0.5	0.1
Max. Drawdown	-24.2%	-59.0%
Start Date	Feb 7, 2000	March 9, 2009
End Date	September 26, 2004	March 9, 2009
Monthly Returns		
% Positive	57.8%	57.3%
Best	8.1%	11.2%
Worst	-7.1%	-19.0%
Correlation to Factor		-0.18

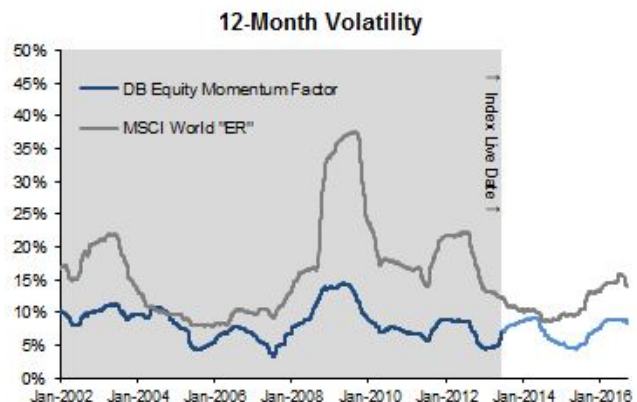


Equity Momentum Factor Index (BBG: DBGLSNMU)

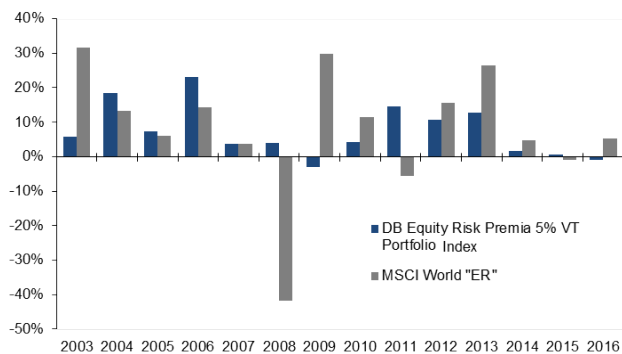
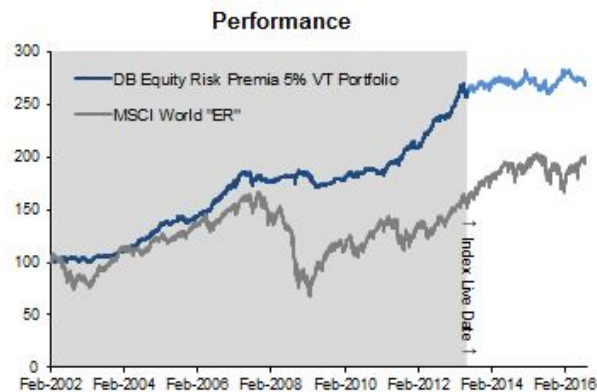


Performance Analysis

	DB Equity Momentum Factor	MSCI World "ER"
	Jan 9, 2001 - Sep 30, 2016	
Return Over Period	28.2%	52.1%
Annualized Return	1.6%	2.7%
Volatility	8.5%	17.0%
Sharpe Ratio	0.2	0.2
Max. Drawdown	-27.1%	-59.0%
Start Date	April 10, 2014	October 12, 2007
End Date	June 18, 2009	March 9, 2009
Monthly Returns		
% Positive	55.9%	58.0%
Best	7.9%	11.2%
Worst	-7.4%	-19.0%
Correlation to Factor		-0.05



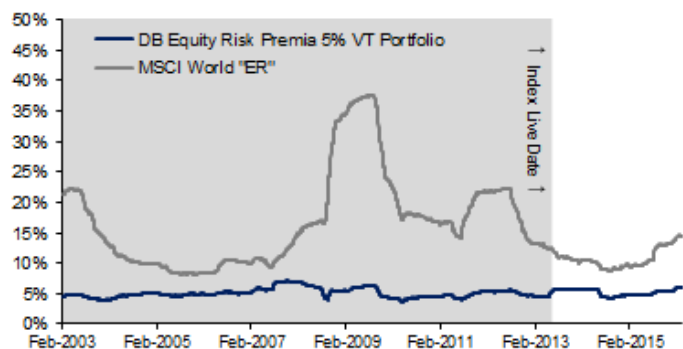
DB Equity Risk Premia 5% VT Portfolio Index (BBG: DBGLRP5U)



Performance Analysis

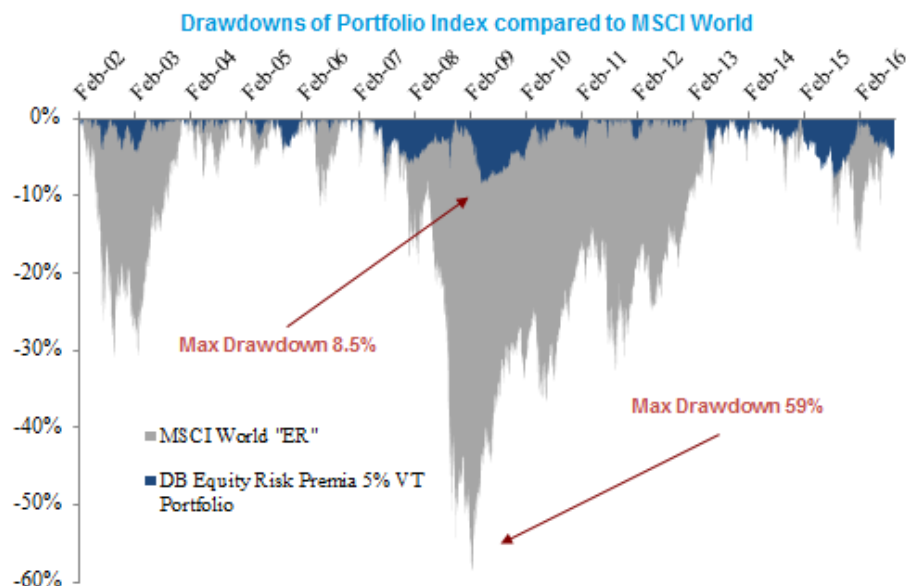
	DB Equity Risk Premia 5% VT Portfolio	MSCI World "ER"
	Feb 20, 2002 - Sep 30, 2016	
Return Over Period	171.1%	98.3%
Annualized Return	7.1%	4.8%
Volatility	5.1%	17.1%
Sharpe Ratio	1.4	0.3
Max. Drawdown	-8.5%	-59.0%
Start Date	June 1, 2007	October 12, 2007
End Date	May 8, 2009	March 9, 2009
Monthly Returns		
% Positive	71.4%	60.0%
Best	4.2%	11.2%
Worst	-3.5%	-19.0%
Correlation to Factor		0.22

12-Month Volatility



Portfolio Index: Reduction of Drawdowns

- By diversifying away from traditional equity beta, it is possible to construct a portfolio that significantly reduces drawdowns
- The chart below shows the historical drawdowns of the Portfolio Index compared to a long exposure to MSCI World "ER"



Hypothetical Implementation Example

The following tables and graphs illustrate the hypothetical performance of a portfolio with an overlay of the Portfolio Index, which we refer to as the risk premia overlay. The hypothetical examples set forth below are for illustrative purposes only. You should consider carefully whether the Portfolio Index is suitable to your investment goals.

In this hypothetical example, various performance-related statistics, such as annualized return and volatility, among others, of a hypothetical portfolio with the risk premia overlay are for information purposes only. No assurance can be given that the hypothetical portfolio with the risk premia overlay will outperform the hypothetical portfolio without the risk premia overlay in the future; nor can assurance be given that the hypothetical portfolio with the risk premia overlay will not significantly underperform the hypothetical portfolio without the risk premia overlay in the future. Similarly, no assurance can be given that the relative volatility levels of the hypothetical portfolio (with or without an overlay) will remain the same in the future.

- As an example, we proxy a basic 60% equity and 40% fixed income portfolio and quantify the impact of a portfolio reallocation and the addition of the risk premia overlay
- We move 5% of the portfolio's notional from the equity allocation into cash and add a 25% allocation to the Portfolio Index as an overlay
 - The risk reduction in the overall portfolio allows for a substantial allocation to be made to the Portfolio Index
 - Based on retrospective performance, the 25% allocation to the risk premia overlay would have resulted in both an overall risk reduction and an improvement in returns

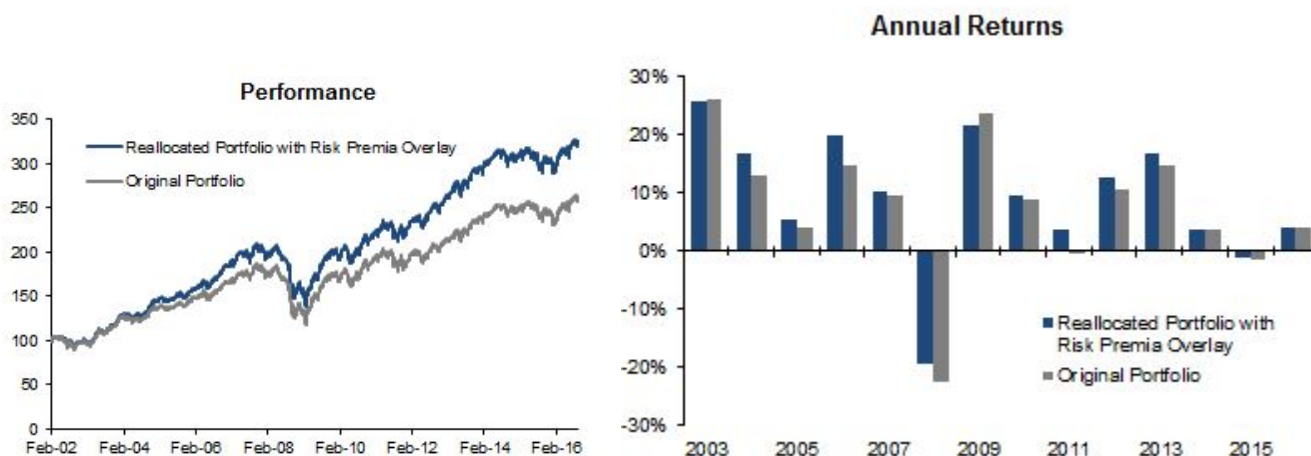
Initial Portfolio

Investment	Proxy	Capital Allocation	Notional Exposure
Equity	MSCI World Index	60%	60%
Fixed Income	JPM Global Aggregate Bond Index	40%	40%

Reallocated Portfolio

Investment	Proxy	Capital Allocation	Notional Exposure
Equity	MSCI World Index	55%	55%
Fixed Income	JPM Global Aggregate Bond Index	40%	40%
Cash	DB Fed Funds Index	5%	5%
Risk Premia Overlay	DB Equity Risk Premia 5% VT Portfolio	0%	25%

Shifting 5% from Equity into Cash and Overlaying Risk Premia



Performance Analysis

	Reallocated Portfolio with Risk Premia Overlay	Original Portfolio
Feb 20, 2002 - Sep 30, 2016		
Return Over Period	224.2%	161.9%
Annualized Return	8.4%	6.8%
Volatility	9.4%	9.9%
Sharpe Ratio	0.7	0.5
Max. Drawdown	-33.5%	-36.6%
Start Date	Nov 1, 2007	Nov 1, 2007
End Date	Sep 24, 2010	Oct 14, 2010
Monthly Returns		
% Positive	65.1%	60.8%
Best	6.3%	7.0%
Worst	-10.7%	-12.1%

12-Month Volatility



DB Equity Value Factor

Introduction

- The landmark paper on Value investing (in a systematic context) is the original Fama-French paper from 1992 which argued that cheap stocks outperform expensive stocks in the long-run
- Explanations for the premium:
 - Risk-based:* The Value premium is a rational phenomenon, which is priced in equilibrium, and represents compensation for systematic risk (exposure to financial distress, gearing, cash flow risk, volatility risk)
 - Behavioural:* Investors tend to overreact by overselling or avoiding buying “value” stocks that fall out-of-favor
 - Structural:* Money managers and pension funds gravitating towards successful growth-orientated names. Value at Risk (VAR) limits may prevent investors from accessing cheap assets
- Risk-based explanations have significant support in academia. There has been increasing evidence of the Value premium being explained by modelling economic uncertainty (e.g., Bali and Zhou (2012))
- The Value premium has all the characteristics of a “true” premium: It is not confined to one market or geography; it is not limited to one size segment. Value strategies have been successful in sector and country selection. And finally, there is burgeoning evidence of a value premium across asset classes (for example, see “Value and Momentum Everywhere,” Asness et al, 2010)

Metrics

- There are various valuation metrics that can be used to gauge the relative cheapness or expensiveness of a company
- The DB Equity Value Factor Index scores stocks based on one defensive and one cyclical measure of value
 - Defensive:* 12-month Trailing Dividend Yield
 - Cyclical:* EV/EBITDA (the inverse, EBITDA/EV is used to score the stocks)
- Why EV/EBITDA?
 - P/E ratios are impacted by a company’s choice of capital structure; companies that raise money via debt will have lower P/Es than companies that raise an equivalent amount of money by issuing shares
 - Enterprise Value includes the value of debt
 - EBITDA excludes interest payments on that debt and also excludes the cost of upfront investments or capital expenditures which can make it a more appropriate measure of a business’s underlying profit potential

Sector Neutralization

- Value tends to tilt toward specific sectors due to structural industry biases

- For example: Technology vs. Financials vs. Industrials
 - Younger technology companies may have a smaller focus on earnings and dividend yields
 - Industrials may focus heavily on earnings
 - Financials may focus more on dividends
- These sector biases are not necessarily reflective of relative value of the companies cross-sector
- The Value score of each stock is adjusted to take into account the average score for that stock's sector, in order to mitigate the sector bias inherent in the value metrics

Index Construction

- For the MSCI World universe of stocks, we determine the 12-month Trailing Dividend Yield and EBITDA/EV
- The metrics are then normalized and sector-adjusted to get a Value score
- We rank the stocks according to their Value score
 - The universe is then divided into five quintiles based on that score
 - The stocks in the Top quintile (high Value score) constitute the Long Value basket, and the stocks in the Bottom quintile (low Value score) constitute the Short Value basket
- The process is repeated every month and the stocks in both baskets are equally weighted
- The Long and Short baskets are then combined to form the aggregated Value Factor

DB Equity Low Beta Factor

Introduction

- The Low Beta anomaly is often considered to be one of the greatest anomalies in finance
 - Based on a study of stock returns between 1968 and 2008, Baker et al. (2011) find that low volatility and low beta portfolios offer an enviable combination of high average returns and small drawdowns
 - Although the anomaly has received particular interest in recent years, it was actually pointed out decades ago (e.g., Black, Jensen and Scholes (1972), Haugen and Baker (1991))
- Explanations for the premium:
 - *Behavioural and Structural*: Attention bias and overconfidence
 - One of the main reasons behind the Low Beta premium is institutional constraints. Fixed-benchmark mandates that are typically capitalization-weighted discourage investments in low-volatility stocks and are usually accompanied by leverage constraints
- The Low Beta premium appears robust in different time periods, geographies, and even asset classes, rendering it a powerful candidate for a consistent return source (Frazzini and Pedersen (2011))
- Structural conditions suggest future persistence of the premium:
 - Popular benchmarking methods would inhibit many “smart” investors from exploiting it
 - For the low beta anomaly to erode significantly, either the market capitalization weighted benchmarks would need to be gradually abolished, or a separate allocation to low risk (low beta/low volatility) strategies would need to be made an essential part of strategic asset allocation frameworks

Beta Neutralization

- A simple long-low-beta/short-high-beta strategy fails to generate abnormal returns, despite the long leg exhibiting significantly higher risk-adjusted returns compared to the short leg
 - A reason for this lies in the asymmetry of the volatilities of both legs, as well as the inherent negative beta exposure of the strategy

- To mitigate the asymmetry, the exposure to the long leg is kept at 100%, and the exposure to the short leg is reduced to match the long leg's beta
- "Low beta" is defined as the beta of a stock compared to a reference index

Index Construction

- On a monthly basis, the 5-year rolling beta of each stock, in relation to the MSCI World Equal Weight Index, is computed using daily returns
- We rank the stocks according to their Beta, low to high
 - The universe is then divided into five quintiles
 - The stocks in the Top quintile (low Beta) constitute the Long Beta basket, and the stocks in the Bottom quintile (high Beta) constitute the Short Beta basket
 - To address turnover control, the ranking is further split into deciles
 - If a stock's beta moves to an adjacent quintile, there is minimal impact on the strategy's profile
 - For existing constituents, unless its Beta moves below (above) the 4th (6th) decile, it will not be removed from the long (short) portfolio upon rebalancing
- The process is repeated every month and the stocks in both baskets are equally weighted
- To neutralize beta, the exposure to the Short basket is reduced by a factor equivalent to the ratio of the overall beta of the Long basket to the overall beta of the Short basket
 - The difference in exposure between the two baskets is made up by adding a cash component to the short basket
- The Long basket and the Short basket are combined to create the aggregated Low Beta Factor

DB Equity Quality Factor

Introduction

- The strength and composition of a company's balance sheet, the source of its earnings, the ability of a company to generate profits, the rate at which it turns over its assets, and the reputation of its management could all be considered aspects of a company's "quality"
 - Explanations for the premium
 - Behavioral: There is an attention bias; investors tend to look more at earnings quantity versus earnings quality (Sloan, "Do Stock Prices Fully Reflect Information in Accruals and Cash Flow about Future Earnings?", The Accounting Review, July 1996)
- From a rational expectations point of view, quality is about changing expectations of future cash flows, and changing perceptions of quality should be expected to move stock prices
- The Quality anomaly seems to be a strong predictor of returns in international stock markets, across various time periods and market segments

Metrics

- The DB Equity Quality Factor uses a measure of earnings quality and a measure of profitability
 - Earnings Quality: represented by Accruals as an inverse indicator
 - Profitability: represented by Return on Invested Capital
- Accrual accounting attempts to match expenses with associated revenues, with a substantial amount of discretion left to managers
 - Revenues and expenses for a certain financial year can be recognized more or less aggressively with the consequence that subsequent years will depend on bookings from the previous years
 - The degree to which a company relies on accruals to boost net income results in lower quality earnings

- Accruals are represented by the year on year Change in Net Operating Assets, normalized by the previous year's Net Operating Assets
 - Operating assets are calculated as the residual from total assets after subtracting financial assets, and operating liabilities are the residual amount from total assets after subtracting equity and financial liabilities

Sector Neutralization

- Quality tends to tilt toward specific sectors due to structural industry biases
 - For example, industrial companies may operate businesses with stricter accounting rules with less potential for accruals, while technology or service companies may operate businesses with less strict accounting rules and more potential for accruals
 - These sector biases are not necessarily reflective of relative quality of the companies cross-sector
- The Quality score of each stock is adjusted to take into account the average score for that stock's sector, in order to mitigate the sector bias inherent in the Quality metrics

Index Construction

- For the MSCI World Universe of stocks, the accruals and profitability score are determined and then adjusted for sector
- The normalized and sector-adjusted accruals score is then subtracted from the normalized and sector-adjusted profitability score to arrive at the final Quality score of the stock
- The stocks are ranked according to their Quality score, high to low
 - The universe is then divided into five quintiles based on that score
 - The stocks in the Top quintile (high Quality score) constitute the Long Quality basket, and the stocks in the Bottom quintile (low Quality score) constitute the Short Quality basket
- The process is repeated every month and the stocks in both baskets are equally weighted
- The Long and Short baskets are then combined to form the aggregated Quality Factor

DB Equity Momentum Factor

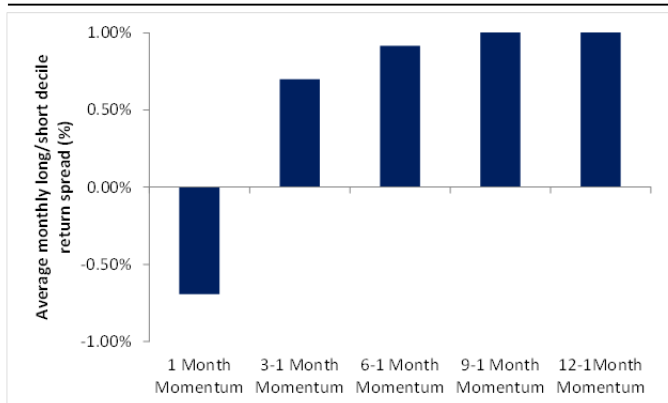
Introduction

- Prior stock returns have been shown to have explanatory power in the cross section of common stock returns (e.g., Jegadeesh and Titman's (1993), Carhart (1997)) independent of market, size, or value factors. An abundance of empirical evidence in favor of the Momentum factor exists in the academic literature
- Explanations for the premium:
 - *Risk-Based*: momentum profits represent reward for priced business cycle risk, and trends in the business cycle drive trends in prices (and vice versa). Momentum is related to economic distress risk and consumption risk
 - *Behavioral*: initial under-reaction followed by over-reaction induces price trends. Overconfidence leads to extrapolation of past price trends
 - *Structural*: closet index tracking by fund managers who aim to achieve returns similar to a benchmark index without replicating such index
- It is likely that none of the above explanations in their own right are adequate to explain the existence and persistence of this phenomenon over time
 - Momentum is one of the strongest premiums/anomalies, which though less profitable over the past decade, still may persist in the future based on its pervasiveness across assets, geographies, and time periods

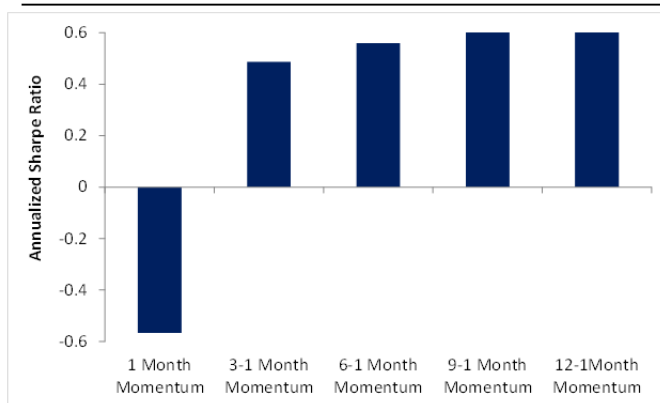
Horizon Performance

- First-11-Month Momentum, despite its popularization in both academic and investment circles following the Carhart (1997) publication, has remained the most profitable look-back window to define momentum stocks
- All else being equal, we give preference to a longer look-back horizon because it will require less turnover and, on average, impose less transaction costs

Return to momentum across different look-back horizons



Sharpe ratios across different look-back horizons



Performance and Risk

- The strong positive returns of momentum strategies are punctuated with strong reversals, or “crashes.” Like the returns to the carry trade in currencies, momentum returns are negatively skewed
- These drawdowns in the strategy coincide with periods of strong and sudden reversals in market sentiment or investor risk aversion
 - For example: the technology bubble crash starting in the spring of 2000; the re-risking episode after the end of the bear market at the end of 2002; the re-risking episode in the spring of 2009 following the financial crises
- Additionally, the momentum portfolio will typically be concentrated in stocks with attributes that are common across relative winners (e.g., defensive stocks, growth stocks)
 - For example, when market sentiment is strong and investor risk appetite is high, momentum strategies commonly have a strong tilt towards higher volatility stocks (e.g., technology bubble period); similarly, when investors are decreasing risk appetite, momentum strategies will align themselves with a tilt towards less volatile stocks (e.g., early to end of 2008)

Risk Neutralization

- According to academic research, momentum is to a great extent related to sector effects (Moskowitz and Grinblatt, 1999) as well as country exposures
 - Constraints on region and sectors mitigate the drawdown, but suppresses performance
- We utilize a factor neutralization approach to reduce exposure to market beta/volatility
- Our momentum metric is the traditional First-11-Month Momentum, uncontrolled for sector or region
- We use idiosyncratic (stock-specific) volatility, measured as the volatility of each stock relative to a market, as a proxy for risk
- We compute a risk-neutralized Momentum score incorporating each stock’s momentum and idiosyncratic volatility and the relationship between that volatility and market momentum generally

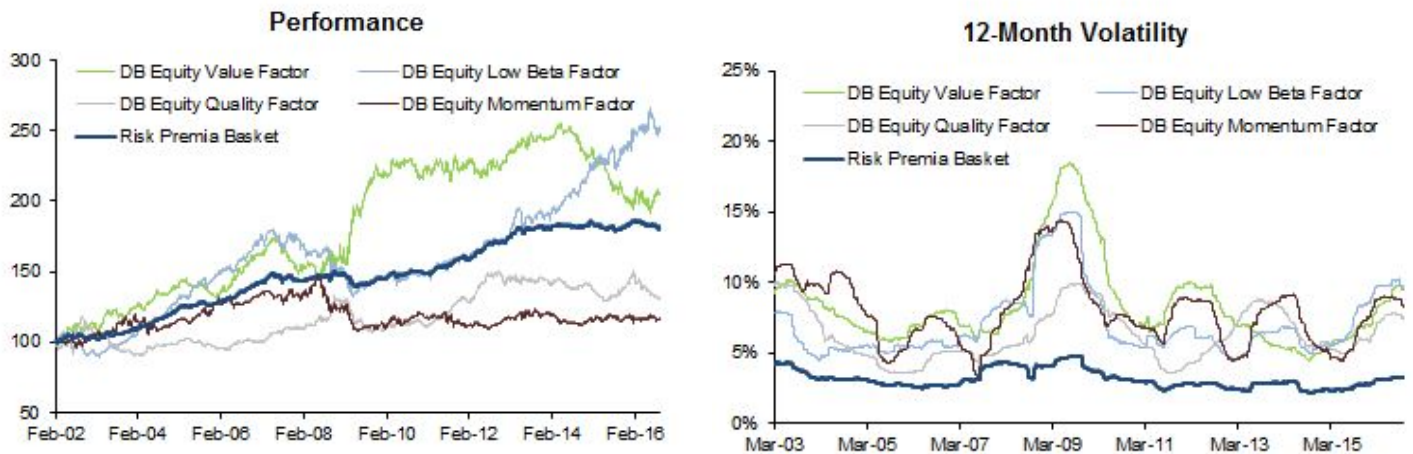
Index Construction

- Using the MSCI World universe, with total returns in USD, the risk-neutralized Momentum scores are calculated
 - Correlations and volatilities needed for the neutralization are computed based on 1-year rolling daily returns
- The stocks are ranked according to their Momentum score, high to low

- The universe is then divided into five quintiles based on that score
- The stocks in the Top quintile (high Momentum score) constitute the Long Momentum basket
- The process is repeated every month and the stocks in Long basket are equally weighted
- The strategy is long the Long Momentum basket and short the benchmark (MSCI World)

Effect of Combining Individual Risk Factors

- By combining risk factors to form a risk premia basket, it is possible to achieve a significant diversification benefit and improved risk adjusted return



	Risk Premia Basket	Value	Low Beta	Quality	Momentum
Feb 20, 2002 - Sep 30, 2016					
Return Over Period	81.8%	105.6%	148.7%	31.4%	17.4%
Annualized Return	4.2%	5.1%	6.4%	1.9%	1.1%
Volatility	3.3%	8.9%	7.7%	6.9%	8.7%
Sharpe Ratio	1.3	0.6	0.8	0.3	0.1
Max. Drawdown	-7.2%	-22.0%	-26.9%	-24.2%	-27.1%
Start Date	Nov 20, 2008	May 9, 2014	Jun 5, 2007	Oct 11, 2002	Jul 15, 2008
End Date	Sep 17, 2010	Dec 31, 2015	Feb 28, 2013	Jul 11, 2008	Dec 31, 2015
Monthly Returns					
% Positive	71.7%	57.2%	64.8%	60.0%	55.9%
Best	2.9%	13.8%	4.2%	8.1%	4.8%
Worst	-3.0%	-4.8%	-7.3%	-7.1%	-7.4%
Correlation to Factor Basket		0.31	0.64	0.41	0.29

Individual Risk Factor Correlations

	Quality	Momentum	Low Beta
Value	0.6%	-44.9%	-0.9%
Quality		-22.1%	-5.3%
Momentum			13.6%

Portfolio Index Construction

Introduction

- When constructing a diversified portfolio of investments we seek to:
 - Maximize the benefits of diversification and low correlation between portfolio constituents
 - Increase the likelihood of positive returns
 - Reduce the likelihood of significant losses
- Equally weighting exposure across investments is an unbiased and simple approach but does not capture the full benefits of diversification where assets have different volatilities
- One traditional tool for portfolio construction is mean-variance optimization (MVO)
- However, MVO-based optimizations can be very sensitive to input parameters, so we tend to avoid this approach
- A Risk Parity approach seeks to construct a portfolio that allocates risk evenly between its components
- Although somewhat simplistic, Risk Parity avoids some of the sensitivity to inputs of other methods

Inverse Volatility Risk Parity

- Risk Parity is a dynamic allocation mechanism which determines the weights of the portfolio components in such a way that the “risk” is distributed evenly among its components
- “Risk distribution” is achieved by assigning a lower weight to components with a high historical volatility and a higher weight to components with a low historical volatility

Equal Weighted Portfolio				Risk Parity Weighted Portfolio			
Asset	Volatility	Weight	Risk Allocation (Volatility x Weight)	Asset	Volatility	Weight	Risk Allocation (Volatility x Weight)
A	40%	33.3%	13.3%	A	40%	14.3%	5.7%
B	20%	33.3%	6.7%	B	20%	28.6%	5.7%
C	10%	33.3%	3.3%	C	10%	57.1%	5.7%

<ul style="list-style-type: none"> • Equal nominal weights do not ensure equal risk allocation • Asset A dominates risk whereas Asset C contributes much less to the risk of the index 	<ul style="list-style-type: none"> • Risk Parity weights are proportional to the inverse of the volatility of each asset • Risk Parity seeks to ensure that investment risk of the index is well distributed among its components
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Volatility Targeting

- With the aim of stabilizing the volatility and also to create an index with a volatility comparable to a diversified hedge fund portfolio, we created the Portfolio Index, which targets an annualized volatility of 5%
- On a monthly basis, we determine a risk-parity based allocation to the four individual risk factor indices (the “**risk-parity basket**”)
- We then calculate a hypothetical trailing 1-year volatility of the risk-parity basket
- The Portfolio increases (or decreases) its overall exposure to the risk-parity basket such that the historical volatility would have equalled 5%
- The exposure to the risk-parity basket is capped at 2 and floored at 0.5

Index Costs

The Portfolio Index is subject to a deduction for the cost of hypothetically implementing the volatility controlled, “risk-parity” weighted portfolio of Risk Premium Indices (the “**Rebalancing Transaction Cost**”) on each monthly rebalancing date. The cost is 0.04% of the change in the notional position in connection with increasing or decreasing exposure of the Portfolio Index to the Value Factor Index, the Quality Factor Index and the Momentum Index. The cost is 0.03% of the change in the notional position in connection with increasing or decreasing exposure of the Portfolio Index to the Low Beta Factor Index. The deductions of these costs are described in more detail under “— *Calculation of the Rebalancing Transaction Cost*” below. As a result of these deductions, the levels of the Portfolio Index will be lower than would otherwise be the case if such costs were not included.

Because the Portfolio Index is linked to the performance of the weighted portfolio of four Risk Premium Indices, the level of the Portfolio Index will also be reduced by the deductions of costs from the levels of the Risk Premium Indices. As described below under “*Risk Premium Indices*,” the calculation of each Risk Premium Index includes a daily deduction for the sum of the cost of hypothetically implementing the notional long position at a rate of 0.40% per annum and the cost of implementing the notional short position at a rate of 0.45% per annum. The calculation of the notional long and short positions also includes a cost deduction of 0.02% (in the case of the long position) and -0.02% (in the case of the short position) in connection with their monthly reconstitution. As a result of these cost deductions, the levels of the Risk Premium Indices will be lower than would otherwise be the case if such costs were not included. The reconstitution costs will be deducted separately from each Risk Premium Index. It is possible that one of the Risk Premium Indices will take a notional long position in a component stock while another Risk Premium Index will take a notional short position in the same component stock. Even if the Portfolio Index as a whole takes both a notionally long and short position in the same component stock, the reconstitution cost will be deducted for both the long and short positions without offsetting such reconstitution costs against each other. These deductions of costs and fees from the levels of the Risk Premium Indices are in addition to the Rebalancing Transaction Cost at the Portfolio Index level.

RISK FACTORS

THE PORTFOLIO INDEX MAY NOT ALWAYS SUCCESSFULLY MAINTAIN THE TARGET VOLATILITY OF 5% — The Portfolio Index is intended to reflect the performance of a dynamic allocation strategy that adjusts the Portfolio Index's notional exposure to the Portfolio Weighted Basket with the aim of maintaining an intended target volatility of 5% each day, calculated by reference to the realized volatility of the Portfolio Weighted Basket (weighted in its then-current form) over the last year (which we refer to as the hypothetical volatility of the Portfolio Weighted Basket). Because the Portfolio Index is subject to a maximum notional exposure of 200% and a minimum notional exposure of 50% to the Portfolio Weighted Basket, the Portfolio Index may not be able to maintain an intended target volatility of 5% each day. For example, if the hypothetical volatility of the Portfolio Weighted Basket were to be less than 2.50% and consequently the notional exposure to the Portfolio Weighted Basket were to be reset to the maximum notional exposure of 200%, the target volatility would be less than 5%. Similarly, if the hypothetical volatility of the Portfolio Weighted Basket were to be greater than 10% and consequently the notional exposure to the Portfolio Weighted Basket were to be reset to the minimum notional exposure of 50%, the target volatility would be greater than 5%.

In addition, the Portfolio Index's notional exposure to the Portfolio Weighted Basket is calculated based on the hypothetical volatility of the Portfolio Weighted Basket over the last year. However, there can be no assurance that historical trends in volatility will continue in the future. Accordingly, there is no assurance that the hypothetical volatility of the Portfolio Weighted Basket's over the past year will be an effective way to (i) accurately assess volatility of the Portfolio Weighted Basket at the given time or (ii) predict patterns of volatility in the future. Thus, the realized volatility of the Portfolio Index at any time in the future could differ significantly from the target volatility of 5%. Furthermore, because the Portfolio Index adjusts its notional exposure to the Portfolio Weighted Basket only once a month, the Portfolio Index will not be able to adjust its notional exposure to the Portfolio Weighted Basket to account for any change in volatility until the next monthly rebalancing date. As a result, the Portfolio Index may not achieve its target volatility of 5%, which may adversely affect the level of the Portfolio Index and the return on the securities.

THE PORTFOLIO INDEX AND THE RISK PREMIUM INDICES CONTAIN EMBEDDED COSTS — The Portfolio Index is subject to a deduction for the cost of hypothetically implementing the volatility controlled, "risk-parity" Portfolio Weighted Basket. As a result of this deduction, the level of the Portfolio Index will be lower than would otherwise be the case if such cost were not included. Because the Portfolio Index is linked to the performance of the Portfolio Weighted Basket, which is composed of the four Risk Premium Indices, the deduction of costs from the levels of the Risk Premium Indices will also lower the level of the Portfolio Index. The calculation of each Risk Premium Index includes a daily deduction for the sum of the cost of hypothetically implementing, as well the cost in connection with the monthly reconstitution of, the notional long position and short position (if applicable). As a result of these deductions, the levels of the Risk Premium Indices will be lower than would otherwise be the case if such costs were not included. The reconstitution costs will be deducted separately from each Risk Premium Index. It is possible that one of the Risk Premium Indices will take a notional long position in a component stock while another Risk Premium Index will take a notional short position in the same component stock. Even if the Portfolio Index as a whole takes both a notionally long and short position in the same component stock, the reconstitution cost will be deducted for both the long and short positions without offsetting such reconstitution costs against each other. These deductions of costs from the levels of the Risk Premium Indices are in addition to the deduction of costs at the Portfolio Index level.

The total annual costs deducted from the level of the Portfolio Index (*i.e.*, the costs deducted from the level of the Portfolio Index plus the costs deducted from the levels of the Risk Premium Indices) from October 22, 2013 to, and including 2016 have ranged from 0.00% to 2.20%. **The historical costs deducted from the Portfolio Index should not be taken as an indication of future costs and, depending on market conditions, such costs could be significantly higher in the future.**

THE PORTFOLIO INDEX'S TARGET VOLATILITY FEATURE CAN EXPOSE THE PORTFOLIO INDEX TO GREATER LOSSES OR REDUCED GAINS — When the hypothetical volatility of the Portfolio Weighted Basket is less than the target volatility of 5%, the Portfolio Index will employ leverage to increase the notional exposure of the Portfolio Index to the Portfolio Weighted Basket, up to a maximum notional exposure of 200%. When the Portfolio Weighted Basket is leveraged, any movements in the levels of the Risk Premium Indices will result in greater changes in the level of the Portfolio Index than if leverage were not used. In particular, the use of leverage will magnify any negative performance of the Portfolio Weighted Basket. Conversely, when the hypothetical volatility of the Portfolio Weighted Basket is greater than the target volatility of 5%, the Portfolio Index will reduce its notional exposure to the Portfolio Weighted Basket, down to a minimum exposure of 50%. At a time when the Portfolio Index's exposure to the Portfolio Weighted Basket is less than 100%, any movements in the levels of the Risk Premium Indices will result in lesser changes in the level of the Portfolio Index. In this circumstance, because you will not participate fully in the increases in the levels of the Risk Premium Indices, the effect of any gains achieved from holding such position will be reduced.

THE PORTFOLIO WEIGHTED BASKET MAY NOT BE ABLE TO MAINTAIN “RISK-PARITY” AMONG THE RISK PREMIUM INDICES — The Portfolio Weighted Basket is rebalanced monthly by weighting the notional exposure to the Risk Premium Indices such that the risk associated with each Risk Premium Index is approximately equal. This is accomplished by measuring the volatility of each Risk Premium Index over the last year and setting the weight of such Risk Premium Index in inverse proportion to its volatility. Therefore, a Risk Premium Index with a high historical volatility will be assigned a lower weight on the monthly rebalancing date, and a Risk Premium Index with a low historical volatility will be assigned a higher weight.

However, there can be no assurance that historical trends in volatility will continue in the future. Thus, the realized volatility of the Risk Premium Indices in the future could differ significantly from their historical volatility. Furthermore, because the Portfolio Weighted Basket adjusts its notional exposure to the Risk Premium Indices only once a month, the Portfolio Weighted Basket will not be able to adjust its notional exposure to the Risk Premium Indices to account for any change in volatility until the next monthly rebalancing date. As a result, the Portfolio Weighted Basket may not successfully weight the notional exposure to the Risk Premium Indices such that the risk associated with each Risk Premium Index is approximately equal. In this circumstance, the Portfolio Weighted Basket may not be able to maintain “risk-parity” among the Risk Premium Indices between monthly rebalancing dates, which may adversely affect the level of the Portfolio Index and the return on the securities.

THE PORTFOLIO WEIGHTED BASKET WILL LIKELY BE UNEQUALLY WEIGHTED — In seeking to achieve “risk-parity” among the four Risk Premium Indices in the Portfolio Weighted Basket, the Risk Premium Indices will likely be unequally weighted. Accordingly, the performance of the Risk Premium Indices with the higher weightings will influence the performance of the Portfolio Index to a greater degree than the performance of the Risk Premium Indices with lower weightings. If the Risk Premium Indices with the higher weightings perform poorly, their poor performance could negate or diminish the effect on the performance of the Portfolio Index of any positive performance by the lower-weighted Risk Premium Indices.

THE RISK PREMIUM INDICES ARE SUBJECT TO STRATEGY RISK — The Risk Premium Indices aim to generate returns by identifying persistent Risk Premiums in the equity markets and implementing systematic strategies to access them. The four Risk Premiums tracked by the respective Risk Premium Indices are: “value,” as measured by a stock’s EBITDA (earnings before interest, tax, depreciation and amortization) to EV (enterprise value) ratio and dividend yield; “quality,” as measured by a stock’s return on invested capital and accruals ratio; “low beta,” as measured by the beta of a stock compared to a reference index; and “momentum,” as measured by a stock’s price momentum, risk-adjusted for idiosyncratic volatility. Each of the Value Factor Index, Quality Factor Index and Low Beta Factor Index comprises a notional long position in a portfolio of stocks ranked as high value, high quality or low beta stocks, respectively, and a notional short position in a portfolio of stocks ranked as low value, low quality or high beta stocks, respectively. The Momentum Factor Index comprises a notional long position in a portfolio of stocks ranked as high momentum stocks and a notional short position in the MSCI World — Gross Total Return — USD Index. Generally, the performance of a Risk Premium Index will be positive, reflecting the premium an investor would earn, if the selected high value, high quality, low beta or high momentum stocks outperform the low value, low quality, high beta or benchmark stocks, respectively. However, if the Risk Premiums are not persistent in the equity markets in the future or the strategies to access them are not successful, the Risk Premium Indices may fail to generate positive returns associated with such Risk Premiums, which would adversely affect the level of the Portfolio Index and the return on the securities.

SUB-INDICES MAY BE ADDED OR REMOVED FROM ANY OF THE RISK PREMIUM INDICES DURING THE TERM OF THE SECURITIES — Each of the Risk Premium Indices currently consists of one sub-index. However, if there are changes in the aggregate outstanding notional investment of financial products (including the securities) linked to any of the Risk Premium Indices during the term of the securities, one or more additional sub-indices may be created and added to the relevant Risk Premium Index. Similarly, sub-indices may be removed from a Risk Premium Index, subject to the requirement that each Risk Premium Index must have at least one sub-index at all times.

While each sub-index of a Risk Premium Index will be reconstituted on a monthly basis and its constituents will be selected at the same as the other sub-indices of such Risk Premium Index, each sub-index of a Risk Premium Index will have its own reconstitution date. As a result, each sub-index will measure the performance of its constituents for a different period of time than the other sub-indices in such Risk Premium Index and the unit weightings of the constituents in each sub-index may be different than the unit weighting of the same constituents in the other sub-indices. Such differences may cause the performance of such sub-index to deviate from the other sub-indices. Therefore, the addition or removal of a sub-index from a Risk Premium Index may have an adverse effect on the level of the Portfolio Index and the return on the securities.

THE SECURITIES ARE SUBJECT TO CURRENCY EXCHANGE RATE RISK — Because some or all of the securities underlying the Portfolio Index are denominated in foreign currencies but the Portfolio Index is calculated in U.S. dollars, changes in currency exchange rates may negatively impact the returns of the Portfolio Index. Of particular importance to currency exchange rate risk are:

- existing and expected rates of inflation;
- existing and expected interest rates;
- political, civil or military unrest;
- the balance of payments between the countries represented in the Portfolio Index and the United States; and
- the extent of governmental surpluses or deficits in the countries represented in the Portfolio Index and the United States.

All of these factors are in turn sensitive to the monetary, fiscal and trade policies pursued by the governments of the countries represented in the Portfolio Index, the United States and other countries important to international trade and finance. An investor's net exposure to currency exchange rate risk will depend on the extent to which the currencies represented in the Portfolio Index strengthen or weaken against the U.S. dollar and the relative weight of each currency represented in the Portfolio Index. If, taking into account such weighting, the U.S. dollar strengthens against the component currencies as a whole, the level of the Portfolio Index will be adversely affected and the value of the securities will be reduced. Additionally, the volatility and/or the correlation (including the direction and the extent of such correlation) of the exchange rates between the U.S. dollar and the currencies represented in the Portfolio Index could adversely affect the value of the securities.

THERE ARE RISKS ASSOCIATED WITH INVESTMENTS IN SECURITIES LINKED TO THE VALUES OF EQUITY SECURITIES ISSUED BY NON-U.S. COMPANIES — Some or all of the securities underlying the Portfolio Index are issued by companies incorporated outside of the U.S. Because the underlying securities also trade outside the U.S., the securities are subject to the risks associated with non-U.S. securities markets. Generally, non-U.S. securities markets may be less liquid and more volatile than U.S. securities markets and market developments may affect non-U.S. securities markets differently than U.S. securities markets, which may adversely affect the level of the Portfolio Index and the value of your securities. Furthermore, there are risks associated with investments in securities linked to the values of equity securities issued by non-U.S. companies. There is generally less publicly available information about non-U.S. companies than about those U.S. companies that are subject to the reporting requirements of the SEC, and non-U.S. companies are subject to accounting, auditing and financial reporting standards and requirements that differ from those applicable to U.S. reporting companies. In addition, the prices of equity securities issued by non-U.S. companies may be adversely affected by political, economic, financial and social factors that may be unique to the particular countries in which the non-U.S. companies are incorporated. These factors include the possibility of recent or future changes in a non-U.S. government's economic and fiscal policies (including any direct or indirect intervention to stabilize the economy and/or securities market of the country of such non-U.S. government), the presence, and extent, of cross shareholdings in non-U.S. companies, the possible imposition of, or changes in, currency exchange laws or other non-U.S. laws or restrictions applicable to non-U.S. companies or investments in non-U.S. securities and the possibility of fluctuations in the rate of exchange between currencies. Moreover, certain aspects of a particular non-U.S. economy may differ favorably or unfavorably from the U.S. economy in important respects, such as growth of gross national product, rate of inflation, capital reinvestment, resources and self-sufficiency.

THE SECURITIES ARE SUBJECT TO EMERGING MARKETS RISK — The value of the securities is subject to the political and economic risks of emerging market countries by linking to the performance of the Portfolio Index. Some or all of the securities underlying the Portfolio Index include stocks of companies that are located in emerging market countries and whose securities trade on the exchanges of emerging market countries. In recent years, some emerging markets have undergone significant political, economic and social upheaval. Such far-reaching changes have resulted in constitutional and social tensions and, in some cases, instability and reaction against market reforms has occurred. With respect to any emerging market nation, there is the possibility of nationalization, expropriation or confiscation, political changes, government regulation and social instability. Future political changes may adversely affect the economic conditions of an emerging market nation. Political or economic instability could affect the value of the securities and the amount payable to you at maturity.

THE PORTFOLIO INDEX AND THE RISK PREMIUM INDICES HAVE LIMITED PERFORMANCE HISTORY — Calculation of the Portfolio Index began on October 22, 2013 and calculation of each of the Risk Premium Indices began on July 1, 2013. Therefore, both the Portfolio Index and the Risk Premium Indices have limited performance history and no actual investment which allowed tracking of the performance of the Portfolio Index or the Risk Premium Indices was

possible before their respective live dates. The performance data of the Portfolio Index prior to October 22, 2013 shown in this underlying supplement has been retrospectively calculated using historical data and the same methodologies as described herein, except that the levels of each Risk Premium Index prior to its respective live date were calculated by the Index Sponsor (as defined below) based on historical stock prices (adjusted to reflect historical corporate events) provided by dbGrade, which uses FAME (database). Such adjustments to the historical stock prices provided by dbGrade may be different from the adjustments for corporate events set forth below in the description of each Risk Premium Index, and the levels of the Portfolio Index prior to October 22, 2013 may have been lower had the adjustments for corporate events set forth in the description of each Risk Premium Index been applied. Although the Index Sponsor believes that these retrospective calculations fairly represent how these indices would have performed before their respective live dates, the Portfolio Index and the Risk Premium Indices did not, in fact, exist prior to their respective live dates. Furthermore, the index methodologies of the Portfolio Index and each of the Risk Premium Indices were designed, constructed and tested using historical market data and based on knowledge of factors that may have possibly affected their performance. The returns prior to their respective live dates were achieved by means of a retroactive application of such back-tested index methodologies designed with the benefit of hindsight. All prospective investors should be aware that no actual investment that allowed a tracking of the performance of the Portfolio Index or the Risk Premium Indices was possible at any time prior to their respective live dates. Furthermore, it is impossible to predict whether the Portfolio Index and the Risk Premium Indices will rise or fall. The actual performance of these indices may bear little relation to their retrospectively calculated performance.

DEUTSCHE BANK AG, LONDON BRANCH, AS THE SPONSOR OF THE PORTFOLIO INDEX AND THE RISK PREMIUM INDICES, MAY ADJUST EACH INDEX IN A WAY THAT AFFECTS ITS LEVEL AND MAY HAVE CONFLICTS OF INTEREST — Deutsche Bank AG, London Branch is the sponsor of the Portfolio Index and the Risk Premium Indices (the “**Index Sponsor**”) and will determine whether there has been a market disruption event with respect to these indices. In the event of any such market disruption event, the Index Sponsor may use an alternate method to calculate the closing levels of the Portfolio Index and the Risk Premium Indices. The Index Sponsor carries out calculations necessary to promulgate these indices and maintains some discretion as to how such calculations are made. In particular, the Index Sponsor has discretion in selecting among methods of how to calculate the Portfolio Index and the Risk Premium Indices in the event the regular means of determining these indices are unavailable at the time a determination is scheduled to take place. There can be no assurance that any determinations made by the Index Sponsor in these various capacities will not affect the levels of these indices and the value of the securities. Any of these actions could adversely affect the value of securities linked to these indices. The Index Sponsor has no obligation to consider the interests of holders of securities linked to the Portfolio Index or the Risk Premium Indices in calculating or revising these indices.

Furthermore, Deutsche Bank AG, London Branch or one or more of its affiliates may have published, and may in the future publish, research reports on the Portfolio Index and the Risk Premium Indices or investment strategies reflected by these indices (or any transaction, product or security related to these indices or any components thereof). This research is modified from time to time without notice and may express opinions or provide recommendations that are inconsistent with purchasing or holding of transactions, products or securities related to these indices. Any of these activities may affect the Portfolio Index and the Risk Premium Indices or transactions, products or securities related to these indices. Investor should make their own independent investigation of the merits of investing in contracts or products related to the Portfolio Index and the Risk Premium Indices.

TRADING AND OTHER TRANSACTIONS BY US OR OUR AFFILIATES IN THE DERIVATIVE MARKETS MAY IMPAIR THE VALUE OF ANY SECURITIES LINKED TO THE PORTFOLIO INDEX OR A RISK PREMIUM INDEX — We or our affiliates expect to hedge our exposure from any securities linked to the Portfolio Index or a Risk Premium Index that we or our affiliates offer and sell by entering into derivative transactions, such as over-the-counter options, futures or exchange-traded instruments. In addition to such securities, we or our affiliates may issue or underwrite other securities or financial or derivative instruments with returns linked or related to the Portfolio Index, a Risk Premium Index or their components. We or our affiliates may establish, adjust or unwind hedge positions with respect to the securities and such other securities or instruments by, among other things, purchasing or selling at any time the components of the Portfolio Index, a Risk Premium Index or instruments whose value is derived from the Portfolio Index, a Risk Premium Index or their components. This hedging activity could adversely affect the levels of the Portfolio Index or a Risk Premium Index and the value of the securities. For example, on or prior to the trade date of the securities, we or our affiliates may purchase the components of the Portfolio Index, the relevant Risk Premium Index or instruments whose value is derived from the Portfolio Index, such Risk Premium Index or their components as part of our or our affiliates’ hedge. Such hedging activity could potentially increase the level of the Portfolio Index or such Risk Premium Index prior to the close of trading on the trade date and effectively establish a higher level that the Portfolio Index or such Risk Premium Index must achieve for an investor to obtain a positive return on its investment in the securities or avoid a loss of some or all of its investment.

In addition, during the term of the securities, we or our affiliates may adjust our or their hedge positions in connection with the reweighting, rebalancing or reconstitution of the Portfolio Index or the relevant Risk Premium Index by selling some or all of the existing components and/or purchasing new or existing components of the Portfolio Index or such Risk Premium Index at or in advance of the time the values and weightings of the components are determined for purposes of such reweighting, rebalancing or reconstitution. This hedging activity could potentially decrease the prices at which the Portfolio Index or such Risk Premium Index notionally sells existing components and increase the prices at which the Portfolio Index or such Risk Premium Index notionally purchases new or existing components, and thus adversely affect the level of the Portfolio Index or such Risk Premium Index. Finally, unwinding any hedge positions on or prior to the valuation date(s) of the securities by us or our affiliates could potentially decrease the level of the Portfolio Index or the relevant Risk Premium Index prior to the close of trading on such valuation date(s) and adversely affect the value of the securities. We or our affiliates may also engage in trading in instruments linked or related to the Portfolio Index and the Risk Premium Indices on a regular basis as part of our or their general broker-dealer and other businesses, for proprietary accounts, for other accounts under management or to facilitate transactions for customers, including block transactions. Such trading and hedging activities may adversely affect the levels of the Portfolio Index and the Risk Premium Indices and make it less likely that an investor will receive a positive return on its investment in the securities. It is possible that we or our affiliates could receive substantial returns from these hedging and trading activities while the value of the securities declines. Introducing competing products linked or related to the Portfolio Index, the Risk Premium Indices or their components into the marketplace could also adversely affect the value of the securities in the secondary market. Any of the foregoing activities described in this risk factor may reflect trading strategies that differ from, or are in direct opposition to, an investor's trading and investment strategies related to the securities.

DESCRIPTION OF INDEX METHODOLOGY

The Deutsche Bank Equity Risk Premia 5% VT Portfolio — USD — Excess Return Index (Bloomberg: DBGLRP5U <Index>) (the “**Portfolio Index**”) is a proprietary index of Deutsche Bank AG, London Branch (the “**Index Sponsor**”) and is intended to reflect the performance of a monthly rebalanced, volatility controlled, “risk-parity” weighted portfolio of four indices: Deutsche Bank Equity Sector-Neutral Value Factor — USD — Excess Return Index (the “**Value Factor Index**”), Deutsche Bank Equity Sector-Neutral Quality Factor — USD — Excess Return Index (the “**Quality Factor Index**”), Deutsche Bank Equity Low Beta Turnover Control Factor — USD — Excess Return Index (the “**Low Beta Factor Index**”) and Deutsche Bank Equity Risk-Adjusted Momentum Factor — USD — Excess Return Index (the “**Momentum Factor Index**”). We refer to each of the Value Factor Index, the Quality Factor Index, the Low Beta Factor Index and the Momentum Factor Index as a “**Risk Premium Index**.” Descriptions of the Risk Premium Indices are attached as annexes hereto.

Each Risk Premium Index is a proprietary index of Deutsche Bank AG, London Branch (the “**Risk Premium Index Sponsor**”) and is intended to capture the potential return premium associated with a specific characteristic of equity stocks (the “**risk premium**”). The four risk premiums tracked by the respective Risk Premium Indices are: “value,” as measured by a stock’s EBITDA (earnings before interest, tax, depreciation and amortization) to EV (enterprise value) ratio and dividend yield; “quality,” as measured by a stock’s return on invested capital and accruals ratio; “low beta,” as measured by the beta of a stock compared to a reference index; and “momentum,” as measured by a stock’s price momentum, risk-adjusted for idiosyncratic volatility. Each of the Value Factor Index, Quality Factor Index and Low Beta Factor Index comprises a notional long position in a portfolio of stocks ranked as high value, high quality or low beta stocks, respectively, and a notional short position in a portfolio of stocks ranked as low value, low quality or high beta stocks, respectively. The Momentum Factor Index comprises a notional long position in a portfolio of stocks ranked as high momentum stocks and a notional short position in the MSCI World — Gross Total Return — USD Index. Generally, the performance of a Risk Premium Index will be positive, reflecting the premium an investor would earn, if the selected high value, high quality, low beta or high momentum stocks outperform the low value, low quality, high beta or benchmark stocks, respectively. The Risk Premium Indices are described in more details under “*Risk Premium Indices*” below.

The Portfolio Index is rebalanced monthly by weighting the notional exposure to the Risk Premium Indices such that the risk associated with each Risk Premium Index is approximately equal. This is accomplished by measuring the volatility of each Risk Premium Index over the last year and setting the weight of such index in inverse proportion to its volatility. Therefore, a Risk Premium Index with a high historical volatility will be assigned a lower weight on the monthly rebalancing date, and a Risk Premium Index with a low historical volatility will be assigned a higher weight.

After determining the weight of each Risk Premium Index, the Portfolio Index uses a further allocation strategy at each monthly rebalancing that aims to maintain a target annualized volatility of 5% (the “**Target Volatility**”) by controlling its overall exposure to the weighted Risk Premium Indices (the “**Weighted Basket**”). The weight of each Risk Premium Index in the Weighted Basket will be reset on each monthly rebalancing date. On the same rebalancing date, the Portfolio Index will reset its exposure to the rebalanced Weighted Basket, based upon a comparison of the volatility of such rebalanced Weighted Basket over the last year, which we refer to as the hypothetical volatility of the Weighted Basket, to the Target Volatility. Notional exposure to the Weighted Basket increases when the hypothetical volatility of the Weighted Basket is less than its hypothetical volatility on the previous rebalancing date, and notional exposure to the Weighted Basket decreases when the hypothetical volatility of the Weighted Basket is greater than its hypothetical volatility on the previous rebalancing date. The Portfolio Index is also subject to a maximum participation in the Weighted Basket of 200% and a minimum participation of 50%. Consequently, if on a monthly rebalancing date, the hypothetical volatility of the Weighted Basket is 5%, the participation of the Portfolio Index in the Weighted Basket will be 100%. If, on a monthly rebalancing date, the hypothetical volatility of the Weighted Basket is less than 5%, the participation of the Portfolio Index in the Weighted Basket will be reset to a level greater than 100%, but not greater than 200%. In this scenario, to maintain the Target Volatility of 5%, the Portfolio Index attempts to compensate for such lower hypothetical volatility of the Weighted Basket by increasing participation going forward, which will be reassessed at the following monthly rebalancing date. Conversely, if, on a monthly rebalancing date, the hypothetical volatility of the Weighted Basket is greater than 5%, the participation of the Portfolio Index in the Weighted Basket will be reset to a level less than 100%, but not less than 50%. In this scenario, to maintain the Target Volatility of 5%, the Portfolio Index attempts to compensate for such higher hypothetical volatility of the Weighted Basket by decreasing participation going forward, which will be reassessed at the following monthly rebalancing date.

By way of example, if the hypothetical volatility of the Weighted Basket is 2.5% (equal to 50% of the Target Volatility of 5%), the participation of the Portfolio Index in the Weighted Basket will be reset to 200%, and investors will have 200% exposure to the performance of the Weighted Basket. Conversely, if the hypothetical volatility of the Weighted Basket is 10% (equal to 200% of the Target Volatility of 5%), the participation of the Portfolio Index in the Weighted

Basket will be reset to 50%, and the investor will have 50% exposure to the performance of the Weighted Basket. Because the Portfolio Index is subject to a maximum participation in the Weighted Basket of 200% and a minimum participation of 50%, if the hypothetical volatility of the Weighted Basket were to be less than 2.5%, and consequently, the exposure of the Portfolio Index to the Weighted Basket were to be reset to the maximum exposure of 200%, the targeted annualized volatility of the Portfolio Index would be less than 5%. Similarly, if the hypothetical volatility of the Weighted Basket were to be greater than 10%, and consequently the exposure of the Portfolio Index to the Weighted Basket were to be reset to the minimum exposure of 50%, the targeted annualized volatility of the Portfolio Index would be greater than 5%.

The Portfolio Index is also subject to a deduction for the cost of hypothetically implementing the volatility controlled, “risk-parity” weighted portfolio of Risk Premium Indices (the “**Rebalancing Transaction Cost**”) on each monthly rebalancing date. The cost is 0.04% of the change in the notional position in connection with increasing or decreasing exposure of the Portfolio Index to the Value Factor Index, the Quality Factor Index and the Momentum Index. The cost is 0.03% of the change in the notional position in connection with increasing or decreasing exposure of the Portfolio Index to the Low Beta Factor Index. The deductions of these costs are described in more detail under “—*Calculation of the Rebalancing Transaction Cost*” below. As a result of these deductions, the levels of the Portfolio Index will be lower than would otherwise be the case if such costs were not included.

Because the Portfolio Index is linked to the performance of the weighted portfolio of four Risk Premium Indices, the level of the Portfolio Index will also be reduced by the deductions of costs from the levels of the Risk Premium Indices. As described below under “*Risk Premium Indices*,” the calculation of each Risk Premium Index includes a daily deduction for the sum of the cost of hypothetically implementing the notional long position at a rate of 0.40% per annum and the cost of implementing the notional short position at a rate of 0.45% per annum. The calculation of the notional long and short positions also includes a cost deduction of 0.02% (in the case of the long position) and -0.02% (in the case of the short position) in connection with their monthly reconstitution. As a result of these cost deductions, the levels of the Risk Premium Indices will be lower than would otherwise be the case if such costs were not included. The reconstitution costs will be deducted separately from each Risk Premium Index. It is possible that one of the Risk Premium Indices will take a notional long position in a component stock while another Risk Premium Index will take a notional short position in the same component stock. Even if the Portfolio Index as a whole takes both a notionally long and short position in the same component stock, the reconstitution cost will be deducted for both the long and short positions without offsetting such reconstitution costs against each other. These deductions of costs and fees from the levels of the Risk Premium Indices are in addition to the Rebalancing Transaction Cost at the Portfolio Index level.

The Portfolio Index has been calculated on a live basis since October 22, 2013 (the “**Live Date**”) and has been retrospectively calculated using the same methodology as described herein since February 20, 2002 (the “**Index Commencement Date**”), except that the levels of each Risk Premium Index prior to its respective live date were calculated by the Index Sponsor based on historical stock prices (adjusted to reflect historical corporate events) provided by dbGrade which uses FAME (database). Such adjustments to the historical stock prices provided by dbGrade may be different from the adjustments for corporate events set forth below in the description of each Risk Premium Index. Therefore, the Portfolio Index has limited performance history and no actual investment which allowed tracking of the performance of the Portfolio Index was possible before the Live Date. Furthermore, the index methodology of the Portfolio Index was designed, constructed and tested using historical market data and based on knowledge of factors that may have affected its performance. Any returns prior to the Live Date were achieved by means of a retroactive application of the back-tested index methodology designed with the benefit of hindsight. The Index Sponsor will calculate the level of the Portfolio Index (the “**Index Closing Level**”) on each Index Calculation Date as described below under “*Calculation of the Index Closing Level*.” The Index Closing Level on the Index Commencement Date was set at 1,000.

Reconstitution of the Weighted Basket

The Portfolio Index is rebalanced on each monthly Index Rebalancing Date (as defined below), which is typically the 20th calendar day of each month. On each Index Rebalancing Date, the Weighted Basket will be reconstituted by re-weighting the Risk Premium Indices based on their historical volatility over the last year, and the Portfolio Index will reset its exposure to the rebalanced Weighted Basket by comparing the hypothetical volatility of the rebalanced Weighted Basket over the last year with the Target Volatility of 5%. On any Index Calculation Date which is not an Index Rebalancing Date, the Index Closing Level will increase if the level of the Weighted Basket as a whole increases from the immediately preceding Index Rebalancing Date and decrease if the level of the Weighted Basket as a whole decreases from the immediately preceding Index Rebalancing Date. The Index Closing Level on each Index Calculation Date will also reflect its notional exposure to the Weighted Basket and the deduction of the Rebalancing Transaction Cost on the immediately preceding Index Rebalancing Date.

The “**Weight**” of each Risk Premium Index in the Weighted Basket will reset on each monthly Index Rebalancing Date. The new Weight of each Risk Premium Index is determined on the “**Index Determination Date**,” which is the 5th Index Business Day (as defined below) prior to the relevant Index Rebalancing Date. The Weight of each Risk Premium Index on the Index Determination Date is the multiplicative inverse of the 264-day trailing realized volatility of such index, expressed as a percentage of the sum of the multiplicative inverse of the 264-day trailing realized volatility of each of the four Risk Premium Indices. Therefore, a Risk Premium Index with a high 264-day trailing realized volatility will have a lower Weight in the Weighted Basket, and a Risk Premium Index with a low 264-day trailing realized volatility will have a higher Weight in the Weighted Basket. The details of this weighting calculation are set forth below. The new Weight of each Risk Premium Index will apply to the Portfolio Index on the immediately following Index Rebalancing Date.

The Weight of each Risk Premium Index on the Index Determination Date is calculated as follows:

$$W_j(t_R) = \frac{\frac{1}{\sigma_j(t_C)}}{\sum_{i=1}^4 \left(\frac{1}{\sigma_i(t_C)} \right)}$$

where:

$W_j(t_R)$ is the Weight of such Risk Premium Index as determined on the Index Determination Date.

$\sigma_j(t_C)$ is the 264-day trailing realized volatility of such Risk Premium Index calculated on the Index Determination Date.

$\sigma_i(t_C)$ is the 264-day trailing realized volatility of each of the four Risk Premium Indices calculated on the Index Determination Date.

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

“**Index Calculation Date**” means each Risk Premium Index Calculation Date and is expected to be each Index Business Day.

“**Index Rebalancing Date**” means the 20th calendar day of each calendar month, or if such day is not a MSCI Trading Day, the first MSCI Trading Day immediately following such day. The first Index Rebalancing Date is deemed to be the Index Commencement Date.

“**MSCI Trading Day**” has the meaning given to it under “*Risk Premium Indices*.”

“**Risk Premium Index Calculation Date**” means, for each Risk Premium Index, each “Index Calculation Date” as defined below under “*Risk Premium Indices*.”

Participation in the Weighted Basket

The notional exposure of the Portfolio Index to the Weighted Basket (the “**Leverage Factor**”) will reset on each monthly Index Rebalancing Date. The “**Leverage Factor**” will be calculated on the Index Determination Date prior to the relevant Index Rebalancing Date and will be expressed as a percentage equal to the quotient of (a) the Target Volatility as numerator and (b) the 264-day trailing hypothetical volatility of the rebalanced Weighted Basket as determined on the Index Determination Date (the “**Weighted Basket Volatility**”), as denominator. However, the Leverage Factor will not exceed 200% or fall below 50%. The details of the calculation of the Weighted Basket Volatility are set forth below. The new Leverage Factor will apply to the Portfolio Index on the immediately following Index Rebalancing Date.

The Weighted Basket Volatility is calculated on the Index Determination Date as follows:

$$\sigma(t_c) = \sqrt{264 \times \left(\frac{\sum_{t=t_c-263}^{t_c} (R_j(t))^2}{264} - \frac{\left(\sum_{t=t_c-263}^{t_c} R_j(t) \right)^2}{264^2} \right)}$$

$$R_j(t) = \sum_{j=1}^4 W_j(t_R) \times \frac{UL_j(t)}{UL_j(t-1)}$$

where:

$\sigma(t_c)$ is the Weighted Basket Volatility.

$UL_j(t)$ is the official closing level of a Risk Premium Index on an Index Calculation Date (t), or if such day is not a Risk Premium Index Calculation Date in respect of such Risk Premium Index, the official closing level of such Risk Premium Index on the immediately preceding Risk Premium Index Calculation Date.

$UL_j(t-1)$ is the official closing level of a Risk Premium Index on the Index Calculation Date immediately preceding such Index Calculation Date (t), or if such day is not a Risk Premium Index Calculation Date in respect of such Risk Premium Index, the official closing level of such Risk Premium Index on the immediately preceding Risk Premium Index Calculation Date.

$W_j(t_R)$ is the Weight of a Risk Premium Index as determined on the Index Determination Date.

Calculation of the Rebalancing Transaction Cost

The Portfolio Index is subject to a deduction for the “**Rebalancing Transaction Cost**,” which is the total cost incurred in connection with notionally increasing or decreasing exposure to the Risk Premium Indices on each monthly Index Rebalancing Date. The cost incurred in connection with notionally increasing or decreasing exposure to each Risk Premium Index on the Index Rebalancing Date is equal to the product of (a) the Transaction Cost for such Risk Premium Index and (b) the absolute value of the difference between:

- (i) the product of the Leverage Factor applied to the Portfolio Index on such Index Rebalancing Date and the Weight of such Risk Premium Index on such Index Rebalancing Date; and
- (ii) the product of the Leverage Factor applied to the Portfolio Index on the Index Rebalancing Date immediately preceding such Index Rebalancing Date and the Weight of such Risk Premium Index on the Index Rebalancing Date immediately preceding such Index Rebalancing Date.

The “**Transaction Cost**” is a per unit cost of (a) for the Value Factor Index, the Quality Factor Index and the Momentum Index, 0.04% or (b) for the Low Beta Index, 0.03%.

The Rebalancing Transaction Cost on the Index Rebalancing Date is calculated as follows:

$$RTC = \sum_{j=1}^4 |LF(t_R) \times W_j(t_R) - LF(t_{R-1}) \times W_j(t_{R-1})| \times TC_j$$

where:

RTC is the Rebalancing Transaction Cost on such Index Rebalancing Date.

$LF(t_R)$ is the Leverage Factor applied to the Portfolio Index on the Index Rebalancing Date.

$LF(t_{R-1})$ is the Leverage Factor applied to the Portfolio Index on the Index Rebalancing Date immediately preceding such Index Rebalancing Date.

- $W_j(t_R)$ is the Weight of a Risk Premium Index on such Index Rebalancing Date.
- $W_j(t_{R-1})$ is the Weight of a Risk Premium Index on the Index Rebalancing Date immediately preceding such Index Rebalancing Date.
- TC_j is the Transaction Cost of a Risk Premium Index.

Calculation of the Index Closing Level

On each Index Calculation Date which is not an Index Rebalancing Date, the “**Index Closing Level**” will be based on the performance of the Weighted Basket from the immediately preceding Index Rebalancing Date to such Index Calculation Date *multiplied by* the Leverage Factor applied to the Portfolio Index on the immediately preceding Index Rebalancing Date and reflect the deduction of the Rebalancing Transaction Cost on the immediately preceding Index Rebalancing Date.

The Index Closing Level on each Index Calculation Date which is not an Index Rebalancing Date shall be determined as follows:

$$IL(t) = IL(t_{R,adj}) \times \left[1 + LF(t_R) \times \sum_{j=1}^4 \left(W_j(t_R) \times \left(\frac{UL_j(t) - UL_j(t_R)}{UL_j(t_R)} \right) \right) \right]$$

where:

- $IL(t)$ is the Index Closing Level on such Index Calculation Date.
- $IL(t_{R,adj})$ is the Adjusted Index Closing Level (as defined below) on the immediately preceding Index Rebalancing Date.
- $LF(t_R)$ is the Leverage Factor applied to the Portfolio Index on the immediately preceding Index Rebalancing Date.
- $W_j(t_R)$ is the Weight of a Risk Premium Index on the immediately preceding Index Rebalancing Date.
- $UL_j(t)$ is the official closing level of a Risk Premium Index on such Index Calculation Date, or if such day is not a Risk Premium Index Calculation Date in respect of such Risk Premium Index, the official closing level of such Risk Premium Index on the immediately preceding Risk Premium Index Calculation Date.
- $UL_j(t_R)$ is the official closing level of a Risk Premium Index on the Index Rebalancing Date immediately preceding such Index Calculation Date.

On each Index Calculation Date which is an Index Rebalancing Date, the Index Closing Level will be based on the performance of the Weighted Basket from the immediately preceding Index Rebalancing Date to such Index Rebalancing Date *multiplied by* the Leverage Factor applied to the Portfolio Index on the immediately preceding Index Rebalancing Date and reflect the deduction of the Rebalancing Transaction Cost on the immediately preceding Index Rebalancing Date.

The Index Closing Level on each Index Calculation Date which is an Index Rebalancing Date shall be determined as follows:

$$IL(t) = IL(t_{R,adj}) \times \left[1 + LF(t_R) \times \sum_{j=1}^4 \left(W_j(t_R) \times \left(\frac{UL_j(t) - UL_j(t_R)}{UL_j(t_R)} \right) \right) \right]$$

where:

- $IL(t_R)$ is the Index Closing Level on such Index Rebalancing Date.

- $IL(t_{R-1, adj})$ is the Adjusted Index Closing Level on the immediately preceding Index Rebalancing Date.
- $LF(t_{R-1})$ is the Leverage Factor applied to the Index on the immediately preceding Index Rebalancing Date.
- $W_j(t_{R-1})$ is the Weight of a Risk Premium Index on the immediately preceding Index Rebalancing Date.
- $UL_j(t_R)$ is the official closing level of Risk Premium Index on such Index Rebalancing.
- $UL_j(t_{R-1})$ is the official closing level of Risk Premium Index the immediately preceding Index Rebalancing Date.

To reflect the deduction of the Rebalancing Transaction Cost, an adjusted Index Closing Level on an Index Rebalancing Date (the “**Adjusted Index Closing Level**”) will be used for purposes of calculating the Index Closing Level on each Index Calculation Date from, and excluding, such Index Rebalancing Date to, and including, the next Index Rebalancing Date. The Adjusted Index Closing Level shall be determined as follows:

$$IL(t_{R,adj}) = IL(t_R) \times (1 - RTC)$$

where:

- $IL(t_{R, adj})$ is the Adjusted Index Closing Level on such Index Rebalancing Date.
- $IL(t_R)$ is the Index Closing Level on such Index Rebalancing Date.
- RTC is the Rebalancing Transaction Cost on such Index Rebalancing Date.

The Index Sponsor will publish the Index Closing Level for each Index Calculation Date as soon as reasonably practicable after 16:00 London time on the next Index Calculation Date following such Index Calculation Day at the Index Sponsor’s principal office in London, on the Index Sponsor’s website under the heading “DB Equity Risk Premia 5% VT Portfolio — USD — Excess Return Index,” on Bloomberg page DBGLRP5U and Reuters page .DBGLRP5U, or at such other information sources as the Index Sponsor may select from time to time at its sole and absolute discretion. The Index Sponsor may, at any time and without notice, increase the frequency of publication of the Index Closing Level.

Adjustments to the Portfolio Index

If on any Index Calculation Date which is not an Index Rebalancing Date, a Market Disruption Event occurs, the Index Closing Level will not be calculated on such Index Calculation Date and will be calculated on the first succeeding Index Calculation Date on which there is no Market Disruption Event; *provided* that, if the Market Disruption Event continues for a period of eight Index Calculation Dates, then the Index Sponsor will calculate the Index Closing Level having regard to the then-prevailing market conditions, the last reported closing level of each relevant Risk Premium Index, if available, and such other conditions as the Index Sponsor determines relevant to the calculation of the Index Closing Level.

However, if a Market Disruption Event occurs on an Index Rebalancing Date, the Index Sponsor will make such determinations and/or adjustments as it considers appropriate to determine the Index Closing Level and/or any closing level of a Risk Premium Index affected by the Market Disruption Event on such Index Rebalancing Date by reference to the prevailing market conditions and the last available closing level for the affected Risk Premium Index or may determine that such day shall not be that Index Rebalancing Date but that such other day as the Index Sponsor shall select shall be that Index Rebalancing Date.

A “**Market Disruption Event**” means a determination by the Index Sponsor that the occurrence or existence of one or more of the following events is material:

- (a) the failure of a Risk Premium Index Sponsor to publish the closing level of the relevant Risk Premium Index on any Risk Premium Index Calculation Date;
- (b) the failure of any Related Exchange to open for trading during its regular trading session on any Index Calculation Date;

- (c) the occurrence or existence at the Relevant Time or at any time during the one hour period that ends at the Relevant Time:
 - (i) of any suspension of or limitation imposed on trading by the relevant Exchange(s) or any Related Exchange or otherwise and whether by reason of movements in price exceeding limits permitted by the relevant Exchange(s) or any Related Exchange or otherwise:
 - (1) relating to any component security of an Underlying Index on the relevant Exchange(s); or
 - (2) in the Related Contracts on the relevant Related Exchange; or
 - (ii) of any event (other than an event described in (d) below) that disrupts or impairs (as determined by the Index Sponsor) the ability of market participants in general (1) to effect transactions in, or obtain market values for, on any relevant Exchange(s), any component security of an Underlying Index, or (2) to effect transactions in, or obtain market values for, the Related Contracts on any relevant Related Exchange;
- (d) the closure on any Exchange Business Day of any relevant Exchange(s) relating to any component security of an Underlying Index or any Related Exchange prior to its Scheduled Closing Time unless such earlier closing time is announced by such Exchange(s) or Related Exchange, as the case may be, at least one hour prior to (i) the actual closing time for the regular trading session on such Exchange(s) or Related Exchange on such Exchange Business Day or, if earlier, (ii) the submission deadline (if applicable) for orders to be entered into the relevant Exchange or Related Exchange system for execution at the Relevant Time on such Exchange Business Day; or
- (e) a general moratorium is declared in respect of banking activities in any Relevant Country.

In determining what is “material,” the Index Sponsor may have regard to such circumstances as it deems appropriate, including any hedging arrangements of the Index Sponsor and/or any of its affiliates in relation to any transactions entered into by any of them relating to the Portfolio Index or any Risk Premium Index.

“Exchange” means the principal stock exchange(s) on which the securities comprising an Underlying Index are principally traded, as determined by the Index Sponsor.

“Exchange Business Day” means any Index Calculation Date on which each Exchange and each Related Exchange are open for trading during their respective regular trading sessions, notwithstanding any such Exchange or Related Exchange closing prior to its Scheduled Closing Time.

“Related Exchange” means each exchange or quotation system where trading has a material effect (as determined by the Index Sponsor) on the overall market for the Related Contracts.

“Related Contracts” means any futures or options contracts relating to a Risk Premium Index, an Underlying Index or any component security of an Underlying Index.

“Relevant Country” means any country (or any political or regulatory authority thereof) with which the Portfolio Index, a Risk Premium Index, an Underlying Index or a constituent of an Underlying Index has a material connection having regard to, without limitation, the country or countries in which the Portfolio Index, a Risk Premium Index, an Underlying Index or a constituent of an Underlying Index is calculated or published, the issuer of such constituent is incorporated and/or such other factor(s) as may be appropriate.

“Relevant Time” means the Scheduled Closing Time of an Exchange or a Related Exchange on the relevant Index Calculation Date. If such Exchange or Related Exchange closes prior to its Scheduled Closing Time, then the Relevant Time shall be such actual closing time.

“Scheduled Closing Time” means, in respect of an Exchange or Related Exchange and an Index Calculation Date, the scheduled weekday closing time of such Exchange or Related Exchange on such Index Calculation Date without regard to after hours or any other trading outside of the regular trading session hours.

“Underlying Index” means, with respect to a Risk Premium Index, an Underlying Index, the Long Index or the Short Index, as applicable, of such Risk Premium Index as defined under *“Risk Premium Indices.”*

Index Sponsor

All determinations made by the Index Sponsor in respect of the Portfolio Index 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. The Index Sponsor may delegate and/or transfer any of its obligations or functions under the terms of the Portfolio Index to one or more third parties as it deems appropriate from time to time. **For information regarding the Risk Premium Index Sponsors, please see the relevant sections under “Risk Premium Indices” below.**

Change in Methodology of the Portfolio Index and Termination

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

Accordingly:

- (a) the Index Sponsor shall be entitled to make such modifications and/or changes as it, in its reasonable discretion, deems appropriate, including (without limitation):
 - (i) to correct any manifest error or proven error contained in the methodology described herein;
 - (ii) to cure, correct or supplement any contradictory or defective provision contained in the methodology described herein; and/or
 - (iii) if market, regulatory, juridical, financial, fiscal or other circumstances arise, which were not foreseeable by the Index Sponsor as at the Live Date and such circumstances have not been deliberately caused by the Index Sponsor and such circumstances would, in the determination of the Index Sponsor, necessitate or make desirable such a modification or change of the methodology described herein (including, but without limitation, a change in the frequency of calculation of any Index Closing Level) in order for the Portfolio Index to continue being calculated and determined notwithstanding the relevant circumstances. In deciding what is necessary the Index Sponsor will consider and/or take into account what the Index Sponsor determines to be the intended strategy of the Portfolio Index.
- (b) further, and without limitation to the above provisions, the Index Sponsor shall be entitled to make such modifications and/or changes as it in its reasonable discretion deems appropriate:
 - (i) to preserve the intended strategy of the Portfolio Index where such modification and/or change is of a formal, minor or technical nature; and/or
 - (ii) if market, regulatory, juridical, financial, fiscal or other circumstances arise, which were not foreseen by the Index Sponsor as at the Live Date and such circumstances have not been deliberately caused by the Index Sponsor and in the determination of the Index Sponsor, such modifications and/or changes would assist in maintaining the intended strategy of the Portfolio Index and/or would ensure that the Portfolio Index can continue to be calculated and determined by the Index Sponsor in light of such circumstances.

In making such modifications however the Index Sponsor will ensure that such modifications or changes will result in a methodology that, in the Index Sponsor’s determination, is consistent in its intended strategy with the methodology described herein. The Index Sponsor may, in its discretion, at any time and without notice, terminate the calculation and publication of the Portfolio Index.

Details of any adjustments made to the Portfolio Index shall be made available by the Index Sponsor on its website and on application to the Index Sponsor's principal office in London. Access to any such publication may be restricted by means determined as appropriate by the Index Sponsor in its reasonable discretion including, but not limited to, password protection on the Index Sponsor's website.

For information regarding the potential for any changes in methodology of each Risk Premium Index, please see the relevant section under “Risk Premium Indices” below.

NONE OF THE PORTFOLIO INDEX, ANY RISK PREMIUM INDEX (THE RISK PREMIUM INDICES, TOGETHER WITH THE PORTFOLIO INDEX, THE “**DB INDICES**”) NOR ANY FINANCIAL PRODUCT IS SPONSORED, ENDORSED, SOLD OR PROMOTED BY MSCI INC., ANY OF ITS AFFILIATES, ANY OF ITS INFORMATION PROVIDERS OR ANY OTHER THIRD PARTY INVOLVED IN, OR RELATED TO, COMPILING, COMPUTING OR CREATING ANY MSCI INDEX (COLLECTIVELY, THE “**MSCI PARTIES**”). THE MSCI INDEXES ARE THE EXCLUSIVE PROPERTY OF MSCI. MSCI AND THE MSCI INDEX NAMES ARE SERVICE MARK(S) OF MSCI OR ITS AFFILIATES AND HAVE BEEN LICENSED FOR USE FOR CERTAIN PURPOSES BY DEUTSCHE BANK AG. NEITHER ANY DB INDEX NOR ANY FINANCIAL PRODUCT HAS BEEN PASSED ON BY ANY OF THE MSCI PARTIES AS TO ITS LEGALITY OR SUITABILITY WITH RESPECT TO ANY PERSON OR ENTITY AND NONE OF THE MSCI PARTIES MAKES ANY WARRANTIES OR BEARS ANY LIABILITY WITH RESPECT TO THE DB INDICES OR ANY FINANCIAL PRODUCT. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, NONE OF THE MSCI PARTIES MAKES ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, TO THE INDEX SPONSOR, THE RISK PREMIUM INDEX SPONSORS OR THE ISSUER OR OWNERS OF ANY FINANCIAL PRODUCT OR ANY OTHER PERSON OR ENTITY REGARDING THE ADVISABILITY OF INVESTING IN FINANCIAL PRODUCTS GENERALLY OR IN ANY FINANCIAL PRODUCT PARTICULARLY OR THE ABILITY OF ANY MSCI INDEX TO TRACK CORRESPONDING STOCK MARKET PERFORMANCE. MSCI OR ITS AFFILIATES ARE THE LICENSORS OF CERTAIN TRADEMARKS, SERVICE MARKS AND TRADE NAMES AND OF THE MSCI INDEXES WHICH ARE DETERMINED, COMPOSED AND CALCULATED BY MSCI WITHOUT REGARD TO THE DB INDICES OR ANY FINANCIAL PRODUCT OR ANY ISSUER OR OWNER OF ANY FINANCIAL PRODUCT OR ANY OTHER PERSON OR ENTITY. NONE OF THE MSCI PARTIES HAS ANY OBLIGATION TO TAKE THE NEEDS OF THE DB INDICES OR ISSUERS OR OWNERS OF ANY FINANCIAL PRODUCT OR ANY OTHER PERSON OR ENTITY INTO CONSIDERATION IN DETERMINING, COMPOSING OR CALCULATING THE MSCI INDEXES. NONE OF THE MSCI PARTIES IS RESPONSIBLE FOR OR HAS PARTICIPATED IN THE DETERMINATION OF THE TIMING OF, PRICES AT, OR QUANTITIES OF ANY FINANCIAL PRODUCT TO BE ISSUED OR IN THE DETERMINATION OR CALCULATION OF THE EQUATION BY OR THE CONSIDERATION INTO WHICH ANY FINANCIAL PRODUCT IS REDEEMABLE OR IN THE CALCULATION OF THE DB INDICES. NONE OF THE MSCI PARTIES HAS ANY OBLIGATION OR LIABILITY TO THE ISSUER OR OWNERS OF ANY FINANCIAL PRODUCT OR ANY OTHER PERSON OR ENTITY IN CONNECTION WITH THE ADMINISTRATION, MARKETING OR OFFERING OF THE DB INDICES OR ANY FINANCIAL PRODUCT.

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Risk Premium Indices

Deutsche Bank Equity Sector-Neutral Value Factor — USD — Excess Return Index.....	Annex I
Deutsche Bank Equity Sector-Neutral Quality Factor — USD — Excess Return Index.....	Annex II
Deutsche Bank Equity Low Beta Turnover Control Factor — USD — Excess Return Index.....	Annex III
Deutsche Bank Equity Risk-Adjusted Momentum Factor — USD — Excess Return Index.....	Annex IV

ANNEX I

DEUTSCHE BANK EQUITY SECTOR-NEUTRAL VALUE FACTOR USD — EXCESS RETURN INDEX

The Deutsche Bank Equity Sector-Neutral Value Factor — USD — Excess Return Index (Bloomberg: DBGLSNVU <Index>) (the “**Value Factor Index**”) is a proprietary index of Deutsche Bank AG, London Branch (the “**Index Sponsor**”) and is intended to reflect the premium an investor would earn pursuing a value-driven strategy by taking notional long exposure to a portfolio of stocks ranked as high “value” stocks, tracked by the Deutsche Bank Equity Sector-Neutral Value Factor Top Index — USD — Net Total Return Index (the “**Top Index**”), and notional short exposure to a portfolio of stocks ranked as low “value” stocks, tracked by the Deutsche Bank Equity Sector-Neutral Value Factor Bottom Index — USD — Gross Total Return Index (the “**Bottom Index**,” together with the Top Index, the “**Underlying Indices**”).

Both the Top Index and the Bottom Index are proprietary stock indices calculated, published and disseminated daily by Deutsche Bank AG, London Branch (the “**Underlying Index Sponsor**”). The stocks comprising both the Top Index and the Bottom Index are selected from the stocks comprising the MSCI World Equal Weight — USD Index (the “**Reference Index**”) based on the value scores of these stocks calculated using a sector-normalized EBITDA (earnings before interest, tax, depreciation and amortization) to EV (enterprise value) ratio and a sector-normalized trailing 12-month dividend yield. The Top Index will include the top 20% of the Reference Index stocks with the highest value scores, excluding certain Reference Index stocks on the basis of liquidity, and the Bottom Index will include the bottom 20% with the lowest value scores, excluding certain Reference Index stocks on the basis of liquidity and stock borrow cost. The Top Index and the Bottom Index are rebalanced monthly and all constituents in the Top Index and the Bottom Index are given an equal weight on each monthly reconstitution date. Both the Top Index and the Bottom Index currently consist of one sub-index. If there are changes in the aggregate outstanding notional investment of financial products linked to the Top Index or the Bottom Index, as applicable, such index may be divided into multiple sub-indices or combined back into fewer sub-indices, subject to the requirement that there be at least one sub-index at all times.

The concept of value investing is founded on the investment hypothesis that high value stocks will outperform low value stocks in the long run. The Value Factor Index implements its value-driven strategy by taking a notional long position in the Top Index comprising high value stocks and a notional short position in the Bottom Index comprising low value stocks. A high value stock is a stock identified as trading at a low price or value relative to its fundamentals. In other words, a high value stock tends to have strong fundamentals such as high earnings or dividend payments relative to its stock price. The Value Factor Index uses two metrics to measure “value”: EBITDA/EV ratio and dividend yield. EBITDA/EV ratio is equal to 1 (one) divided by EV/EBITDA ratio, a common valuation metric used to compare the market value of a company taking into account the company’s outstanding debt to the amount of earnings (excluding interests on debt, taxes, depreciation and amortization) such company made during the previous fiscal year. Dividend yield shows how much a company pays out in dividends per year relative to its stock price. In the absence of any capital gains for a stock, the dividend yield is the return on investment for such stock. Using these two metrics, a stock with a relatively high EBITDA/EV ratio and high dividends relative to its stock price is more likely to be selected as one of the high value stocks tracked by the Top Index. Conversely, a stock with a relatively low EBITDA/EV ratio and low dividends relative to its stock price is more likely to be selected as one of the low value stocks tracked by the Bottom Index. Generally, the performance of the Value Factor Index will be positive, reflecting the premium an investor would earn, if the high value stocks tracked by the Top Index outperform the low value stocks tracked by the Bottom Index, and negative, reflecting the loss an investor would suffer, if the high value stocks tracked by the Top Index underperform the low value stocks tracked by the Bottom Index. Whether the Top Index and the Bottom Index go up or down, if the Top Index outperforms the Bottom Index sufficiently to offset any daily cost deductions as described below, the level of the Value Factor Index will increase; conversely, if the Top Index underperforms the Bottom Index, the level of the Value Factor Index will decrease.

The Value Factor Index is subject to a daily deduction for the sum of the cost of hypothetically implementing the notional long position in the Top Index at a rate of 0.40% per annum (the “**Long Leg Cost Rate**”) and the cost of implementing the notional short position in the Bottom Index at a rate of 0.45% per annum (the “**Short Leg Cost Rate**”). In addition, calculation of the Top Index and the Bottom Index includes a cost deduction of 0.02% (in the case of the Top Index) and -0.02% (in the case of the Bottom Index) in connection with reconstitution of their relevant sub-indices, subject to certain adjustments. Because the Value Factor Index takes a notional short position in the Bottom Index, deduction of a negative 0.02% cost from the Bottom Index will reduce the level of the Value Factor Index. As a result of these deductions, the levels of the Value Factor Index will be lower than would otherwise be the case if such costs were not included.

The Value Factor Index has been calculated on a live basis since July 1, 2013 (the “**Live Date**”) and has been retrospectively calculated using the same methodology as described herein since January 6, 2000 (the “**Index Commencement Date**”), except that such retrospective calculations prior to the Live Date used historical stock prices (adjusted to reflect historical corporate events) provided by dbGrade which uses FAME (database). Such adjustments to the historical stock prices provided by dbGrade may be different from the adjustments for corporate events set forth

below. Therefore, the Value Factor Index has limited performance history and no actual investment which allowed tracking of the performance of the Value Factor Index was possible before the Live Date. The Index Sponsor will calculate the level of the Value Factor Index (the “**Index Closing Level**”) on each Index Calculation Date as described below under “*Calculation of the Index Closing Level*.” The Index Closing Level on the Index Commencement Date was set at 1,000.

The Reference Index is a benchmark stock index calculated, published and disseminated daily by MSCI Inc. (“**MSCI**” or the “**Reference Index Sponsor**”). The Reference Index includes the same constituent stocks as the MSCI World Index, which is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of certain developed equity markets in U.S. dollar values. The Reference Index is rebalanced in February, May, August and November, coinciding with the quarterly and semi-annual reviews of the MSCI World Index. Unlike the MSCI World Index, all constituents of the Reference Index are given an equal weight at each quarterly rebalance date. As of May 31, 2016, the Reference Index comprises over 1,639 large and mid-cap equity securities from the following 23 developed equity markets: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States.

Calculation of the Index Closing Level

The Value Factor Index is rebalanced on each monthly Index Reconstitution Date, which is typically the 6th calendar day of each month. The Index Closing Level will generally increase if the Top Index outperforms the Bottom Index measured during the period from the previous Index Reconstitution Date to the day of calculation, and decrease if the Top Index underperforms the Bottom Index measured during the same period. The Index Closing Level on each Index Calculation Date will reflect its notional long exposure to the Top Index and notional short exposure to the Bottom Index, subject to deduction on a daily basis for notional costs assessed at the sum of the Long Leg Cost Rate and Short Leg Cost Rate. The Index Closing Level is calculated using the following formula:

$$IL(t) = IL(t_R) \times \left(1 + \frac{TIL(t)}{TIL(t_R)} - LLC \times \frac{ACT(t_R, t)}{365} - \frac{BIL(t)}{BIL(t_R)} - SLC \times \frac{ACT(t_R, t)}{365} \right)$$

where:

$IL(t)$	is the Index Closing Level on such Index Calculation Date.
$IL(t_R)$	is the Index Closing Level on the Index Reconstitution Date immediately preceding such Index Calculation Date.
$TIL(t)$	is the closing level of the Top Index (the “ Top Index Level ”) on such Index Calculation Date.
$TIL(t_R)$	is the Top Index Level on the Index Reconstitution Date immediately preceding such Index Calculation Date.
$BIL(t)$	is the closing level of the Bottom Index (the “ Bottom Index Level ,” together with the Top Index Level, the “ Underlying Index Closing Level ”) on such Index Calculation Date.
$BIL(t_R)$	is the Bottom Index Level on the Index Reconstitution Date immediately preceding such Index Calculation Date.
LLC	is the Long Leg Cost Rate of 0.40% per annum.
SLC	is the Short Leg Cost Rate of 0.45% per annum.
$ACT(t_R, t)$	is the number of calendar days from, but excluding, the Index Reconstitution Date immediately preceding such Index Calculation Date to, and including, such Index Calculation Date.

“**Index Calculation Date**” means each Underlying Index Calculation Date (as defined below, subject to adjustment by the Underlying Index Sponsor) and is expected to be each Index Business Day.

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

“Index Reconstitution Date” means the 6th calendar day of each calendar month, or if such day is not a MSCI Trading Day, the first MSCI Trading Day immediately following such day.

“MSCI Trading Day” means a Trading Day in relation to all stock constituents of the Reference Index.

“Trading Day” means (a) in relation to a stock, any day on which the primary exchange relating to such stock is scheduled to be open for its usual trading session, (b) in relation to an Underlying Index, any day that is a Trading Day in relation to all of its sub-indices; or (c) in relation to a sub-index of an Underlying Index, any day that is a Trading Day in relation to all constituents of such sub-index and, if relevant, all stocks comprising the new constituents.

The Index Sponsor will publish the Index Closing Level for each Index Business Day as soon as reasonably practicable after 16:00 London time on the next Index Business Day following such Index Business Day at the Index Sponsor’s principal office in London, on the Index Sponsor’s website under the heading “DB Equity Sector Neutral Value Factor Index — USD — Excess Return,” on Bloomberg page DBGLSNVU and Reuters page .DBGLSNVU, or at such other information sources as the Index Sponsor may select from time to time at its sole and absolute discretion. The Index Sponsor may, at any time and without notice, increase the frequency of publication of the Index Closing Level.

Top Index and Bottom Index

The Deutsche Bank Equity Sector-Neutral Value Factor Top Index — USD — Net Total Return Index, which we refer to as the Top Index, is designed to reflect the performance of a monthly rebalanced notional portfolio of high value stocks representing the top 20% of the constituent stocks comprising the Reference Index with the highest value scores, excluding certain stocks in the Reference Index on the basis of liquidity. For each constituent stock of the Reference Index (a **“Reference Index Stock”**), the value score (the **“Value Score”**) of such Reference Index Stock, if available, is calculated using a sector-normalized EBITDA/EV ratio and a sector-normalized trailing 12-month dividend yield as described below. The Deutsche Bank Equity Sector-Neutral Value Factor Bottom Index — USD — Gross Total Return Index, which we refer to as the Bottom Index, is designed to reflect the performance of a monthly rebalanced notional portfolio of low value stocks representing the bottom 20% of the Reference Index Stocks with the lowest Value Scores, excluding certain Reference Index Stocks on the basis of liquidity and stock borrow cost. We refer to each of the Top Index and the Bottom Index as an Underlying Index.

Each Underlying Index is rebalanced monthly and the selected constituent stocks are equally weighted on each reconstitution date, as further described below. The calculation of the Top Index and the Bottom Index includes a cost deduction of 0.02% (in the case of the Top Index) and -0.02% (in the case of the Bottom Index) in connection with reconstitution of their relevant sub-indices, subject to certain adjustments as described below. The negative 0.02% reconstitution cost will increase the level of the Bottom Index and, because the Value Factor Index has a notional short exposure to the Bottom Index, will effectively reduce the level of the Value Factor Index.

Both Underlying Indices are total return indices whose index levels reflect cash dividend reinvestment, meaning that they measure the market performance of their constituent stocks in terms of both price performance and income from cash dividend payments. Cash dividends are deemed reinvested in the relevant Underlying Index on the day the dividend-paying stock is quoted ex-dividend. The Top Index is a net total return index calculated so that the amount of cash dividend reinvested is equal to the cash dividend distributed after taking account of the hypothetical tax rate (the **“Withholding Tax Rate”**) at which the relevant jurisdiction generally taxes (or imposes a withholding tax upon) cash dividends paid by corporations incorporated in such jurisdiction to a non-resident of the relevant jurisdiction as determined by the Underlying Index Calculation Agent by reference to established industry sources. The Bottom Index is a gross total return index calculated so that the amount of cash dividend deemed reinvested is equal to the cash dividend distributed, irrespective of any tax accruals, deductions or withholding. Net total return indices are often used for tracking notional long positions, whose hypothetical dividend incomes would be subject to withholding tax, while gross total return indices are often used for tracking notional short positions, whose hypothetical dividend payments would have to be repaid by the holder of a short position to the stock lender without reduction for tax withholding.

Each Underlying Index is calculated after converting the trading prices of the relevant index constituents into U.S. dollars at the relevant exchange rates. Each Underlying Index has been calculated on a live basis since the Live Date of the Value Factor Index and has been retrospectively calculated since the Index Commencement Date. Therefore, each Underlying Index has limited performance history and no actual investment that allowed tracking of the performance of

such Underlying Index was possible before the Live Date. Deutsche Bank AG, London Branch (the “**Underlying Index Calculation Agent**”) will calculate the Underlying Index Closing Levels on each Underlying Index Calculation Date as described below under “*Calculation of the Sub-Index Closing Level*” and “*Underlying Index Construction and Calculation*.” The Underlying Index Closing Levels of both Underlying Indices were set at 1,000 on the Index Commencement Date.

The “**Underlying Index Calculation Date**” means any weekday on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealings in foreign exchange and foreign currency deposits) in London.

Addition or Deletion of Sub-Indices

Each Underlying Index currently consists of one sub-index (“**Sub-Index 1**”). If there are changes in the aggregate outstanding notional investment of financial products linked to an Underlying Index, one or more additional sub-indices (each, a “**Sub-Index**”, and together with Sub-Index 1, the “**Sub-Indices**”) may be created and added to such Underlying Index. Similarly, Sub-Indices may also be removed from an Underlying Index, subject to the requirement that there be at least one Sub-Index at all times. See “*Underlying Index Construction and Calculation*” below for more information about the addition and deletion of Sub-Indices. Each Sub-Index is reconstituted on a monthly basis and its constituents (the “**Sub-Index Constituents**”) will be selected at the same time using the same criteria as further detailed below under “*Sub-Index Reconstitution*,” except that each Sub-Index will have its own reconstitution dates (each, a “**Sub-Index Reconstitution Date**”).

Sub-Index Reconstitution

On the last Underlying Index Calculation Date of each calendar month (the “**Selection Date**”), the Underlying Index Calculation Agent will select, for each Sub-Index to be reconstituted in the immediately following calendar month, the Sub-Index Constituents from the Reference Index Stocks based on their Value Scores on such Selection Date.

Calculating the Value Scores

The Value Score of a stock is used as the basis for selecting Sub-Index Constituents and is calculated using a sector-normalized EBITDA/EV ratio and a sector-normalized trailing 12-month dividend yield. On each Selection Date, the Underlying Index Calculation Agent will determine the Value Scores in accordance with the following four steps.

First, the Underlying Index Calculation Agent will identify the Reference Index Stocks on such Selection Date, and select from the Reference Index Stocks the eligible “**Scoring Pool Stocks**” by excluding those stocks (a) whose Operational Yield and/or Dividend Yield cannot be determined by the Underlying Index Calculation Agent or (b) whose Worldscape Trailing 12-Month Total Dividend Per Share is zero.

The “**Operational Yield**” is 1 divided by the EV/EBITDA ratio, which is the ratio of the enterprise value (EV) to the earnings before interest, tax, depreciation and amortization (EBITDA) of the issuer of the relevant stock on the Selection Date, as determined by the business unit of Thomson Reuters Corp. trading as Worldscape Fundamentals or any successor (“**Worldscope**”) and disseminated by FactSet Research Systems Inc. or any successor (“**FactSet**”) under the mnemonic “WSF_ENTRPR_VAL_EBITDA_OPER” on the Selection Date.

The “**Dividend Yield**” is the Worldscape Trailing 12-Month Total Dividend Per Share of the relevant stock divided by the Worldscape Price of such stock. The “**Worldscope Trailing 12-Month Total Dividend Per Share**” is the sum of the dividends paid by the issuer of such stock over the twelve-month period immediately preceding the Selection Date, as determined by Worldscape and disseminated by FactSet under the mnemonic “WM_DIV.” The “**Worldscope Price**” is the last price of such stock on the Selection Date, as determined by Worldscape and disseminated by FactSet under the mnemonic “WSF_PRICE_CLOSE_CP.”

Second, the Underlying Index Calculation Agent will compute the Operational Yield and Dividend Yield for each Scoring Pool Stock, rank them respectively from the highest to the lowest and then calculate the “**Operational Yield Score**” and the “**Dividend Yield Score**” for such Scoring Pool Stock by applying the Inverse Standard Normal Cumulative Distribution Function in Microsoft Excel to the ratio of (a) their respective rankings *divided by* (b) 1 (one) plus the number of Scoring Pool Stocks. The purpose of this step is to assign increasingly higher scores to the stocks whose Operational Yield or Dividend Yield is ranked further above the mean, and increasingly lower scores to the stocks whose Operational Yield or Dividend Yield is ranked further below the mean. For example, if there are 100 Scoring Pool Stocks, the difference between the Operational Yield Score (or Dividend Yield Score) of stocks ranked 51 and 52 will be relatively small (as they are both very close to the mean) while such difference in score between stocks ranked 91 and 92 will be

greater (as they are farther away from the mean). This serves to differentiate to a greater degree stocks whose scores are far away from the mean (either positively or negatively).

Third, the Underlying Index Calculation Agent will separate the Scoring Pool Stocks by MSCI GICS[®] Sector (as determined and published by the Reference Index Sponsor under the “GICS Sector” heading) and calculate their sector-normalized Operational Yield Scores and sector-normalized Dividend Yield Scores. Sector normalization is a process that takes into account and adjusts for the fact that companies in different industries tend to exhibit different Operational Yield and Dividend Yield metrics, which we refer to as inherent sector bias. For example, young technology companies tend to focus less on earnings and dividend yields while mature companies in traditional industries tend to focus heavily on earnings and dividends. These industry sector biases are not necessarily reflective of relative value of the companies across sectors. To mitigate the inherent sector bias, both the Operational Yield and Dividend Yield scores are sector normalized using the average and the standard deviation of the Operational Yield Score and Dividend Yield Score, respectively, for each industry sector. The sector-normalized Operational Yield Score (or Dividend Yield Score) for each Scoring Pool Stock is equal to (a) the Operational Yield Score (or Dividend Yield Score) minus the average Operational Yield Score (or Dividend Yield Score) in the MSCI GICS[®] Sector of such Scoring Pool Stock, *divided by* (b) the standard deviation of the Operational Yield Scores (or Dividend Yield Scores) in such MSCI GICS[®] Sector.

Fourth, the Underlying Index Calculation Agent will calculate the Value Score for each Scoring Pool Stock, which is equal to the sum of its sector-normalized Operational Yield Score and sector-normalized Dividend Yield Score.

Selecting the Sub-Index Constituents

Sub-Index 1 comprises stocks, and any additional Sub-Indices, if created, will comprise the same stocks selected from the Selection Pool Stocks on the relevant Selection Date. The Underlying Index Calculation Agent will identify the Selection Pool Stocks by excluding Reference Index Stocks on the basis of liquidity, stock borrow cost and ability to determine a Value Score. Therefore, the “**Selection Pool Stocks**” include all Reference Index Stocks except those stocks (a) whose average daily trading volume in the previous 60 weekdays (the “**ADV**”) is ranked lower than the 20th percentile among the Reference Index Stocks, (b) whose ADV, Operational Yield and/or Dividend Yield cannot be determined by the Underlying Index Calculation Agent or (c) in the case of Bottom Index only, whose stock borrow cost is greater than 1% per annum.

After the Selection Pool Stocks are identified by the Underlying Index Calculation Agent on the relevant Selection Date, the Selection Pool Stocks will be ranked by their Value Scores. Each Sub-Index of the Top Index will comprise the top 20% of the Selection Pool Stocks with the highest Value Scores, and each Sub-Index of the Bottom Index will comprise the bottom 20% of the Selection Pool Stocks with the lowest Value Scores. Each Selection Pool Stock identified in the manner described above will be a Sub-Index Constituent for the relevant Sub-Index following its Sub-Index Reconstitution Date. The Sub-Index Constituents will be equally weighted on the Sub-Index Reconstitution Date and the “**New Weight**” of each Sub-Index Constituent will be equal to 1 (one) divided by the number of Sub-Index Constituents. We refer to each Sub-Index Constituent comprising a Sub-Index following a Sub-Index Reconstitution Date, as a new Sub-Index Constituent, and each Sub-Index Constituent comprising a Sub-Index on or prior to a Sub-Index Reconstitution Date, as a previous Sub-Index Constituent.

Calculation of the Sub-Index Closing Level

For each Sub-Index, the Underlying Index Calculation Agent will calculate the closing level of such Sub-Index (the “**Sub-Index Closing Level**”) on each Underlying Index Calculation Date based on the performance of the Sub-Index Constituents on such Underlying Index Calculation Date, determined after converting the closing price of each Sub-Index Constituent into U.S. dollars. If, on a Sub-Index Reconstitution Date, one or more new Sub-Index Constituents for a Sub-Index is determined to be a “**Restricted Stock**” that Deutsche Bank AG and/or any of its affiliates is restricted from dealing in pursuant to regulatory or legal obligations or internal policies, the Underlying Index Calculation Agent will remove such stocks from the Sub-Index Constituents and replace such stocks with a notional Cash Amount (as defined below) deemed to be included in such Sub-Index effective on the immediately following Underlying Index Calculation Date.

The Sub-Index Closing Level is calculated using the following formula:

$$CSIL(t) = SICA(t) + \sum P_i(t) \times FX_i(t) \times N_i(t)$$

where:

$CSIL(t)$	is the Sub-Index Closing Level of a Sub-Index on the relevant Underlying Index Calculation Date.
$SICA(t)$	is the Cash Amount of such Sub-Index on such Underlying Index Calculation Date.
$P_i(t)$	is the closing price of a Sub-Index Constituent on such Underlying Index Calculation Date.
$FX_i(t)$	is the exchange rate between the relevant currency of such Sub-Index Constituent and U.S. dollars on such Underlying Index Calculation Date.
$N_i(t)$	is the Unit Weight of such Sub-Index Constituent on such Underlying Index Calculation Date, as described below under “ <i>Determining the Unit Weight.</i> ”
Σ	is the operation of adding a series of numbers.

Because the closing price of each Sub-Index Constituent is converted into U.S. dollars for purposes of calculating the Sub-Index Closing Level, the Underlying Indices and the Value Factor Index will be exposed to currency exchange rate risk with respect to each of the currencies in which the Sub-Index Constituents trade. Exposure to currency changes will depend on the extent to which such currencies strengthen or weaken against the U.S. dollar and the relative weight of the Sub-Index Constituents denominated in each such currency. A net depreciation of the U.S. dollar against the currencies in which the Sub-Index Constituents trade will result in an increase in the level of the relevant Underlying Index. Conversely, a net appreciation of U.S. dollar against such currencies will result in a decrease in the level of the relevant Underlying Index. Fluctuations in currency exchange rates can have a continuing impact on the levels the Underlying Indices and the Value Factor Index.

On the Underlying Index Calculation Date immediately following a Sub-Index Reconstitution Date, the “**Cash Amount**” is equal to the sum of, for all such Restricted Stocks, the product of (a) the Sub-Index Closing Level on such Sub-Index Reconstitution Date (calculated by reference to the previous Sub-Index Constituents), (b) 1 (one) minus the Total Reconstitution Cost on such Sub-Index Reconstitution Date and (c) the New Weight of such stock prior to its removal.

Determining the Unit Weights

Following each Selection Date, the Underlying Index Calculation Agent will reconstitute each Sub-Index on its immediately following Sub-Index Reconstitution Date by replacing the previous Sub-Index Constituents with the equally weighted new Sub-Index Constituents. In order to do so, the Underlying Index Calculation Agent will calculate the Unit Weight of each new Sub-Index Constituent applicable after reconstitution. The Unit Weight of each new Sub-Index Constituent is equal to the notional number of units required to give equal weighting to each Sub-Index Constituent in the Sub-Index, reduced by a pro rata share of the Total Reconstitution Cost incurred in connection with notionally replacing and rebalancing the previous Sub-Index Constituents with the new Sub-Index Constituents.

If at any time any Sub-Index Constituent is expected to pay a cash dividend, the Unit Weight of such Sub-Index Constituent will be increased on the day such Sub-Index Constituent is traded ex-dividend on its primary exchange to account for the reinvested dividend (in the case of a Sub-Index Constituent comprising the Top Index, the reinvested dividend will be the cash dividend after taking into account the Withholding Tax Rate). The Unit Weight may also be adjusted to take into account certain corporate events that impact a Sub-Index Constituent. Please see below under “*Corporate Events and Their Consequences*” for more information.

The “**Unit Weight**” of each new Sub-Index Constituent is equal to the product of:

- (a) the Sub-Index Closing Level on such Sub-Index Reconstitution Date (calculated by reference to the previous Sub-Index Constituents) times the New Weight of such Sub-Index Constituent on such Sub-Index Reconstitution Date divided by the closing price of such Sub-Index Constituent on such Sub-Index Reconstitution Date, converted into U.S. dollars by reference to the relevant exchange rate; and
- (b) 1(one) minus the Total Reconstitution Cost.

The “**Total Reconstitution Cost**” on each Sub-Index Reconstitution Date is the total cost incurred in connection with notionally selling the previous Sub-Index Constituents, buying the new Sub-Index Constituents and rebalancing the previous Sub-Index Constituents that are also new Sub-Index Constituents. The Total Reconstitution Cost is equal to the

sum of, for each stock which is a previous Sub-Index Constituent and/or a new Sub-Index Constituent (other than any stock which is determined to be a Restricted Stock on such Sub-Index Reconstitution Date), the *product* of (a) the Reconstitution Cost of such stock and (b) the absolute value of the difference between:

- (a) the New Weight of such stock; and
- (b) the ratio of (i) the product of (1) the Unit Weight of such stock on such Sub-Index Reconstitution Date and (2) the closing price of such stock on such Sub-Index Reconstitution Date, converted into U.S. dollars by reference to the relevant exchange rate divided by (ii) the Sub-Index Closing Level on such Sub-Index Reconstitution Date (calculated by reference to the previous Sub-Index Constituents).

For the purposes of this calculation, the Unit Weight for each new Sub-Index Constituent that is not a previous Sub-Index Constituent is equal to zero, and the New Weight for each previous Sub-Index Constituent that is not a new Sub-Index Constituent is equal to zero.

The “**Reconstitution Cost**” is a per unit cost of (a) for the Top Index, 0.02% or (b) for the Bottom Index, -0.02%. *The Reconstitution Cost may be adjusted by the Underlying Index Sponsor by an amount necessary to cover any change in the cost of transacting in such stock on the relevant exchange due to any increase or imposition of financial transactions tax by a relevant taxing authority, if applicable. Any change in the Reconstitution Cost will only become effective following the publication of a notice on the Underlying Index Sponsor’s website specifying such change in the Reconstitution Cost.*

Underlying Index Construction and Calculation

On the 15th calendar day of each calendar month, if the Underlying Index Sponsor determines that the aggregate outstanding notional investment of the financial products linked in whole or in part to an Underlying Index or the Euro denominated version of such Underlying Index has reached a higher Sub-Index Determination Band (as defined below) or fallen into a lower Sub-Index Determination Band, the Underlying Index Sponsor will determine whether the existence of such event is material in respect of the reconstitution of the existing Sub-Index or Sub-Indices. If the Underlying Index Sponsor determines that such event is material, the Underlying Index Sponsor will add (if the total notional investment has increased) or remove (if the total notional investment has decreased) one or more Sub-Indices as determined in its reasonable discretion. The Underlying Index Sponsor will publish its determination at least 10 calendar days prior to effecting such change.

“**Sub-Index Determination Band**” means, each of:

- (a) EUR 0 to EUR 200,000,000 (inclusive);
- (b) EUR 200,000,001 to EUR 400,000,000 (inclusive);
- (c) EUR 400,000,001 to EUR 600,000,000 (inclusive);
- (d) EUR 600,000,001 to EUR 800,000,000 (inclusive); and
- (e) thereafter, each band from, but excluding, the upper end of the previous Sub-Index Determination Band to, and including, the next multiple of EUR 200,000,000.

If an additional Sub-Index is, or Sub-Indices are, created and added, the Underlying Index will be rebalanced among Sub-Indices on the 1st calendar day of each month (each, a “**Sub-Index Rebalancing Date**”) so that each of the Sub-Indices will be equally weighted.

Following the initial constitution of an Underlying Index and its Sub-Index 1, the Underlying Index Calculation Agent will continue to reconstitute Sub-Index 1 every month on the relevant Sub-Index Reconstitution Date. In relation to any additional Sub-Index, the Underlying Index Calculation Agent will reconstitute such Sub-Index on each monthly Sub-Index Reconstitution Date for such additional Sub-Index using the new Sub-Index Constituents identified on the relevant Selection Date.

The Underlying Index Calculation Agent will calculate the Underlying Index Closing Level for each Underlying Index on each Underlying Index Calculation Date. The Underlying Index Closing Level is equal to the sum of, for each

Sub-Index of such Underlying Index, the product of (a) the Sub-Index Closing Level of such Sub-Index and (b) the Sub-Index Weight of such Sub-Index on such Underlying Index Calculation Date.

The Underlying Index Calculation Agent will determine, on each Sub-Index Rebalancing Date, the “**Sub-Index Weight**” of each Sub-Index so that each Sub-Index has an equal impact on the overall Underlying Index Closing Level. The Sub-Index Weight of each Sub-Index effective on the immediately following Calculation Date is equal to:

- (a) the sum of (i) the Underlying Index Closing Level on such Sub-Index Rebalancing Date and (ii) the total dividend adjustment amount that reflects the difference between the expected dividends and the actual dividends paid (after taking account of the Withholding Tax Rate in the case of the Top Index) on such Sub-Index Rebalancing Date following the adjustment on such Sub-Index Rebalancing Date; divided by
- (b) the product of (i) the Sub-Index Closing Level on such Sub-Index Rebalancing Date and (ii) the number of Sub-Indices constituting such Underlying Index immediately following such Sub-Index Rebalancing Date.

The Underlying Index Sponsor will publish the Underlying Index Closing Levels on each Underlying Index Calculation Date as soon as reasonably practicable after 16:00 London time on the next Underlying Index Calculation Date following such Underlying Index Calculation Date at the Underlying Index Sponsor’s principal office in London, on the Underlying Index Sponsor’s website, on Bloomberg and/or Reuters, or at such other information sources as the Underlying Index Sponsor may select from time to time at its sole and absolute discretion. The Underlying Index Sponsor may, at any time and without notice, either permanently or temporarily increase the frequency of publication of the Underlying Index Closing Levels.

Corporate Events and Their Consequences

The following sections describe how an Underlying Index will be adjusted to reflect certain corporate events and to preserve the economic value of such Underlying Index. In circumstances where the holder of a stock would be required to choose between several alternative options, such as cash or shares distribution, the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, will determine which alternative is to be taken and adjust the relevant Underlying Index accordingly.

Stock Reclassification, Stock Distribution, Spin-off or Rights Issuance

Following the declaration by the issuer of a Sub-Index Constituent of the terms of any stock reclassification, stock distribution, spin-off or rights issuance (each, an “**Adjustment Event**”), the Underlying Index Calculation Agent will adjust the Unit Weight of such Sub-Index Constituent or the Cash Amount (if any Sub-Index Constituent or any distributed asset is removed from the relevant Sub-Index due to such Adjustment Event) to take into account the dilutive or concentrative effect of such Adjustment Event on the theoretical value of the affected Sub-Index Constituent in accordance with the formulaic rules of the Underlying Index.

Other Potential Adjustment Events

Following the declaration by an issuer of the terms of any Other Potential Adjustment Event, the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, will determine in its reasonable discretion whether such Other Potential Adjustment Event has a dilutive or concentrative effect on the theoretical value of the relevant Sub-Index Constituent. In determining the impact on such theoretical value, the Underlying Index Calculation Agent may take into account any tax, duty, withholding, deduction or other charge which would be sustained or incurred by a holder of such Sub-Index Constituent that is a financial institution resident in Germany as a result of such Other Potential Adjustment Event. If the Underlying Index Calculation Agent determines that such Other Potential Adjustment Event has a dilutive or concentrative effect on the theoretical value of the relevant Sub-Index Constituent, then in relation to such Sub-Index Constituent and Sub-Index, the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, will make such determinations and/or adjustments that in its reasonable discretion are required to take account of such event, including (a) adjusting the Unit Weight of such Sub-Index Constituent and/or the formula for determining the relevant Underlying Index Level and/or any other provisions of the rules of such Underlying Index and (b) determine the effective date of such adjustment.

“**Other Potential Adjustment Event**” means any of the following:

- (a) a call by the issuer of a Sub-Index Constituent in respect of such Sub-Index Constituent that is not fully paid;

- (b) a repurchase by the issuer of a Sub-Index Constituent or any of its affiliates of the relevant Sub-Index Constituent whether out of profits or capital and whether the consideration for such repurchase is cash, securities or otherwise;
- (c) in respect of the issuer of a Sub-Index Constituent, an event that results in any shareholder rights being distributed, or becoming separated from shares of common stock or other shares of the capital stock of the issuer of such Sub-Index Constituent pursuant to a shareholder rights plan or arrangement directed against hostile takeovers that provides for a distribution of preferred stock, warrants, debt instruments or stock rights at a price below their market value upon the occurrence of certain events;
- (d) any redemption of shareholder rights referred to in (c) above; or
- (e) any other event that may have, in the opinion of the Underlying Index Sponsor, a dilutive, concentrative or other effect on the theoretical value of a Sub-Index Constituent.

Delisting

Upon the announcement of a delisting of a Sub-Index Constituent by its primary exchange, the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, will determine whether a suitable exchange for such Sub-Index Constituent exists. If no suitable exchange exists, the Underlying Index Calculation Agent will (a) increase the Cash Amount of each relevant Sub-Index to an amount to offset the removal of the delisted Sub-Index Constituent and (b) remove such delisted Sub-Index Constituent from such Sub-Index. If a suitable exchange exists, the suitable exchange will be deemed to be the primary exchange for such Sub-Index Constituent.

Merger, Tender Offer, Nationalization or Insolvency

If a merger event, tender offer, nationalization or insolvency occurs in relation to a Sub-Index Constituent and/or an issuer of a Sub-Index Constituent, the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, will make such determinations and/or adjustments that are required to be taken to account for such event. In particular, and without limitation, the Underlying Index Calculation Agent, in making such determination, will (a) make such adjustments to any one or more of the provisions of the Underlying Index rules and/or take such actions that are required to account for the merger event, tender offer, nationalization or insolvency and (b) determine the effective date of such adjustments. In making such determination, the Underlying Index Calculation Agent in consultation with the Underlying Index Sponsor may, without limitation, take into account any adjustment in respect of the merger event, tender offer, nationalization or insolvency made by a Related Exchange to options contracts or futures contracts on the relevant Sub-Index Constituent traded on that Related Exchange when determining the appropriate adjustment.

“Related Exchange” means, in relation to a stock, any exchange, trading system or quotation system on which, in the Underlying Index Calculation Agent determination, where derivatives linked to such share usually trade.

Market Disruption Events and their Consequences

If the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, determines that a Market Disruption Event occurs or subsists on any day, the Underlying Index Sponsor will determine whether the occurrence or existence of such Market Disruption Event is material in respect of the reconstitution of the Sub-Indices and/or the calculation of the Underlying Index Closing Levels.

In the event that the Underlying Index Sponsor determines that the occurrence or existence of a Market Disruption Event is material to such reconstitution or calculation, the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, will make such determinations and/or adjustments that, in its determination, are required to take account of such Market Disruption Event. In particular (and without limitation), the Underlying Index Calculation Agent, in making such determination, may:

- (a) if such day would otherwise be a Sub-Index Rebalancing Date or a Sub-Index Reconstitution Date;
- (i) determine that such day shall still be such Sub-Index Rebalancing Date or Sub-Index Reconstitution Date, as the case may be, and determine any necessary values (including, without limitation, the Underlying Index Closing Levels and/or the closing price of any relevant Sub-Index Reconstitution Constituent on such day) by reference to the prevailing market conditions and such other factors it determines appropriate; or

- (ii) determine that such day shall not be a Sub-Index Rebalancing Date or Sub-Index Reconstitution Date, as the case may be, and that the Sub-Index Rebalancing Date or the Sub-Index Reconstitution Date, as the case may be, will be such other day as the Underlying Index Calculation Agent shall select, in which case, the reconstitution or rebalancing, as the case may be, of the Sub-Index will instead take place on such new Sub-Index Rebalancing Date or Sub-Index Reconstitution Date, as the case may be; and
- (b) if such day is an Underlying Index Calculation Date but would not otherwise be a Sub-Index Rebalancing Date or a Sub-Index Reconstitution Date:
 - (i) calculate the relevant Underlying Index Closing Level having regard to the then prevailing market conditions, the last reported closing price of any relevant Sub-Index Reconstitution Constituent and/or such other conditions that the Underlying Index Calculation Agent determines relevant for the calculation of the relevant Underlying Index Closing Level; or
 - (ii) determine that no Underlying Index Closing Level will be calculated for such day.

“Sub-Index Reconstitution Constituent” means, in relation to a day, each Sub-Index Constituent on such day and, if such day falls on a Sub-Index Reconstitution Date, each Sub-Index Constituent comprising or which, but for the occurrence of a Market Disruption Event, would comprise the Sub-Index reconstituted on such Sub-Index Reconstitution Date.

“Market Disruption Event” means, in relation to a Sub-Index Reconstitution Constituent, the occurrence or existence of:

- (a) any suspension of or limitation imposed on trading by any exchange or Related Exchange or otherwise and whether by reason of movements in price exceeding limits permitted by such exchange or Related Exchange or otherwise relating to (i) the exchange as a whole, (ii) such Sub-Index Reconstitution Constituent on the exchange or (iii) options contracts or futures contracts relating to such Sub-Index Reconstitution Constituent on the Related Exchange;
- (b) any event (other than an early closure covered in clause (c)) that disrupts or impairs the ability of market participants in general (i) to effect transactions in, or to obtain market values for, such Sub-Index Reconstitution Constituent on any relevant exchange or (ii) to effect transactions in, or obtain market values for options contracts or futures contracts relating to such Sub-Index Reconstitution Constituent on any relevant Related Exchange, in either case, at any time during either (1) the one-half hour period that ends at the Scheduled Closing Time (if the relevant day is an Underlying Index Calculation Date but not a Sub-Index Reconstitution Date) or (2) the regular trading session on the relevant exchange or Related Exchange without regard to after-hours trading or any other trading outside of the regular trading session hours on the relevant day (if such day is a Sub-Index Reconstitution Date);
- (c) the closure on any Underlying Index Calculation Date of any exchange or any Related Exchange prior to its scheduled closing time unless such earlier closing time is announced by such exchange or such Related Exchange, as the case may be, at least one hour prior to (i) the actual closing time for the regular trading session on such exchange or such Related Exchange on such Underlying Index Calculation Date or, if earlier, (ii) the submission deadline, if applicable, for orders to be entered into such exchange or such Related Exchange system for execution at the scheduled closing time on such Underlying Index Calculation Date;
- (d) with regards to a Sub-Index Constituent whose Relevant Currency is not U.S. dollars, the determination by the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, that as a result of the occurrence of an event which has or would have the effect of preventing, restricting or delaying Deutsche Bank AG, its affiliates or non-affiliated third parties from (i) converting the Relevant Currency of a Sub-Index Constituent into U.S. dollars through customary legal channels or transferring within or from the relevant jurisdiction either currency, (ii) converting such Relevant Currency into U.S. dollars at a rate at least as favourable as the rate for domestic institutions located in the relevant jurisdiction, (iii) delivering such Relevant Currency or U.S. dollars from accounts inside the relevant jurisdiction to accounts outside such jurisdiction or (iv) transferring such Relevant Currency or U.S. dollars between accounts inside the relevant jurisdiction or to a party that is a non-resident of such jurisdiction,

the ability of Deutsche Bank AG, its affiliates or non-affiliated third parties to acquire, hold, transfer or realize or otherwise to effect transactions in relation to such Sub-Index Constituent is likely to be affected;

- (e) the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, determining that as a result of a relevant jurisdiction (i) imposing any controls or announcing its intention to impose any controls, (ii) implementing or announcing its intention to implement any laws or regulations or (iii) changing or announcing its intention to change the interpretation or administration of any laws or regulations, the ability of Deutsche Bank AG, its affiliates or non-affiliated third parties to acquire, hold, transfer or realize or otherwise to effect transactions in relation to such Sub-Index Reconstitution Constituent is likely to be affected; or
- (f) a general moratorium is declared in relation to banking activities in the country in which any exchange is located.

“Relevant Currency” means, in relation to a Sub-Index Constituent, the currency in which the closing price of such Sub-Index Constituent on the primary exchange is denominated.

Selection Disruption Events and Their Consequences

If the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, determines that it is unable to obtain from FactSet some or all of the data required to determine the relevant ADVs, Operational Yields, the Dividend Yields and/or the Value Scores (a **“Selection Disruption Event”**) on a Selection Date (a **“Selection Disruption Date”**), the Underlying Index Sponsor will determine whether the occurrence or existence of such Selection Disruption Event is material in respect of Sub-Index reconstitution.

In the event that the Underlying Index Sponsor determines that the occurrence or existence of a Selection Disruption Event is material, the Selection Date will be the first succeeding Underlying Index Calculation Date that is not a Disrupted Day and the relevant Sub-Index Reconstitution Date will be postponed accordingly. However, if the Underlying Index Sponsor determines that the relevant Selection Disruption Event is not, or will not be, temporary or each of the five Underlying Index Calculation Dates immediately following the Selection Disruption Date is a Disrupted Day, the Underlying Index Sponsor will:

- (a) make such determinations and/or adjustments that, in its determination, are required to take account of such Selection Disruption Event (including, without limitation, determining that the relevant Sub-Index reconstitution will not take place or, if the Selection Disruption Event is in relation to a data source, using an alternative data source in lieu of such disrupted data source); or
- (b) notwithstanding the section *“Change in Methodology of the Value Factor Index or the Underlying Indices and Termination,”* terminate the calculation and publication of the relevant Underlying Index.

“Disrupted Day” means any Underlying Index Calculation Date on which a Selection Disruption Event has occurred or is continuing.

Reference Index Event and their Consequences

Upon the occurrence of any Reference Index Event, the Underlying Index Sponsor will make such determinations and/or adjustments that, in its reasonable discretion, are required to take account of such event. In particular, and without limitation, the Underlying Index Sponsor, in exercising its reasonable discretion, may:

- (a) make such adjustments to the terms of the relevant Underlying Index (including, without limitation, selecting a successor Reference Index) as it considers reasonably appropriate;
- (b) decide that the day on which such event occurs will not be an Underlying Index Calculation Date or Trading Day; and/or
- (c) permanently cease to calculate and publish the relevant Underlying Index Closing Level and cancel the relevant Underlying Index.

“Reference Index Event” means a Reference Index Cancellation, Reference Index Disruption or Reference Index Modification.

“Reference Index Cancellation” means that at any relevant time the sponsor of the Reference Index or any successor sponsor permanently cancels the Reference Index.

“Reference Index Disruption” means that at any relevant time the sponsor of the Reference Index or any successor sponsor fails to disseminate the constituents of the Reference Index, calculate such Reference Index and/or publish the levels of such Reference Index or any other relevant data on any day on which such Reference Index details were scheduled to be published.

“Reference Index Modification” means that at any relevant time the sponsor of the Reference Index or any successor sponsor makes or announces that it will make a material change in the formula for or the method of calculating the Reference Index or in any way materially modifies the Reference Index or any relevant data (other than modification prescribed in its formula or method to maintain the Reference Index, or permitted changes in its constituents and/or other routine events).

Index Sponsor and Underlying Index Sponsor

All determinations made by the Index Sponsor in respect of the Value Factor Index 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. The Index Sponsor may delegate and/or transfer any of its obligations or functions under the terms of the Value Factor Index to one or more third parties as it deems appropriate from time to time. The above paragraph is also applicable to the Underlying Index Calculation Agent and Underlying Index Sponsor (as appropriate) in respect of the Underlying Indices.

Change in Methodology of the Value Factor Index or the Underlying Indices and Termination

The following paragraphs in this section are also applicable to the Underlying Index Calculation Agent and the Underlying Index Sponsor in respect of the Underlying Indices, with the Underlying Index Calculation Agent calculating and determining the Underlying Indices and the Underlying Index Sponsor having the authority to modify or change the methodology of the Underlying Indices (as described above).

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

Accordingly:

- (a) the Index Sponsor shall be entitled to make such modifications and/or changes as it, in its reasonable discretion, deems appropriate, including (without limitation):
 - (i) to correct any manifest error or proven error contained in the methodology described herein;
 - (ii) to cure, correct or supplement any contradictory or defective provision contained in the methodology described herein; and/or
 - (iii) if market, regulatory, juridical, financial, fiscal or other circumstances arise, which were not foreseeable by the Index Sponsor as at the Live Date and such circumstances have not been deliberately caused by the Index Sponsor and such circumstances would, in the determination of the Index Sponsor, necessitate or make desirable such a modification or change of the methodology described herein (including, but without limitation, a change in the frequency of calculation of any Index Closing Level) in order for the Value Factor Index to continue being calculated and determined notwithstanding the relevant circumstances. In deciding what is necessary the Index Sponsor will consider and/or take into account what the Index Sponsor determines to be the intended strategy of the Value Factor Index.

- (b) further, and without limitation to the above provisions, the Index Sponsor shall be entitled to make such modifications and/or changes as it in its reasonable discretion deems appropriate:
 - (i) to preserve the intended strategy of the Value Factor Index where such modification and/or change is of a formal, minor or technical nature; and/or
 - (ii) if market, regulatory, juridical, financial, fiscal or other circumstances arise, which were not foreseen by the Index Sponsor as at the Live Date and such circumstances have not been deliberately caused by the Index Sponsor and in the determination of the Index Sponsor, such modifications and/or changes would assist in maintaining the intended strategy of the Value Factor Index and/or would ensure that the Value Factor Index can continue to be calculated and determined by the Index Sponsor in light of such circumstances.

In making such modifications however the Index Sponsor will ensure that such modifications or changes will result in a methodology that, in the Index Sponsor's determination, is consistent in its intended strategy with the methodology described herein. The Index Sponsor may, in its discretion, at any time and without notice, terminate the calculation and publication of the Value Factor Index.

Details of any adjustments made to the Value Factor Index shall be made available by the Index Sponsor on its website and on application to the Index Sponsor's principal office in London. Access to any such publication may be restricted by means determined as appropriate by the Index Sponsor in its reasonable discretion including, but not limited to, password protection on the Index Sponsor's website.

ANNEX II

DEUTSCHE BANK EQUITY SECTOR-NEUTRAL QUALITY FACTOR USD — EXCESS RETURN INDEX

The Deutsche Bank Equity Sector-Neutral Quality Factor — USD — Excess Return Index (Bloomberg: DBGLSNQU <Index>) (the “**Quality Factor Index**”) is a proprietary index of Deutsche Bank AG, London Branch (the “**Index Sponsor**”) and is intended to reflect the premium an investor would earn pursuing a quality-driven strategy by taking notional long exposure to a portfolio of stocks ranked as high “quality” stocks, tracked by the Deutsche Bank Equity Sector-Neutral Quality Factor Top — USD — Net Total Return Index (the “**Top Index**”), and notional short exposure to a portfolio of stocks ranked as low “quality” stocks, tracked by the Deutsche Bank Equity Sector-Neutral Quality Factor Bottom — USD — Gross Total Return Index (the “**Bottom Index**,” together with the Top Index, the “**Underlying Indices**”).

Both the Top Index and the Bottom Index are proprietary stock indices calculated, published and disseminated daily by Deutsche Bank AG, London Branch (the “**Underlying Index Sponsor**”). The stocks comprising both the Top Index and the Bottom Index are selected from the stocks comprising the MSCI World Equal Weight — USD Index (the “**Reference Index**”) based on the quality scores of these stocks calculated using a sector-normalized return on invested capital and subtracting a sector-normalized accruals ratio. The Top Index will include the top 20% of the Reference Index stocks with the highest quality scores, excluding certain Reference Index stocks on the basis of liquidity and industrial sector, and the Bottom Index will include the bottom 20% with the lowest quality scores, excluding certain Reference Index stocks on the basis of liquidity, industrial sector and stock borrow cost. The Top Index and the Bottom Index are rebalanced monthly and all constituents in the Top Index and the Bottom Index are given an equal weight on each monthly reconstitution date. Both the Top Index and the Bottom Index currently consist of one sub-index. If there are changes in the aggregate outstanding notional investment of financial products linked to the Top Index or the Bottom Index, as applicable, such index may be divided into multiple sub-indices or combined back into fewer sub-indices, subject to the requirement that there be at least one sub-index at all times.

The concept of quality investing is founded on the investment hypothesis that high quality stocks will outperform low quality stocks in the long run. The Quality Factor Index implements its quality-driven strategy by taking a notional long position in the Top Index comprising high quality stocks and a notional short position in the Bottom Index comprising low quality stocks. The strength of a company’s balance sheet and its composition, the quality of its earnings, the ability of a company to generate profits, the rate at which it turns over its assets and the reputation of its management could all be considered aspects of a company’s quality. The Quality Factor Index selects two objective metrics to measure “quality”: return on invested capital and accruals ratio. Return on invested capital is calculated by dividing the after-tax operating income by the book value of invested capital, which includes a company’s equity and all of its financial debts. Return on invested capital is used to measure how well a company is using its capital to generate returns. The accruals ratio is equal to the year-on-year change in the net operating assets of a company divided by the absolute value of its previous year’s net operating assets. The accruals ratio is used to measure how heavily a company depends on accruals (such as accounts receivable) to show a profit. A high accruals ratio may indicate that a company is accruing more each year in outstanding accounts receivable than it is collecting from its customers in cash. The accrual ratio is subtracted from the return on invested capital when computing the Quality Score to reflect that a low accruals ratio is a positive signal and signifies a higher quality stock. Using these two metrics, a stock with a high return on invested capital and a relatively low accruals ratio is more likely to be selected as one of the high quality stocks tracked by the Top Index. Conversely, a stock with a low return on invested capital and a relatively high accruals ratio is more likely to be selected as one of the low quality stocks tracked by the Bottom Index. Generally, the performance of the Quality Factor Index will be positive, reflecting the premium an investor would earn, if the high quality stocks tracked by the Top Index outperform the low quality stocks tracked by the Bottom Index, and negative, reflecting the loss an investor would suffer, if the high quality stocks tracked by the Top Index underperform the low quality stocks tracked by the Bottom Index. Whether the Top Index and the Bottom Index go up or down, if the Top Index outperforms the Bottom Index sufficiently to offset any daily cost deductions as described below, the level of the Quality Factor Index will increase; conversely, if the Top Index underperforms the Bottom Index, the level of the Quality Factor Index will decrease.

The Quality Factor Index is subject to a daily deduction for the sum of the cost of hypothetically implementing the notional long position in the Top Index at a rate of 0.40% per annum (the “**Long Leg Cost Rate**”) and the cost of implementing the notional short position in the Bottom Index at a rate of 0.45% per annum (the “**Short Leg Cost Rate**”). In addition, calculation of the Top Index and the Bottom Index includes a cost deduction of 0.02% (in the case of the Top Index) and -0.02% (in the case of the Bottom Index) in connection with reconstitution of their relevant sub-indices, subject to certain adjustments. Because the Quality Factor Index takes a notional short position in the Bottom Index, deduction of a negative 0.02% cost from the Bottom Index will reduce the level of the Quality Factor Index. As a result of these deductions, the levels of the Quality Factor Index will be lower than would otherwise be the case if such costs were not included.

The Quality Factor Index has been calculated on a live basis since July 16, 2013 (the “**Live Date**”) and has been retrospectively calculated using the same methodology as described herein since February 7, 2000 (the “**Index Commencement Date**”), except that such retrospective calculations prior to the Live Date used historical stock prices (adjusted to reflect historical corporate events) provided by dbGrade which uses FAME (database). Such adjustments to the historical stock prices provided by dbGrade may be different from the adjustments for corporate events set forth below. Therefore, the Quality Factor Index has limited performance history and no actual investment which allowed tracking of the performance of the Quality Factor Index was possible before the Live Date. The Index Sponsor will calculate the level of the Quality Factor Index (the “**Index Closing Level**”) on each Index Calculation Date as described below under “*Calculation of the Index Closing Level*.” The Index Closing Level on the Index Commencement Date was set at 1,000.

The Reference Index is a benchmark stock index calculated, published and disseminated daily by MSCI Inc. (“**MSCI**” or the “**Reference Index Sponsor**”). The Reference Index includes the same constituent stocks as the MSCI World Index, which is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of certain developed equity markets in U.S. dollar values. The Reference Index is rebalanced in February, May, August and November, coinciding with the quarterly and semi-annual reviews of the MSCI World Index. Unlike the MSCI World Index, all constituents of the Reference Index are given an equal weight at each quarterly rebalance date. As of May 31, 2016, the Reference Index comprises over 1,639 large and mid-cap equity securities from the following 23 developed equity markets: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States.

Calculation of the Index Closing Level

The Quality Factor Index is rebalanced on each monthly Index Reconstitution Date, which is typically the 6th calendar day of each month. The Index Closing Level will generally increase if the Top Index outperforms the Bottom Index measured during the period from the previous Index Reconstitution Date to the day of calculation, and decrease if the Top Index underperforms the Bottom Index measured during the same period. The Index Closing Level on each Index Calculation Date will reflect its notional long exposure to the Top Index and notional short exposure to the Bottom Index, subject to deduction on a daily basis for notional costs assessed at the sum of the Long Leg Cost Rate and Short Leg Cost Rate. The Index Closing Level is calculated using the following formula:

$$IL(t) = IL(t_R) \times \left(1 + \frac{TIL(t)}{TIL(t_R)} - LLC \times \frac{ACT(t_R, t)}{365} - \frac{BIL(t)}{BIL(t_R)} - SLC \times \frac{ACT(t_R, t)}{365} \right)$$

where:

$IL(t)$ is the Index Closing Level on such Index Calculation Date.

$IL(t_R)$ is the Index Closing Level on the Index Reconstitution Date immediately preceding such Index Calculation Date.

$TIL(t)$ is the closing level of the Top Index (the “**Top Index Level**”) on such Index Calculation Date.

$TIL(t_R)$ is the Top Index Level on the Index Reconstitution Date immediately preceding such Index Calculation Date.

$BIL(t)$ is the closing level of the Bottom Index (the “**Bottom Index Level**,” together with the Top Index Level, the “**Underlying Index Closing Level**”) on such Index Calculation Date.

$BIL(t_R)$ is the Bottom Index Level on the Index Reconstitution Date immediately preceding such Index Calculation Date.

LLC is the Long Leg Cost Rate of 0.40% per annum.

SLC is the Short Leg Cost Rate of 0.45% per annum.

$ACT(t_{R,t})$ is the number of calendar days from, but excluding, the Index Reconstitution Date immediately preceding such Index Calculation Date to, and including, such Index Calculation Date.

“Index Calculation Date” means each Underlying Index Calculation Date (as defined below, subject to adjustment by the Underlying Index Sponsor) and is expected to be each Index Business Day.

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

“Index Reconstitution Date” means the 6th calendar day of each calendar month, or if such day is not a MSCI Trading Day, the first MSCI Trading Day immediately following such day.

“MSCI Trading Day” means a Trading Day in relation to all stock constituents of the Reference Index.

“Trading Day” means (a) in relation to a stock, any day on which the primary exchange relating to such stock is scheduled to be open for its usual trading session, (b) in relation to an Underlying Index, any day that is a Trading Day in relation to all of its sub-indices; or (c) in relation to a sub-index of an Underlying Index, any day that is a Trading Day in relation to all constituents of such sub-index and, if relevant, all stocks comprising the new constituents.

The Index Sponsor will publish the Index Closing Level for each Index Business Day as soon as reasonably practicable after 16:00 London time on the next Index Business Day following such Index Business Day at the Index Sponsor’s principal office in London, on the Index Sponsor’s website under the heading “DB Equity Sector Neutral Quality Factor Index — USD — Excess Return,” on Bloomberg page DBGLSNQU and Reuters page .DBGLSNQU, or at such other information sources as the Index Sponsor may select from time to time at its sole and absolute discretion. The Index Sponsor may, at any time and without notice, increase the frequency of publication of the Index Closing Level.

Top Index and Bottom Index

The Deutsche Bank Equity Sector-Neutral Quality Factor Top Index — USD — Net Total Return Index, which we refer to as the Top Index, is designed to reflect the performance of a monthly rebalanced notional portfolio of high quality stocks representing the top 20% of the constituent stocks comprising the Reference Index with the highest quality scores, excluding certain stocks in the Reference Index on the basis of liquidity and industrial sector. For each constituent stock of the Reference Index (a **“Reference Index Stock”**), the quality score (the **“Quality Score”**) of such Reference Index Stock, if available, is calculated using a sector-normalized return on invested capital minus a sector-normalized accruals ratio as described below. The Deutsche Bank Equity Sector-Neutral Quality Factor Bottom Index — USD — Gross Total Return Index, which we refer to as the Bottom Index, is designed to reflect the performance of a monthly rebalanced notional portfolio of low quality stocks representing the bottom 20% of the Reference Index Stocks with the lowest Quality Scores, excluding certain Reference Index Stocks on the basis of liquidity, industrial sector and stock borrow cost. We refer to each of the Top Index and the Bottom Index as an Underlying Index.

Each Underlying Index is rebalanced monthly and the selected constituent stocks are equally weighted on each reconstitution date, as further described below. The calculation of the Top Index and the Bottom Index includes a cost deduction of 0.02% (in the case of the Top Index) and -0.02% (in the case of the Bottom Index) in connection with reconstitution of their relevant sub-indices, subject to certain adjustments as described below. The negative 0.02% reconstitution cost will increase the level of the Bottom Index and, because the Quality Factor Index has a notional short exposure to the Bottom Index, will effectively reduce the level of the Quality Factor Index.

Both Underlying Indices are total return indices whose index levels reflect cash dividend reinvestment, meaning that they measure the market performance of their constituent stocks in terms of both price performance and income from cash dividend payments. Cash dividends are deemed reinvested in the relevant Underlying Index on the day the dividend-paying stock is quoted ex-dividend. The Top Index is a net total return index calculated so that the amount of cash dividend reinvested is equal to the cash dividend distributed after taking account of the hypothetical tax rate (the **“Withholding Tax Rate”**) at which the relevant jurisdiction generally taxes (or imposes a withholding tax upon) cash dividends paid by corporations incorporated in such jurisdiction to a non-resident of the relevant jurisdiction as determined by the Underlying Index Calculation Agent by reference to established industry sources. The Bottom Index is a gross total return index calculated so that the amount of cash dividend deemed reinvested is equal to the cash dividend distributed, irrespective of any tax accruals, deductions or withholding. Net total return indices are often used for tracking notional long positions, whose hypothetical dividend incomes would be subject to withholding tax, while gross total return indices are

often used for tracking notional short positions, whose hypothetical dividend payments would have to be repaid by the holder of a short position to the stock lender without reduction for tax withholding.

Each Underlying Index is calculated after converting the trading prices of the relevant index constituents into U.S. dollars at the relevant exchange rates. Each Underlying Index has been calculated on a live basis since July 2, 2012. Therefore, each Underlying Index has limited performance history and no actual investment that allowed tracking of the performance of such Underlying Index was possible before the Live Date. Deutsche Bank AG, London Branch (the **"Underlying Index Calculation Agent"**) will calculate the Underlying Index Closing Levels on each Underlying Index Calculation Date as described below under *"Calculation of the Sub-Index Closing Level"* and *"Underlying Index Construction and Calculation."* The Underlying Index Closing Levels of both Underlying Indices were set at 1,000 on the Index Commencement Date.

The **"Underlying Index Calculation Date"** means any weekday on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealings in foreign exchange and foreign currency deposits) in London.

Addition or Deletion of Sub-Indices

Each Underlying Index currently consists of one sub-index (**"Sub-Index 1"**). If there are changes in the aggregate outstanding notional investment of financial products linked to an Underlying Index, one or more additional sub-indices (each, a **"Sub-Index"**, and together with Sub-Index 1, the **"Sub-Indices"**) may be created and added to such Underlying Index. Similarly, Sub-Indices may also be removed from an Underlying Index, subject to the requirement that there be at least one Sub-Index at all times. See *"Underlying Index Construction and Calculation"* below for more information about the addition and deletion of Sub-Indices. Each Sub-Index is reconstituted on a monthly basis and its constituents (the **"Sub-Index Constituents"**) will be selected at the same time using the same criteria as further detailed below under *"Sub-Index Reconstitution,"* except that each Sub-Index will have its own reconstitution dates (each, a **"Sub-Index Reconstitution Date"**).

Sub-Index Reconstitution

On the last Underlying Index Calculation Date of each calendar month (the **"Selection Date"**), the Underlying Index Calculation Agent will select, for each Sub-Index to be reconstituted in the immediately following calendar month, the Sub-Index Constituents from the Reference Index Stocks based on their Quality Scores on such Selection Date.

Calculating the Quality Scores

The Quality Score of a stock is used as the basis for selecting Sub-Index Constituents and is calculated using a sector-normalized return on invested capital and subtracting a sector-normalized accruals ratio. On each Selection Date, the Underlying Index Calculation Agent will determine the Quality Scores in accordance with the following four steps.

First, the Underlying Index Calculation Agent will identify the Reference Index Stocks on such Selection Date, and select from the Reference Index Stocks the eligible **"Scoring Pool Stocks"** by excluding those stocks (a) whose ROIC and/or Accruals Ratio cannot be determined by the Underlying Index Calculation Agent or (b) whose MSCI GICS[®] Sector (as determined and published by the Reference Index Sponsor under the "GICS Sector" heading) is "Financials." Financial companies are excluded from the Scoring Pool Stocks because ROIC and Accruals Ratio and are not the appropriate measures of stock quality for financial companies.

"ROIC" is the return on invested capital of the issuer of the relevant stock on the Selection Date, as determined by Worldscope and disseminated by FactSet under the mnemonic **"WSF_ROIC."**

"Accruals Ratio" is the year-on-year change in the Net Operating Assets of the issuer of the relevant stock on the Selection Date divided by the absolute value of such issuer's Net Operating Assets one year prior to such Selection Date. **"Net Operating Assets"** are the sum of the Long Term Debt, Short Term Debt, Minority Interests and Total Equity minus Cash and Cash Equivalents on the Selection Date. The Long Term Debt, Short Term Debt, Minority Interests, Total Equity and Cash and Cash Equivalents are determined by the business unit of Thomson Reuters Corp. trading as Worldscope Fundamentals or any successor (**"Worldscope"**) and disseminated by FactSet Research Systems Inc. or any successor (**"FactSet"**) under the mnemonics **"WS_LT_DEBT," "WS_ST_DEBT," "WS_MIN_INT_ACCUM," "WS_COM_EQUITY"** and **"WS_CASH,"** respectively, on the Selection Date.

Second, the Underlying Index Calculation Agent will compute the ROIC and Accruals Ratio and for each Scoring Pool Stock, rank them respectively from the highest to the lowest and then calculate the “**ROIC Score**” and the “**Accruals Ratio Score**” for such Scoring Pool Stock by applying the Inverse Standard Normal Cumulative Distribution Function in Microsoft Excel to the ratio of (a) their respective rankings divided by (b) 1 (one) plus the number of Scoring Pool Stocks. The purpose of this step is to assign increasingly higher scores to the stocks whose ROIC or Accruals Ratio is ranked further above the mean, and increasingly lower scores to the stocks whose ROIC or Accruals Ratio is ranked further below the mean. For example, if there are 100 Scoring Pool Stocks, the difference between the ROIC Score (or Accruals Ratio Score) of stocks ranked 51 and 52 will be relatively small (as they are both very close to the mean) while such difference in score between stocks ranked 91 and 92 will be greater (as they are farther away from the mean). This serves to differentiate to a greater degree stocks whose scores are far away from the mean (either positively or negatively).

Third, the Underlying Index Calculation Agent will separate the Scoring Pool Stocks by MSCI GICS[®] Sector and calculate their sector-normalized ROIC Scores and sector-normalized Accruals Ratio Scores. Sector normalization is a process that takes into account and adjusts for the fact that companies in different industries tend to exhibit different ROIC and Accruals Ratio metrics, which we refer to as inherent sector bias. For example, industrials tend to have lower accruals than technology companies. These industry sector biases are not necessarily reflective of relative quality of the companies across sectors. To mitigate the inherent sector bias, both the ROIC and Accruals Ratio scores are sector normalized using the average and the standard deviation of the ROIC and Accruals Ratio scores, respectively, for each industry sector. The sector-normalized ROIC Score (or Accruals Ratio Score) for each Scoring Pool Stock is equal to (a) the ROIC Score (or Accruals Ratio Score) minus the average ROIC Score (or Accruals Ratio Score) in the MSCI GICS[®] Sector of such Scoring Pool Stock, divided by (b) the standard deviation of the ROIC Scores (or Accruals Ratio Scores) in such MSCI GICS[®] Sector.

Fourth, the Underlying Index Calculation Agent will calculate the Quality Score for each Scoring Pool Stock, which is equal to its sector-normalized ROIC Score minus its sector-normalized Accruals Ratio Score.

Selecting the Sub-Index Constituents

Sub-Index 1 comprises stocks, and any additional Sub-Indices, if created, will comprise the same stocks selected from the Selection Pool Stocks on the relevant Selection Date. The Underlying Index Calculation Agent will identify the Selection Pool Stocks by excluding Reference Index Stocks on the basis of liquidity, industrial sector, stock borrow cost and ability to determine a Quality Score. Therefore, the “**Selection Pool Stocks**” include all Reference Index Stocks except those stocks (a) whose average daily trading volume in the previous 60 weekdays (the “**ADV**”) is ranked lower than the 20th percentile among the Reference Index Stocks, (b) whose ADV, ROIC and/or Accruals Ratio cannot be determined by the Underlying Index Calculation Agent, (c) whose MSCI GICS[®] Sector is “Financials” or (d) in the case of Bottom Index only, whose stock borrow cost is greater than 1% per annum.

After the Selection Pool Stocks are identified by the Underlying Index Calculation Agent on the relevant Selection Date, the Selection Pool Stocks will be ranked by their Quality Scores. Each Sub-Index of the Top Index will comprise the top 20% of the Selection Pool Stocks with the highest Quality Scores, and each Sub-Index of the Bottom Index will comprise the bottom 20% of the Selection Pool Stocks with the lowest Quality Scores. Each Selection Pool Stock identified in the manner described above will be a Sub-Index Constituent for the relevant Sub-Index following its Sub-Index Reconstitution Date. The Sub-Index Constituents will be equally weighted on the Sub-Index Reconstitution Date and the “**New Weight**” of each Sub-Index Constituent will be equal to 1 (one) divided by the number of Sub-Index Constituents. We refer to each Sub-Index Constituent comprising a Sub-Index following a Sub-Index Reconstitution Date, as a new Sub-Index Constituent, and each Sub-Index Constituent comprising a Sub-Index on or prior to a Sub-Index Reconstitution Date, as a previous Sub-Index Constituent.

Calculation of the Sub-Index Closing Level

For each Sub-Index, the Underlying Index Calculation Agent will calculate the closing level of such Sub-Index (the “**Sub-Index Closing Level**”) on each Underlying Index Calculation Date based on the performance of the Sub-Index Constituents on such Underlying Index Calculation Date, determined after converting the closing price of each Sub-Index Constituent into U.S. dollars. If, on a Sub-Index Reconstitution Date, one or more new Sub-Index Constituents for a Sub-Index is determined to be a “**Restricted Stock**” that Deutsche Bank AG and/or any of its affiliates is restricted from dealing in pursuant to regulatory or legal obligations or internal policies, the Underlying Index Calculation Agent will remove such stocks from the Sub-Index Constituents and replace such stocks with a notional Cash Amount (as defined below) deemed to be included in such Sub-Index effective on the immediately following Underlying Index Calculation Date.

The Sub-Index Closing Level is calculated using the following formula:

$$CSIL(t) = SICA(t) + \sum P_i(t) \times FX_i(t) \times N_i(t)$$

where:

$CSIL(t)$ is the Sub-Index Closing Level of a Sub-Index on the relevant Underlying Index Calculation Date.

$SICA(t)$ is the Cash Amount of such Sub-Index on such Underlying Index Calculation Date.

$P_i(t)$ is the closing price of a Sub-Index Constituent on such Underlying Index Calculation Date.

$FX_i(t)$ is the exchange rate between the relevant currency of such Sub-Index Constituent and U.S. dollars on such Underlying Index Calculation Date.

$N_i(t)$ is the Unit Weight of such Sub-Index Constituent on such Underlying Index Calculation Date, as described below under “**Determining the Unit Weight.**”

Σ is the operation of adding a series of numbers.

Because the closing price of each Sub-Index Constituent is converted into U.S. dollars for purposes of calculating the Sub-Index Closing Level, the Underlying Indices and the Quality Factor Index will be exposed to currency exchange rate risk with respect to each of the currencies in which the Sub-Index Constituents trade. Exposure to currency changes will depend on the extent to which such currencies strengthen or weaken against the U.S. dollar and the relative weight of the Sub-Index Constituents denominated in each such currency. A net depreciation of the U.S. dollar against the currencies in which the Sub-Index Constituents trade will result in an increase in the level of the relevant Underlying Index. Conversely, a net appreciation of U.S. dollar against such currencies will result in a decrease in the level of the relevant Underlying Index. Fluctuations in currency exchange rates can have a continuing impact on the levels the Underlying Indices and the Quality Factor Index.

On the Underlying Index Calculation Date immediately following a Sub-Index Reconstitution Date, the “**Cash Amount**” is equal to the sum of, for all such Restricted Stocks, the product of (a) the Sub-Index Closing Level on such Sub-Index Reconstitution Date (calculated by reference to the previous Sub-Index Constituents), (b) 1 (one) minus the Total Reconstitution Cost on such Sub-Index Reconstitution Date and (c) the New Weight of such stock prior to its removal.

Determining the Unit Weights

Following each Selection Date, the Underlying Index Calculation Agent will reconstitute each Sub-Index on its immediately following Sub-Index Reconstitution Date by replacing the previous Sub-Index Constituents with the equally weighted new Sub-Index Constituents. In order to do so, the Underlying Index Calculation Agent will calculate the Unit Weight of each new Sub-Index Constituent applicable after reconstitution. The Unit Weight of each new Sub-Index Constituent is equal to the notional number of units required to give equal weighting to each Sub-Index Constituent in the Sub-Index, reduced by a pro rata share of the Total Reconstitution Cost incurred in connection with notionally replacing and rebalancing the previous Sub-Index Constituents with the new Sub-Index Constituents.

If at any time any Sub-Index Constituent is expected to pay a cash dividend, the Unit Weight of such Sub-Index Constituent will be increased on the day such Sub-Index Constituent is traded ex-dividend on its primary exchange to account for the reinvested dividend (in the case of a Sub-Index Constituent comprising the Top Index, the reinvested dividend will be the cash dividend after taking into account the Withholding Tax Rate). The Unit Weight may also be adjusted to take into account certain corporate events that impact a Sub-Index Constituent. Please see below under “*Corporate Events and Their Consequences*” for more information.

The “**Unit Weight**” of each new Sub-Index Constituent is equal to the product of:

- (a) the Sub-Index Closing Level on such Sub-Index Reconstitution Date (calculated by reference to the previous Sub-Index Constituents) times the New Weight of such Sub-Index Constituent on such Sub-Index Reconstitution Date divided by the closing price of such Sub-Index Constituent on such Sub-Index Reconstitution Date, converted into U.S. dollars by reference to the relevant exchange rate; and

- (b) 1 (one) minus the Total Reconstitution Cost.

The “**Total Reconstitution Cost**” on each Sub-Index Reconstitution Date is the total cost incurred in connection with notionally selling the previous Sub-Index Constituents, buying the new Sub-Index Constituents and rebalancing the previous Sub-Index Constituents that are also new Sub-Index Constituents. The Total Reconstitution Cost is equal to the sum of, for each stock which is a previous Sub-Index Constituent and/or a new Sub-Index Constituent (other than any stock which is determined to be a Restricted Stock on such Sub-Index Reconstitution Date), the *product of* (a) the Reconstitution Cost of such stock and (b) the absolute value of the difference between:

- (a) the New Weight of such stock; and
- (b) the ratio of (i) the product of (1) the Unit Weight of such stock on such Sub-Index Reconstitution Date and (2) the closing price of such stock on such Sub-Index Reconstitution Date, converted into U.S. dollars by reference to the relevant exchange rate divided by (ii) the Sub-Index Closing Level on such Sub-Index Reconstitution Date (calculated by reference to the previous Sub-Index Constituents).

For the purposes of this calculation, the Unit Weight for each new Sub-Index Constituent that is not a previous Sub-Index Constituent is equal to zero, and the New Weight for each previous Sub-Index Constituent that is not a new Sub-Index Constituent is equal to zero.

The “**Reconstitution Cost**” is a per unit cost of (a) for the Top Index, 0.02% or (b) for the Bottom Index, -0.02%. *The Reconstitution Cost may be adjusted by the Underlying Index Sponsor by an amount necessary to cover any change in the cost of transacting in such stock on the relevant exchange due to any increase or imposition of financial transactions tax by a relevant taxing authority, if applicable. Any change in the Reconstitution Cost will only become effective following the publication of a notice on the Underlying Index Sponsor’s website specifying such change in the Reconstitution Cost.*

Underlying Index Construction and Calculation

On the 15th calendar day of each calendar month, if the Underlying Index Sponsor determines that the aggregate outstanding notional investment of the financial products linked in whole or in part to an Underlying Index or the Euro denominated version of such Underlying Index has reached a higher Sub-Index Determination Band (as defined below) or fallen into a lower Sub-Index Determination Band, the Underlying Index Sponsor will determine whether the existence of such event is material in respect of the reconstitution of the existing Sub-Index or Sub-Indices. If the Underlying Index Sponsor determines that such event is material, the Underlying Index Sponsor will add (if the total notional investment has increased) or remove (if the total notional investment has decreased) one or more Sub-Indices as determined in its reasonable discretion. The Underlying Index Sponsor will publish its determination at least 10 calendar days prior to effecting such change.

“**Sub-Index Determination Band**” means, each of:

- (a) EUR 0 to EUR 200,000,000 (inclusive);
- (b) EUR 200,000,001 to EUR 400,000,000 (inclusive);
- (c) EUR 400,000,001 to EUR 600,000,000 (inclusive);
- (d) EUR 600,000,001 to EUR 800,000,000 (inclusive); and
- (e) thereafter, each band from, but excluding, the upper end of the previous Sub-Index Determination Band to, and including, the next multiple of EUR 200,000,000.

If an additional Sub-Index is, or Sub-Indices are, created and added, the Underlying Index will be rebalanced among Sub-Indices on the 1st calendar day of each month (each, a “**Sub-Index Rebalancing Date**”) so that each of the Sub-Indices will be equally weighted.

Following the initial constitution of an Underlying Index and its Sub-Index 1, the Underlying Index Calculation Agent will continue to reconstitute Sub-Index 1 every month on the relevant Sub-Index Reconstitution Date. In relation to any additional Sub-Index, the Underlying Index Calculation Agent will reconstitute such Sub-Index on each monthly Sub-

Index Reconstitution Date for such additional Sub-Index using the new Sub-Index Constituents identified on the relevant Selection Date.

The Underlying Index Calculation Agent will calculate the Underlying Index Closing Level for each Underlying Index on each Underlying Index Calculation Date. The Underlying Index Closing Level is equal to the sum of, for each Sub-Index of such Underlying Index, the product of (a) the Sub-Index Closing Level of such Sub-Index and (b) the Sub-Index Weight of such Sub-Index on such Underlying Index Calculation Date.

The Underlying Index Calculation Agent will determine, on each Sub-Index Rebalancing Date, the “**Sub-Index Weight**” of each Sub-Index so that each Sub-Index has an equal impact on the overall Underlying Index Closing Level. The Sub-Index Weight of each Sub-Index effective on the immediately following Calculation Date is equal to:

- (a) the sum of (i) the Underlying Index Closing Level on such Sub-Index Rebalancing Date and (ii) the total dividend adjustment amount that reflects the difference between the expected dividends and the actual dividends paid (after taking account of the Withholding Tax Rate in the case of the Top Index) on such Sub-Index Rebalancing Date following the adjustment on such Sub-Index Rebalancing Date; divided by
- (b) the product of (i) the Sub-Index Closing Level on such Sub-Index Rebalancing Date and (ii) the number of Sub-Indices constituting such Underlying Index immediately following such Sub-Index Rebalancing Date.

The Underlying Index Sponsor will publish the Underlying Index Closing Levels on each Underlying Index Calculation Date as soon as reasonably practicable after 16:00 London time on the next Underlying Index Calculation Date following such Underlying Index Calculation Date at the Underlying Index Sponsor's principal office in London, on the Underlying Index Sponsor's website, on Bloomberg and/or Reuters, or at such other information sources as the Underlying Index Sponsor may select from time to time at its sole and absolute discretion. The Underlying Index Sponsor may, at any time and without notice, either permanently or temporarily increase the frequency of publication of the Underlying Index Closing Levels.

Corporate Events and Their Consequences

The following sections describe how an Underlying Index will be adjusted to reflect certain corporate events and to preserve the economic value of such Underlying Index. In circumstances where the holder of a stock would be required to choose between several alternative options, such as cash or shares distribution, the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, will determine which alternative is to be taken and adjust the relevant Underlying Index accordingly.

Stock Reclassification, Stock Distribution, Spin-off or Rights Issuance

Following the declaration by the issuer of a Sub-Index Constituent of the terms of any stock reclassification, stock distribution, spin-off or rights issuance (each, an “**Adjustment Event**”), the Underlying Index Calculation Agent will adjust the Unit Weight of such Sub-Index Constituent or the Cash Amount (if any Sub-Index Constituent or any distributed asset is removed from the relevant Sub-Index due to such Adjustment Event) to take into account the dilutive or concentrative effect of such Adjustment Event on the theoretical value of the affected Sub-Index Constituent in accordance with the formulaic rules of the Underlying Index.

Other Potential Adjustment Events

Following the declaration by an issuer of the terms of any Other Potential Adjustment Event, the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, will determine in its reasonable discretion whether such Other Potential Adjustment Event has a dilutive or concentrative effect on the theoretical value of the relevant Sub-Index Constituent. In determining the impact on such theoretical value, the Underlying Index Calculation Agent may take into account any tax, duty, withholding, deduction or other charge which would be sustained or incurred by a holder of such Sub-Index Constituent that is a financial institution resident in Germany as a result of such Other Potential Adjustment Event. If the Underlying Index Calculation Agent determines that such Other Potential Adjustment Event has a dilutive or concentrative effect on the theoretical value of the relevant Sub-Index Constituent, then in relation to such Sub-Index Constituent and Sub-Index, the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, will make such determinations and/or adjustments that in its reasonable discretion are required to take account of such event, including (a) adjusting the Unit Weight of such Sub-Index Constituent and/or the formula for determining the relevant Underlying Index Level and/or any other provisions of the rules of such Underlying Index and (b) determine the effective date of such adjustment.

“Other Potential Adjustment Event” means any of the following:

- (a) a call by the issuer of a Sub-Index Constituent in respect of such Sub-Index Constituent that is not fully paid;
- (b) a repurchase by the issuer of a Sub-Index Constituent or any of its affiliates of the relevant Sub-Index Constituent whether out of profits or capital and whether the consideration for such repurchase is cash, securities or otherwise;
- (c) in respect of the issuer of a Sub-Index Constituent, an event that results in any shareholder rights being distributed, or becoming separated from shares of common stock or other shares of the capital stock of the issuer of such Sub-Index Constituent pursuant to a shareholder rights plan or arrangement directed against hostile takeovers that provides for a distribution of preferred stock, warrants, debt instruments or stock rights at a price below their market value upon the occurrence of certain events;
- (d) any redemption of shareholder rights referred to in (c) above; or
- (e) any other event that may have, in the opinion of the Underlying Index Sponsor, a dilutive, concentrative or other effect on the theoretical value of a Sub-Index Constituent.

Delisting

Upon the announcement of a delisting of a Sub-Index Constituent by its primary exchange, the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, will determine whether a suitable exchange for such Sub-Index Constituent exists. If no suitable exchange exists, the Underlying Index Calculation Agent will (a) increase the Cash Amount of each relevant Sub-Index to an amount to offset the removal of the delisted Sub-Index Constituent and (b) remove such delisted Sub-Index Constituent from such Sub-Index. If a suitable exchange exists, the suitable exchange will be deemed to be the primary exchange for such Sub-Index Constituent.

Merger, Tender Offer, Nationalization or Insolvency

If a merger event, tender offer, nationalization or insolvency occurs in relation to a Sub-Index Constituent and/or an issuer of a Sub-Index Constituent, the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, will make such determinations and/or adjustments that are required to be taken to account for such event. In particular, and without limitation, the Underlying Index Calculation Agent, in making such determination, will (a) make such adjustments to any one or more of the provisions of the Underlying Index rules and/or take such actions that are required to account for the merger event, tender offer, nationalization or insolvency and (b) determine the effective date of such adjustments. In making such determination, the Underlying Index Calculation Agent in consultation with the Underlying Index Sponsor may, without limitation, take into account any adjustment in respect of the merger event, tender offer, nationalization or insolvency made by a Related Exchange to options contracts or futures contracts on the relevant Sub-Index Constituent traded on that Related Exchange when determining the appropriate adjustment.

“Related Exchange” means, in relation to a stock, any exchange, trading system or quotation system on which, in the Underlying Index Calculation Agent determination, where derivatives linked to such share usually trade.

Market Disruption Events and their Consequences

If the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, determines that a Market Disruption Event occurs or subsists on any day, the Underlying Index Sponsor will determine whether the occurrence or existence of such Market Disruption Event is material in respect of the reconstitution of the Sub-Indices and/or the calculation of the Underlying Index Closing Levels.

In the event that the Underlying Index Sponsor determines that the occurrence or existence of a Market Disruption Event is material to such reconstitution or calculation, the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, will make such determinations and/or adjustments that, in its determination, are required to take account of such Market Disruption Event. In particular (and without limitation), the Underlying Index Calculation Agent, in making such determination, may:

- (a) if such day would otherwise be a Sub-Index Rebalancing Date or a Sub-Index Reconstitution Date;

- (i) determine that such day shall still be such Sub-Index Rebalancing Date or Sub-Index Reconstitution Date, as the case may be, and determine any necessary values (including, without limitation, the Underlying Index Closing Levels and/or the closing price of any relevant Sub-Index Reconstitution Constituent on such day) by reference to the prevailing market conditions and such other factors it determines appropriate; or
 - (ii) determine that such day shall not be a Sub-Index Rebalancing Date or Sub-Index Reconstitution Date, as the case may be, and that the Sub-Index Rebalancing Date or the Sub-Index Reconstitution Date, as the case may be, will be such other day as the Underlying Index Calculation Agent shall select, in which case, the reconstitution or rebalancing, as the case may be, of the Sub-Index will instead take place on such new Sub-Index Rebalancing Date or Sub-Index Reconstitution Date, as the case may be; and
- (b) if such day is an Underlying Index Calculation Date but would not otherwise be a Sub-Index Rebalancing Date or a Sub-Index Reconstitution Date:
- (i) calculate the relevant Underlying Index Closing Level having regard to the then prevailing market conditions, the last reported closing price of any relevant Sub-Index Reconstitution Constituent and/or such other conditions that the Underlying Index Calculation Agent determines relevant for the calculation of the relevant Underlying Index Closing Level; or
 - (ii) determine that no Underlying Index Closing Level will be calculated for such day.

“Sub-Index Reconstitution Constituent” means, in relation to a day, each Sub-Index Constituent on such day and, if such day falls on a Sub-Index Reconstitution Date, each Sub-Index Constituent comprising or which, but for the occurrence of a Market Disruption Event, would comprise the Sub-Index reconstituted on such Sub-Index Reconstitution Date.

“Market Disruption Event” means, in relation to a Sub-Index Reconstitution Constituent, the occurrence or existence of:

- (a) any suspension of or limitation imposed on trading by any exchange or Related Exchange or otherwise and whether by reason of movements in price exceeding limits permitted by such exchange or Related Exchange or otherwise relating to (i) the exchange as a whole, (ii) such Sub-Index Reconstitution Constituent on the exchange or (iii) options contracts or futures contracts relating to such Sub-Index Reconstitution Constituent on the Related Exchange;
- (b) any event (other than an early closure covered in clause (c)) that disrupts or impairs the ability of market participants in general (i) to effect transactions in, or to obtain market values for, such Sub-Index Reconstitution Constituent on any relevant exchange or (ii) to effect transactions in, or obtain market values for options contracts or futures contracts relating to such Sub-Index Reconstitution Constituent on any relevant Related Exchange, in either case, at any time during either (1) the one-half hour period that ends at the Scheduled Closing Time (if the relevant day is an Underlying Index Calculation Date but not a Sub-Index Reconstitution Date) or (2) the regular trading session on the relevant exchange or Related Exchange without regard to after-hours trading or any other trading outside of the regular trading session hours on the relevant day (if such day is a Sub-Index Reconstitution Date);
- (c) the closure on any Underlying Index Calculation Date of any exchange or any Related Exchange prior to its scheduled closing time unless such earlier closing time is announced by such exchange or such Related Exchange, as the case may be, at least one hour prior to (i) the actual closing time for the regular trading session on such exchange or such Related Exchange on such Underlying Index Calculation Date or, if earlier, (ii) the submission deadline, if applicable, for orders to be entered into such exchange or such Related Exchange system for execution at the scheduled closing time on such Underlying Index Calculation Date;
- (d) with regards to a Sub-Index Constituent whose Relevant Currency is not U.S. dollars, the determination by the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, that as a result of the occurrence of an event which has or would have the effect of preventing, restricting or delaying Deutsche Bank AG, its affiliates or non-affiliated third parties from (i) converting the Relevant Currency of a Sub-Index Constituent into U.S. dollars through customary legal channels or transferring

within or from the relevant jurisdiction either currency, (ii) converting such Relevant Currency into U.S. dollars at a rate at least as favourable as the rate for domestic institutions located in the relevant jurisdiction, (iii) delivering such Relevant Currency or U.S. dollars from accounts inside the relevant jurisdiction to accounts outside such jurisdiction or (iv) transferring such Relevant Currency or U.S. dollars between accounts inside the relevant jurisdiction or to a party that is a non-resident of such jurisdiction, the ability of Deutsche Bank AG, its affiliates or non-affiliated third parties to acquire, hold, transfer or realize or otherwise to effect transactions in relation to such Sub-Index Constituent is likely to be affected;

- (e) the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, determining that as a result of a relevant jurisdiction (i) imposing any controls or announcing its intention to impose any controls, (ii) implementing or announcing its intention to implement any laws or regulations or (iii) changing or announcing its intention to change the interpretation or administration of any laws or regulations, the ability of Deutsche Bank AG, its affiliates or non-affiliated third parties to acquire, hold, transfer or realize or otherwise to effect transactions in relation to such Sub-Index Reconstitution Constituent is likely to be affected; or
- (f) a general moratorium is declared in relation to banking activities in the country in which any exchange is located.

“Relevant Currency” means, in relation to a Sub-Index Constituent, the currency in which the closing price of such Sub-Index Constituent on the primary exchange is denominated.

Selection Disruption Events and Their Consequences

If the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, determines that it is unable to obtain from FactSet some or all of the data required to determine the relevant ADVs, ROIC's, Accruals Ratios and/or the Quality Scores (a **“Selection Disruption Event”**) on a Selection Date (a **“Selection Disruption Date”**), the Underlying Index Sponsor will determine whether the occurrence or existence of such Selection Disruption Event is material in respect of Sub-Index reconstitution.

In the event that the Underlying Index Sponsor determines that the occurrence or existence of a Selection Disruption Event is material, the Selection Date will be the first succeeding Underlying Index Calculation Date that is not a Disrupted Day and the relevant Sub-Index Reconstitution Date will be postponed accordingly. However, if the Underlying Index Sponsor determines that the relevant Selection Disruption Event is not, or will not be, temporary or each of the five Underlying Index Calculation Dates immediately following the Selection Disruption Date is a Disrupted Day, the Underlying Index Sponsor will:

- (a) make such determinations and/or adjustments that, in its determination, are required to take account of such Selection Disruption Event (including, without limitation, determining that the relevant Sub-Index reconstitution will not take place or, if the Selection Disruption Event is in relation to a data source, using an alternative data source in lieu of such disrupted data source); or
- (b) notwithstanding the section *“Change in Methodology of the Quality Factor Index or the Underlying Indices and Termination,”* terminate the calculation and publication of the relevant Underlying Index.

“Disrupted Day” means any Underlying Index Calculation Date on which a Selection Disruption Event has occurred or is continuing.

Reference Index Event and their Consequences

Upon the occurrence of any Reference Index Event, the Underlying Index Sponsor will make such determinations and/or adjustments that, in its reasonable discretion, are required to take account of such event. In particular, and without limitation, the Underlying Index Sponsor, in exercising its reasonable discretion, may:

- (a) make such adjustments to the terms of the relevant Underlying Index (including, without limitation, selecting a successor Reference Index) as it considers reasonably appropriate;
- (b) decide that the day on which such event occurs will not be an Underlying Index Calculation Date or Trading Day; and/or

- (c) permanently cease to calculate and publish the relevant Underlying Index Closing Level and cancel the relevant Underlying Index.

"Reference Index Event" means a Reference Index Cancellation, Reference Index Disruption or Reference Index Modification.

"Reference Index Cancellation" means that at any relevant time the sponsor of the Reference Index or any successor sponsor permanently cancels the Reference Index.

"Reference Index Disruption" means that at any relevant time the sponsor of the Reference Index or any successor sponsor fails to disseminate the constituents of the Reference Index, calculate such Reference Index and/or publish the levels of such Reference Index or any other relevant data on any day on which such Reference Index details were scheduled to be published.

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

Index Sponsor and Underlying Index Sponsor

All determinations made by the Index Sponsor in respect of the Quality Factor Index 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. The Index Sponsor may delegate and/or transfer any of its obligations or functions under the terms of the Quality Factor Index to one or more third parties as it deems appropriate from time to time. The above paragraph is also applicable to the Underlying Index Calculation Agent and Underlying Index Sponsor (as appropriate) in respect of the Underlying Indices.

Change in Methodology of the Quality Factor Index or the Underlying Indices and Termination

The following paragraphs in this section are also applicable to the Underlying Index Calculation Agent and the Underlying Index Sponsor in respect of the Underlying Indices, with the Underlying Index Calculation Agent calculating and determining the Underlying Indices and the Underlying Index Sponsor having the authority to modify or change the methodology of the Underlying Indices (as described above).

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

Accordingly:

- (a) the Index Sponsor shall be entitled to make such modifications and/or changes as it, in its reasonable discretion, deems appropriate, including (without limitation):
 - (i) to correct any manifest error or proven error contained in the methodology described herein;
 - (ii) to cure, correct or supplement any contradictory or defective provision contained in the methodology described herein; and/or
 - (iii) if market, regulatory, juridical, financial, fiscal or other circumstances arise, which were not foreseeable by the Index Sponsor as at the Live Date and such circumstances have not been deliberately caused by the Index Sponsor and such circumstances would, in the determination of the Index Sponsor, necessitate or make desirable such a modification or change of the methodology described herein (including, but without limitation, a change in the frequency of calculation of any Index Closing Level) in order for the Quality Factor Index to continue being

calculated and determined notwithstanding the relevant circumstances. In deciding what is necessary the Index Sponsor will consider and/or take into account what the Index Sponsor determines to be the intended strategy of the Quality Factor Index.

- (b) further, and without limitation to the above provisions, the Index Sponsor shall be entitled to make such modifications and/or changes as it in its reasonable discretion deems appropriate:
 - (i) to preserve the intended strategy of the Quality Factor Index where such modification and/or change is of a formal, minor or technical nature; and/or
 - (ii) if market, regulatory, juridical, financial, fiscal or other circumstances arise, which were not foreseen by the Index Sponsor as at the Live Date and such circumstances have not been deliberately caused by the Index Sponsor and in the determination of the Index Sponsor, such modifications and/or changes would assist in maintaining the intended strategy of the Quality Factor Index and/or would ensure that the Quality Factor Index can continue to be calculated and determined by the Index Sponsor in light of such circumstances.

In making such modifications however the Index Sponsor will ensure that such modifications or changes will result in a methodology that, in the Index Sponsor's determination, is consistent in its intended strategy with the methodology described herein. The Index Sponsor may, in its discretion, at any time and without notice, terminate the calculation and publication of the Quality Factor Index.

Details of any adjustments made to the quality Factor Index shall be made available by the Index Sponsor on its website and on application to the Index Sponsor's principal office in London. Access to any such publication may be restricted by means determined as appropriate by the Index Sponsor in its reasonable discretion including, but not limited to, password protection on the Index Sponsor's website.

ANNEX III

DEUTSCHE BANK EQUITY LOW BETA TURNOVER CONTROL FACTOR USD — EXCESS RETURN INDEX

The Deutsche Bank Equity Low Beta Turnover Control Factor — USD — Excess Return Index (Bloomberg: DBGLSTBU <Index>) (the “**Low Beta Factor Index**”) is a proprietary index of Deutsche Bank AG, London Branch (the “**Index Sponsor**”) and is intended to reflect the premium an investor would earn pursuing a low beta-driven strategy by taking notional long exposure to a portfolio of stocks ranked as “low beta” stocks, tracked by the Deutsche Bank Equity Low Beta Turnover Control Factor Top — USD — Net Total Return Index (the “**Top Index**”), and beta-adjusted notional short exposure to a portfolio of stocks ranked as “high beta” stocks, tracked by the Deutsche Bank Equity Low Beta Turnover Control Factor Bottom — USD — Gross Total Return Index (the “**Bottom Index**,” together with the Top Index, the “**Underlying Indices**”).

Both the Top Index and the Bottom Index are proprietary stock indices calculated, published and disseminated daily by Deutsche Bank AG, London Branch (the “**Underlying Index Sponsor**”). The stocks comprising both the Top Index and the Bottom Index are selected from the stocks comprising the MSCI World Equal Weight — Local Currency Index (the “**Reference Index**”) based on the beta scores of these stocks ranking from lowest to highest. After applying a turnover constraint, the Top Index will include half of the top 40% of the Reference Index stocks with the lowest betas, excluding certain Reference Index stocks on the basis of liquidity, and the Bottom Index will include half of the bottom 40% of the Reference Index stocks with the highest betas, excluding certain Reference Index stocks on the basis of liquidity and stock borrow cost. The Top Index and the Bottom Index are rebalanced monthly, and all constituents in the Top Index and the Bottom Index are given an equal weight on each monthly reconstitution date.

The notional long exposure to the Top Index is set to 100% on each monthly reconstitution date. The notional short exposure to the Bottom Index is less than 100%, reduced by the ratio of the Top Index constituents’ average beta *divided* by the Bottom Index constituents’ average beta (the “**Beta Ratio**”). This adjustment by the Beta Ratio is to ensure that the market risk inherent in the Top Index is matched and consequently offset by the notional short position in the Bottom Index. To fund the Top Index, the reduced weighting in the Bottom Index (100% *minus* the Beta Ratio) will be replaced by a notional short position in a basket of cash or cash equivalents in US dollars, euros, British Pound Sterling, and Japanese yen (the “**Cash Basket**”) accruing interests at the relevant overnight rates, resulting in a deduction of the cost of that additional funding of the Top Index from the Low Beta Factor Index. The notional position of each currency in the Cash Basket will generally reflect the weighting of the shares denominated in such currency (or similar currencies) in the Reference Index as described below under “*The Cash Basket*.” The combined weighting of the notional short position of the Bottom Index and the notional short position of the Cash Basket will equal 100%. Both the Top Index and the Bottom Index currently consist of one sub-index. If there are changes in the aggregate outstanding notional investment of financial products linked to the Top Index or the Bottom Index, as applicable, such index may be divided into multiple sub-indices or combined back into fewer sub-indices, subject to the requirement that there be at least one sub-index at all times.

Beta is a number that is often used to describe the relationship between a specific asset's return and the market's return as a whole. An asset has a beta of zero if its returns change independently of changes in the market's returns. A positive beta means that the asset's returns generally follow the market's returns, in the sense that they tend to be both above their respective averages at the same time or below their respective averages at the same time. A negative beta means that the asset's returns generally move in opposition to the market's returns: one will tend to be above its average when the other is below its average. A beta of 1.0 means the asset's returns generally move in the same direction as, and about the same amount as the market. A beta greater than 1.0 means the asset's returns generally move in the same direction as, but more than the movement of the market. A positive beta less than 1.0 means the asset's returns generally move in the same direction as, but less than the movement of the market.

High beta stocks are generally more volatile to changes in the market's returns as a whole and riskier than low beta stocks. Thus, in theory, stocks with higher betas will experience greater returns compared to stocks with lower betas to compensate for such risk. Low beta investing is a response to the market observation that low beta stocks tend to be undervalued by investors and, despite the theory noted above, the return of low beta stocks tends to outperform high beta stocks over the long term. The Low Beta Factor Index seeks to implement its low beta-driven strategy by taking a notional long position in the Top Index comprising low beta stocks and a beta-adjusted notional short position in the Bottom Index comprising high beta stocks. For the purpose of the Low Beta Factor Index, beta is calculated as the trailing 5 year beta of each stock compared to the Reference Index; provided that, based on data availability, a beta shorter than 5 years, but not less than 6 months, may be used. Using this metric, a stock with relatively low beta is more likely to be selected as one of the low beta stocks tracked by the Top Index. Conversely, a stock with a relatively high beta is more likely to be selected as one of the high beta stocks tracked by the Bottom Index. Generally, the performance of the Low Beta Factor Index will be positive, reflecting the premium an investor would earn, if the low beta stocks tracked by the Top Index

outperform the high beta stocks tracked by the Bottom Index (after adjusting exposure to the Bottom Index by the Beta Ratio) sufficiently to offset any deduction on account of the Cash Basket, and negative, reflecting the loss an investor would suffer, if the low beta stocks tracked by the Top Index underperform the high beta stocks tracked by the Bottom Index (after adjusting exposure to the Bottom Index by the Beta Ratio). Whether the Top Index and the Bottom Index go up or down, if the Top Index outperforms the beta-adjusted Bottom Index sufficiently to offset any deduction from the Cash Basket and any cost deductions described below, the level of the Low Beta Factor Index will increase; conversely, if the Top Index underperforms the beta-adjusted Bottom Index, the level of the Low Beta Factor Index will decrease.

The Low Beta Factor Index is subject to a daily deduction for the cost of hypothetically implementing the notional long position in the Top Index at a rate of 0.40% per annum (the “**Long Leg Cost Rate**”) and the cost of implementing the notional short position in the Bottom Index at a rate of 0.45% per annum (the “**Short Leg Cost Rate**”). In addition, calculation of the Top Index and the Bottom Index includes a cost deduction of 0.02% (in the case of the Top Index) and -0.02% (in the case of the Bottom Index) in connection with reconstitution of their relevant sub-indices, subject to certain adjustments. Because the Low Beta Factor Index takes a notional short position in the Bottom Index, deduction of a negative 0.02% cost from the Bottom Index will reduce the level of the Low Beta Factor Index. As a result of these deductions, the levels of the Low Beta Factor Index will be lower than would otherwise be the case if such costs were not included.

The Low Beta Factor Index has been calculated on a live basis since July 16, 2013 (the “**Live Date**”) and has been retrospectively calculated using the same methodology as described herein since February 7, 2000 (the “**Index Commencement Date**”), except that such retrospective calculations prior to the Live Date used historical stock prices (adjusted to reflect historical corporate events) provided by dbGrade which uses FAME (database). Such adjustments to the historical stock prices provided by dbGrade may be different from the adjustments for corporate events set forth below. Therefore, the Low Beta Factor Index has limited performance history and no actual investment which allowed tracking of the performance of the Low Beta Factor Index was possible before the Live Date. The Index Sponsor will calculate the level of the Low Beta Factor Index (the “**Index Closing Level**”) on each Index Calculation Date as described below under “*Calculation of the Index Closing Level*.” The Index Closing Level on the Index Commencement Date was set at 1,000.

The Reference Index is a benchmark stock index calculated, published and disseminated daily by MSCI Inc. (“**MSCI**” or the “**Reference Index Sponsor**”). The Reference Index includes the same constituent stocks as the MSCI World Index, which is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of certain developed equity markets in the U.S. dollars. The Reference Index is rebalanced in February, May, August and November, coinciding with the quarterly and semi-annual reviews of the MSCI World Index. Unlike the MSCI World Index, all constituents of the Reference Index are given an equal weight at each quarterly rebalance date and the Reference Index is calculated in the constituents’ local currencies. Therefore, the Reference Index only represents the price appreciation or depreciation of the constituents excluding the impact of currency fluctuations. As of May 31, 2016, the Reference Index comprises over 1,639 large and mid-cap equity securities from the following 23 developed equity markets: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States.

Calculation of the Index Closing Level

The Low Beta Factor Index is rebalanced on each monthly Index Reconstitution Date, which is typically the 6th calendar day of each month. The Index Closing Level will generally increase if the Top Index outperforms the beta-adjusted Bottom Index measured during the period from the previous Index Reconstitution Date to the day of calculation, and decrease if the Top Index underperforms the beta-adjusted Bottom Index measured during the same period. The Index Closing Level on each Index Calculation Date will reflect its notional long exposure to the Top Index and notional short exposure to both the Bottom Index and the Cash Basket, subject to deduction on a daily basis for notional costs assessed at the Long Leg Cost Rate and Short Leg Cost Rate. The Index Closing Level is calculated using the following formula:

$$IL(t) = IL(t_R) \times \left(1 + \frac{TIL(t)}{TIL(t_R)} - LLC \times \frac{ACT(t_R, t)}{365} - \left(\frac{BIL(t)}{BIL(t_R)} + SLC \times \frac{ACT(t_R, t)}{365} \right) \times \frac{TIAB(t_R)}{BIAB(t_R)} - \frac{CBL(t)}{CBL(t_R)} \times \left(1 - \frac{TIAB(t_R)}{BIAB(t_R)} \right) \right)$$

where:

$IL(t)$	is the Index Closing Level on such Index Calculation Date.
$IL(t_R)$	is the Index Closing Level on the Index Reconstitution Date immediately preceding such Index Calculation Date.
$TIL(t)$	is the closing level of the Top Index (the “ Top Index Level ”) on such Index Calculation Date.
$TIL(t_R)$	is the Top Index Level on the Index Reconstitution Date immediately preceding such Index Calculation Date.
$BIL(t)$	is the closing level of the Bottom Index (the “ Bottom Index Level ,” and together with the Top Index Level, the “ Underlying Index Closing Level ”) on such Index Calculation Date.
$BIL(t_R)$	is the Bottom Index Level on the Index Reconstitution Date immediately preceding such Index Calculation Date.
$TIAB(t_R)$	is the average beta of the Sub-Index Constituents (as defined below) in the Top Index on the Selection Date (as defined below) immediately preceding such Index Calculation Date.
$BIAB(t_R)$	is the average beta of the Sub-Index Constituents in the Bottom Index on the Selection Date immediately preceding such Index Calculation Date.
$CBL(t)$	is the closing level of the Cash Basket (the “ Cash Basket Level ”) on such Index Calculation Date.
$CBL(t_R)$	is the Cash Basket Level on the Index Reconstitution Date immediately preceding such Index Calculation Date.
LLC	is the Long Leg Cost Rate of 0.40% per annum.
SLC	is the Short Leg Cost Rate of 0.45% per annum.
$ACT(t_R, t)$	is the number of calendar days from, but excluding, the Index Reconstitution Date immediately preceding such Index Calculation Date to, and including, such Index Calculation Date.

“**Index Calculation Date**” means each Underlying Index Calculation Date (as defined below, subject to adjustment by the Underlying Index Sponsor) and is expected to be each Index Business Day.

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

“**Index Reconstitution Date**” means the 6th calendar day of each calendar month, or if such day is not a MSCI Trading Day, the first MSCI Trading Day immediately following such day.

“**MSCI Trading Day**” means a Trading Day in relation to all stock constituents of the Reference Index.

“**Trading Day**” means (a) in relation to a stock, any day on which the primary exchange relating to such stock is scheduled to be open for its usual trading session, (b) in relation to an Underlying Index, any day that is a Trading Day in relation to all of its sub-indices; or (c) in relation to a sub-index of an Underlying Index, any day that is a Trading Day in relation to all constituents of such sub-index and, if relevant, all stocks comprising the new constituents.

The Index Sponsor will publish the Index Closing Level for each Index Business Day as soon as reasonably practicable after 16:00 London time on the next Index Business Day following such Index Business Day at the Index Sponsor’s principal office in London, on the Index Sponsor’s website under the heading “DB Equity Low Beta Turnover Control Factor Index — USD — Excess Return,” on Bloomberg page DBGLSTBU and Reuters page .DBGLSTBU, or at such other information sources as the Index Sponsor may select from time to time at its sole and absolute discretion. The Index Sponsor may, at any time and without notice, increase the frequency of publication of the Index Closing Level.

Top Index and Bottom Index

The Deutsche Bank Equity Low Beta Turnover Control Factor Top — USD — Net Total Return Index, which we refer to as the Top Index, is designed to reflect the performance of a monthly rebalanced notional portfolio of low beta stocks representing half of the top 40% of the constituent stocks comprising the Reference Index with the lowest Betas (a lower Beta will have a higher ranking), excluding certain stocks in the Reference Index on the basis of liquidity. For each constituent stock of the Reference Index (a “**Reference Index Stock**”), the beta (“**Beta**”) of such stock is the trailing 5 year beta of such stock compared to the Reference Index, computed as described below. The Deutsche Bank Equity Low Beta Turnover Control Factor Bottom — USD — Gross Total Return Index, which we refer to as the Bottom Index, is designed to reflect the performance of a monthly rebalanced notional portfolio of high Beta stocks representing half of the bottom 40% of the Reference Index Stocks with the highest Betas (a higher Beta will have a lower ranking), excluding certain Reference Index Stocks on the basis of liquidity and stock borrow cost. We refer to each of the Top Index and the Bottom Index as an Underlying Index.

On the Index Commencement Date, the Top Index will include the top 20% of the Reference Index stocks with the lowest betas, and the Bottom Index will include the bottom 20% with the highest betas. On each monthly rebalancing date following the Index Commencement Date, the previous constituents of the Top Index that still rank within the top 40% of the Reference Index stocks with the lowest betas will remain in the Top Index. Each previous constituent that falls out of the top 40% will be replaced by a new constituent with the lowest beta until the previous constituents remaining in the Top Index and the newly selected constituents consist of 20% of the Reference Index Stocks. Similarly, the previous constituents of the Bottom Index that still rank within the bottom 40% will remain in the Bottom Index. Each previous constituent that rise above of the bottom 40% will be replaced by a new constituent with the highest beta until the previous constituents remaining in the Bottom Index and the newly selected constituents consist of 20% of the Reference Index Stocks. This selection constraint (the “**Turnover Constraint**”) is designed to reduce constituent turnover in each Underlying Index.

Each Underlying Index is rebalanced monthly and the selected constituent stocks are equally weighted on each reconstitution date, as further described below. The calculation of the Top Index and the Bottom Index includes a cost deduction of 0.02% (in the case of the Top Index) and -0.02% (in the case of the Bottom Index) in connection with reconstitution of their relevant sub-indices, subject to certain adjustments as described below. The negative 0.02% reconstitution cost will increase the level of the Bottom Index and, because the Low Beta Factor Index has a notional short exposure to the Bottom Index, will effectively reduce the level of the Low Beta Factor Index.

Both Underlying Indices are total return indices whose index levels reflect cash dividend reinvestment, meaning that they measure the market performance of their constituent stocks in terms of both price performance and income from cash dividend payments. Cash dividends are deemed reinvested in the relevant Underlying Index on the day the dividend-paying stock is quoted ex-dividend. The Top Index is a net total return index calculated so that the amount of cash dividend reinvested is equal to the cash dividend distributed after taking account of the hypothetical tax rate (the “**Withholding Tax Rate**”) at which the relevant jurisdiction generally taxes (or imposes a withholding tax upon) cash dividends paid by corporations incorporated in such jurisdiction to a non-resident of the relevant jurisdiction as determined by the Underlying Index Calculation Agent by reference to established industry sources. The Bottom Index is a gross total return index calculated so that the amount of cash dividend deemed reinvested is equal to the cash dividend distributed, irrespective of any tax accruals, deductions or withholding. Net total return indices are often used for tracking notional long positions, whose hypothetical dividend incomes would be subject to withholding tax, while gross total return indices are often used for tracking notional short positions, whose hypothetical dividend payments would have to be repaid by the holder of a short position to the stock lender without reduction for tax withholding.

Each Underlying Index is calculated after converting the trading prices of the relevant index constituents into U.S. dollars at the relevant exchange rates. Each Underlying Index has been calculated on a live basis since the Live Date of the Low Beta Factor Index and has been retrospectively calculated since the Index Commencement Date. Therefore, each Underlying Index has limited performance history and no actual investment that allowed tracking of the performance of such Underlying Index was possible before the Live Date. Deutsche Bank AG, London Branch (the “**Underlying Index Calculation Agent**”) will calculate the Underlying Index Closing Levels on each Underlying Index Calculation Date as described below under “*Calculation of the Sub-Index Closing Level*” and “*Underlying Index Construction and Calculation.*” The Underlying Index Closing Levels of both Underlying Indices were set at 1,000 on the Index Commencement Date.

The “**Underlying Index Calculation Date**” means any weekday on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealings in foreign exchange and foreign currency deposits) in London.

Addition or Deletion of Sub-Indices

Each Underlying Index currently consists of one sub-index (“**Sub-Index 1**”). If there are changes in the aggregate outstanding notional investment of financial products linked to an Underlying Index, one or more additional sub-indices (each, a “**Sub-Index**,” and together with Sub-Index 1, the “**Sub-Indices**”) may be created and added to such Underlying Index. Similarly, Sub-Indices may also be removed from an Underlying Index, subject to the requirement that there be at least one Sub-Index at all times. See “*Underlying Index Construction and Calculation*” below for more information about the addition and deletion of Sub-Indices. Each Sub-Index is reconstituted on a monthly basis and its constituents (the “**Sub-Index Constituents**”) will be selected at the same time using the same criteria as further detailed below under “*Sub-Index Reconstitution*,” except that each Sub-Index will have its own reconstitution dates (each, a “**Sub-Index Reconstitution Date**”).

Sub-Index Reconstitution

On the last Underlying Index Calculation Date of each calendar month (the “**Selection Date**”), the Underlying Index Calculation Agent will select, for each Sub-Index to be reconstituted in the immediately following calendar month, the Sub-Index Constituents from the Reference Index Stocks based on their Betas and the application of the Turnover Constraint on such Selection Date.

Identifying the Filtered List Stocks

The Underlying Index Calculation Agent will first identify the Reference Index Stocks on such Selection Date, and select from the Reference Index Stocks the eligible “**Selection Pool Stocks**” by excluding those stocks (a) whose Beta and/or average daily trading volume in the previous 60 weekdays (the “**ADV**”) cannot be determined by the Underlying Index Calculation Agent, (b) whose available data are not sufficient to compute a minimum of a 6-month Beta or (c) in the case of the Bottom Index only, whose stock borrow cost is greater than 1% per annum.

Second, the Underlying Index Calculation Agent will identify the “**Filtered List Stocks**” by excluding those stocks whose ADV is ranked lower than the 20th percentile among the Selection Pool Stocks.

Calculating the Beta

On each Selection Date, the Underlying Index Calculation Agent will determine the Beta of each Filtered List Stock which is equal to the covariance of the daily returns of such Filtered List Stock and the Reference Index divided by the variance of the daily return of the Reference Index, each calculated using the daily returns over the previous 5 years preceding the Selection Date. Covariance is a measure of the extent to which the prices of two assets move together and thus provides a measure of the strength and magnitude of the correlation between two assets. Variance is the square of volatility. Based on data availability, the Underlying Index Calculation Agent may determine a Beta shorter than 5 years, but not less than 6 months (using a variance and a covariance of shorter than 5 years).

Selecting the Sub-Index Constituents

After the Underlying Index Calculation Agent determines the Betas of each Filtered List Stock on the relevant Selection Date, the Filtered List Stocks will be ranked by their Betas from lowest to highest (a lower Beta will have a higher ranking). On the Index Commencement Date, each Sub-Index of the Top Index will comprise the top 20% of the Filtered List Stocks with the lowest Betas and each Sub-Index of the Bottom Index will comprise the bottom 20% of the Filtered List Stocks with the highest Betas. We refer to each Sub-Index Constituent comprising a Sub-Index following a Sub-Index Reconstitution Date, as a new Sub-Index Constituent, and each Sub-Index Constituent comprising a Sub-Index on or prior to a Sub-Index Reconstitution Date, as a previous Sub-Index Constituent.

On each Selection Date following the Index Commencement Date, the Underlying Index Calculation Agent will apply the Turnover Constraint to reduce the number of constituent stocks that are added and/or removed on each Selection Date. The Underlying Index Calculation Agent will first determine the “**Stable Stocks**” by (a) identifying each Filtered List Stock that is a previous Sub-Index Constituent and (b) excluding each Filtered List Stock that is a previous Sub-Index Constituent and (i) in the case of the Top Index, has a Beta that is lower than the 60th percentile among the Filtered List Stocks or (ii) in the case of the Bottom Index, has a Beta that is higher than 40th percentile among the Filtered List Stocks. Each Selection Pool Stock that is not a Stable Stock (a “**Potential Additional Stock**”) will be ranked by each Potential Additional Stock’s Beta from lowest to highest. If two or more such Potential Additional Stocks have the same Beta, then such stocks will be ranked by decreasing market value of their respective issuers on such Selection Date. The “**Number of Additional Stocks**” on the relevant Selection Date is the difference between (a) the number of

Filtered List Stocks divided by five (rounded to the nearest integer with 0.5 rounded upwards) (the “**Target Number of Shares**”) and (b) the number of Stable Stocks. If the Target Number of Shares is less than the number of Stable Stocks, the Number of Additional Stock is zero. If the Number of Additional Stocks is positive, then in the case of the Top Index, the Underlying Index Calculation Agent will identify, starting from the Potential Additional Stock with the lowest Beta and thereafter in order of decreasing rank, a number of Potential Additional Stocks that is equal to the Number of Additional Stocks. In the case of the Bottom Index, the Underlying Index Calculation Agent will identify, starting from the Potential Additional Stock with the highest Beta and thereafter in order of increasing rank, a number of Potential Additional Stocks that is equal to the Number of Additional Stocks. By applying the Turnover Constraint, the Top Index will always be comprised of approximately half of the top 40% of the Filtered List Stocks with the lowest Betas and the Bottom Index will always be comprised of approximately half of the bottom 40% of the Filtered List Stocks with the highest Betas.

Each Filtered List Stock identified in the manner described above will be a Sub-Index Constituent for the relevant Sub-Index following its Sub-Index Reconstitution Date. The Sub-Index Constituents will be equally weighted on the Sub-Index Reconstitution Date and the “**New Weight**” of each Sub-Index Constituent will be equal to 1 (one) divided by the number of Sub-Index Constituents.

Calculation of the Sub-Index Closing Level

For each Sub-Index, the Underlying Index Calculation Agent will calculate the closing level of such Sub-Index (the “**Sub-Index Closing Level**”) on each Underlying Index Calculation Date based on the performance of the Sub-Index Constituents on such Underlying Index Calculation Date, determined after converting the closing price of each Sub-Index Constituent into U.S. dollars. If, on a Sub-Index Reconstitution Date, one or more new Sub-Index Constituents for a Sub-Index is determined to be a “**Restricted Stock**” that Deutsche Bank AG and/or any of its affiliates is restricted from dealing in pursuant to regulatory or legal obligations or internal policies, the Underlying Index Calculation Agent will remove such stocks from the Sub-Index Constituents and replace such stocks with a notional Cash Amount (as defined below) deemed to be included in such Sub-Index effective on the immediately following Underlying Index Calculation Date.

The Sub-Index Closing Level is calculated using the following formula:

$$CSIL(t) = SICA(t) + \sum P_i(t) \times FX_i(t) \times N_i(t)$$

where:

- $CSIL(t)$ is the Sub-Index Closing Level of a Sub-Index on the relevant Underlying Index Calculation Date.
- $SICA(t)$ is the Cash Amount of such Sub-Index on such Underlying Index Calculation Date.
- $P_i(t)$ is the closing price of a Sub-Index Constituent on such Underlying Index Calculation Date.
- $FX_i(t)$ is the exchange rate between the relevant currency of such Sub-Index Constituent and U.S. dollars on such Underlying Index Calculation Date.
- $N_i(t)$ is the Unit Weight of such Sub-Index Constituent on such Underlying Index Calculation Date, as described below under “*Determining the Unit Weight.*”
- \sum is the operation of adding a series of numbers.

Because the closing price of each Sub-Index Constituent is converted into U.S. dollars for purposes of calculating the Sub-Index Closing Level, the Underlying Indices and the Low Beta Factor Index will be exposed to currency exchange rate risk with respect to each of the currencies in which the Sub-Index Constituents trade. Exposure to currency changes will depend on the extent to which such currencies strengthen or weaken against the U.S. dollar and the relative weight of the Sub-Index Constituents denominated in each such currency. A net depreciation of the U.S. dollar against the currencies in which the Sub-Index Constituents trade will result in an increase in the level of the relevant Underlying Index. Conversely, a net appreciation of U.S. dollar against such currencies will result in a decrease in the level of the relevant Underlying Index. Fluctuations in currency exchange rates can have a continuing impact on the levels the Underlying Indices and the Low Beta Factor Index.

On the Underlying Index Calculation Date immediately following a Sub-Index Reconstitution Date, the “**Cash Amount**” is equal to the sum of, for all such Restricted Stocks, the *product* of (a) the Sub-Index Closing Level on such Sub-Index Reconstitution Date (calculated by reference to the previous Sub-Index Constituents), (b) 1 (one) minus the Total Reconstitution Cost on such Sub-Index Reconstitution Date and (c) the New Weight of such stock prior to its removal.

Determining the Unit Weights

Following each Selection Date, the Underlying Index Calculation Agent will reconstitute each Sub-Index on its immediately following Sub-Index Reconstitution Date by replacing the previous Sub-Index Constituents with the equally weighted new Sub-Index Constituents. In order to do so, the Underlying Index Calculation Agent will calculate the Unit Weight of each new Sub-Index Constituent applicable after reconstitution. The Unit Weight of each new Sub-Index Constituent is equal to the notional number of units required to give equal weighting to each Sub-Index Constituent in the Sub-Index, reduced by a pro rata share of the Total Reconstitution Cost incurred in connection with notionally replacing and rebalancing the previous Sub-Index Constituents with the new Sub-Index Constituents.

If at any time any Sub-Index Constituent is expected to pay a cash dividend, the Unit Weight of such Sub-Index Constituent will be increased on the day such Sub-Index Constituent is traded ex-dividend on its primary exchange to account for the reinvested dividend (in the case of a Sub-Index Constituent comprising the Top Index, the reinvested dividend will be the cash dividend after taking into account the Withholding Tax Rate). The Unit Weight may also be adjusted to take into account certain corporate events that impact a Sub-Index Constituent. Please see below under “*Corporate Events and Their Consequences*” for more information.

The “**Unit Weight**” of each new Sub-Index Constituent is equal to the product of:

- (a) the Sub-Index Closing Level on such Sub-Index Reconstitution Date (calculated by reference to the previous Sub-Index Constituents) times the New Weight of such Sub-Index Constituent on such Sub-Index Reconstitution Date divided by the closing price of such Sub-Index Constituent on such Sub-Index Reconstitution Date, converted into U.S. dollars by reference to the relevant exchange rate; and
- (b) 1(one) minus the Total Reconstitution Cost.

The “**Total Reconstitution Cost**” on each Sub-Index Reconstitution Date is the total cost incurred in connection with notionally selling (or buying to close out short positions in) the previous Sub-Index Constituents, buying (or selling to establish short positions in) the new Sub-Index Constituents and rebalancing the previous Sub-Index Constituents that are also new Sub-Index Constituents. The Total Reconstitution Cost is equal to the sum of, for each stock which is a previous Sub-Index Constituent and/or a new Sub-Index Constituent (other than any stock which is determined to be a Restricted Stock on such Sub-Index Reconstitution Date), the *product* of (a) the Reconstitution Cost of such stock and (b) the absolute value of the difference between:

- (a) the New Weight of such stock; and
- (b) the ratio of (i) the product of (1) the Unit Weight of such stock on such Sub-Index Reconstitution Date and (2) the closing price of such stock on such Sub-Index Reconstitution Date, converted into U.S. dollars by reference to the relevant exchange rate divided by (ii) the Sub-Index Closing Level on such Sub-Index Reconstitution Date (calculated by reference to the previous Sub-Index Constituents).

For the purposes of this calculation, the Unit Weight for each new Sub-Index Constituent that is not a previous Sub-Index Constituent is equal to zero, and the New Weight for each previous Sub-Index Constituent that is not a new Sub-Index Constituent is equal to zero.

The “**Reconstitution Cost**” is a per unit cost of (a) for the Top Index, 0.02% or (b) for the Bottom Index, -0.02%. *The Reconstitution Cost may be adjusted by the Underlying Index Sponsor by an amount necessary to cover any change in the cost of transacting in such stock on the relevant exchange due to any increase or imposition of financial transactions tax by a relevant taxing authority, if applicable. Any change in the Reconstitution Cost will only become effective following the publication of a notice on the Underlying Index Sponsor’s website specifying such change in the Reconstitution Cost.*

Underlying Index Construction and Calculation

On the 15th calendar day of each calendar month, if the Underlying Index Sponsor determines that the aggregate outstanding notional investment of the financial products linked in whole or in part to an Underlying Index or the Euro denominated version of such Underlying Index has reached a higher Sub-Index Determination Band (as defined below) or fallen into a lower Sub-Index Determination Band, the Underlying Index Sponsor will determine whether the existence of such event is material in respect of the reconstitution of the existing Sub-Index or Sub-Indices. If the Underlying Index Sponsor determines that such event is material, the Underlying Index Sponsor will add (if the total notional investment has increased) or remove (if the total notional investment has decreased) one or more Sub-Indices as determined in its reasonable discretion. The Underlying Index Sponsor will publish its determination at least 10 calendar days prior to effecting such change.

“Sub-Index Determination Band” means, each of:

- (a) EUR 0 to EUR 200,000,000 (inclusive);
- (b) EUR 200,000,001 to EUR 400,000,000 (inclusive);
- (c) EUR 400,000,001 to EUR 600,000,000 (inclusive);
- (d) EUR 600,000,001 to EUR 800,000,000 (inclusive); and
- (e) thereafter, each band from, but excluding, the upper end of the previous Sub-Index Determination Band to, and including, the next multiple of EUR 200,000,000.

If an additional Sub-Index is, or Sub-Indices are, created and added, the Underlying Index will be rebalanced among Sub-Indices on the 1st calendar day of each month (each, a **“Sub-Index Rebalancing Date”**) so that each of the Sub-Indices will be equally weighted.

Following the initial constitution of an Underlying Index and its Sub-Index 1, the Underlying Index Calculation Agent will continue to reconstitute Sub-Index 1 every month on the relevant Sub-Index Reconstitution Date. In relation to any additional Sub-Index, the Underlying Index Calculation Agent will reconstitute such Sub-Index on each monthly Sub-Index Reconstitution Date for such additional Sub-Index using the new Sub-Index Constituents identified on the relevant Selection Date.

The Underlying Index Calculation Agent will calculate the Underlying Index Closing Level for each Underlying Index on each Underlying Index Calculation Date. The Underlying Index Closing Level is equal to the sum of, for each Sub-Index of such Underlying Index, the product of (a) the Sub-Index Closing Level of such Sub-Index and (b) the Sub-Index Weight of such Sub-Index on such Underlying Index Calculation Date.

The Underlying Index Calculation Agent will determine, on each Sub-Index Rebalancing Date, the **“Sub-Index Weight”** of each Sub-Index so that each Sub-Index has an equal impact on the overall Underlying Index Closing Level. The Sub-Index Weight of each Sub-Index effective on the immediately following Calculation Date is equal to:

- (a) the sum of (i) the Underlying Index Closing Level on such Sub-Index Rebalancing Date and (ii) the total dividend adjustment amount that reflects the difference between the expected dividends and the actual dividends paid (after taking account of the Withholding Tax Rate in the case of the Top Index) on such Sub-Index Rebalancing Date following the adjustment on such Sub-Index Rebalancing Date; divided by
- (b) the product of (i) the Sub-Index Closing Level on such Sub-Index Rebalancing Date and (ii) the number of Sub-Indices constituting such Underlying Index immediately following such Sub-Index Rebalancing Date.

The Underlying Index Sponsor will publish the Underlying Index Closing Levels on each Underlying Index Calculation Date as soon as reasonably practicable after 16:00 London time on the next Underlying Index Calculation Date following such Underlying Index Calculation Date at the Underlying Index Sponsor’s principal office in London, on the Underlying Index Sponsor’s website, on Bloomberg and/or Reuters, or at such other information sources as the Underlying Index Sponsor may select from time to time at its sole and absolute discretion. The Underlying Index Sponsor may, at any time and without notice, either permanently or temporarily increase the frequency of publication of the Underlying Index Closing Levels.

Corporate Events and Their Consequences

The following sections describe how an Underlying Index will be adjusted to reflect certain corporate events and to preserve the economic value of such Underlying Index. In circumstances where the holder of a stock would be required to choose between several alternative options, such as cash or shares distribution, the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, will determine which alternative is to be taken and adjust the relevant Underlying Index accordingly.

Stock Reclassification, Stock Distribution, Spin-off or Rights Issuance

Following the declaration by the issuer of a Sub-Index Constituent of the terms of any stock reclassification, stock distribution, spin-off or rights issuance (each, an **“Adjustment Event”**), the Underlying Index Calculation Agent will adjust the Unit Weight of such Sub-Index Constituent or the Cash Amount (if any Sub-Index Constituent or any distributed asset is removed from the relevant Sub-Index due to such Adjustment Event) to take into account the dilutive or concentrative effect of such Adjustment Event on the theoretical value of the affected Sub-Index Constituent in accordance with the formulaic rules of the Underlying Index.

Other Potential Adjustment Events

Following the declaration by an issuer of the terms of any Other Potential Adjustment Event, the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, will determine in its reasonable discretion whether such Other Potential Adjustment Event has a dilutive or concentrative effect on the theoretical value of the relevant Sub-Index Constituent. In determining the impact on such theoretical value, the Underlying Index Calculation Agent may take into account any tax, duty, withholding, deduction or other charge which would be sustained or incurred by a holder of such Sub-Index Constituent that is a financial institution resident in Germany as a result of such Other Potential Adjustment Event. If the Underlying Index Calculation Agent determines that such Other Potential Adjustment Event has a dilutive or concentrative effect on the theoretical value of the relevant Sub-Index Constituent, then in relation to such Sub-Index Constituent and Sub-Index, the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, will make such determinations and/or adjustments that in its reasonable discretion are required to take account of such event, including (a) adjusting the Unit Weight of such Sub-Index Constituent and/or the formula for determining the relevant Underlying Index Level and/or any other provisions of the rules of such Underlying Index and (b) determine the effective date of such adjustment.

“Other Potential Adjustment Event” means any of the following:

- (a) a call by the issuer of a Sub-Index Constituent in respect of such Sub-Index Constituent that is not fully paid;
- (b) a repurchase by the issuer of a Sub-Index Constituent or any of its affiliates of the relevant Sub-Index Constituent whether out of profits or capital and whether the consideration for such repurchase is cash, securities or otherwise;
- (c) in respect of the issuer of a Sub-Index Constituent, an event that results in any shareholder rights being distributed, or becoming separated from shares of common stock or other shares of the capital stock of the issuer of such Sub-Index Constituent pursuant to a shareholder rights plan or arrangement directed against hostile takeovers that provides for a distribution of preferred stock, warrants, debt instruments or stock rights at a price below their market value upon the occurrence of certain events;
- (d) any redemption of shareholder rights referred to in (c) above; or
- (e) any other event that may have, in the opinion of the Underlying Index Sponsor, a dilutive, concentrative or other effect on the theoretical value of a Sub-Index Constituent.

Delisting

Upon the announcement of a delisting of a Sub-Index Constituent by its primary exchange, the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, will determine whether a suitable exchange for such Sub-Index Constituent exists. If no suitable exchange exists, the Underlying Index Calculation Agent will (a) increase the Cash Amount of each relevant Sub-Index to an amount to offset the removal of the delisted Sub-Index Constituent and (b)

remove such delisted Sub-Index Constituent from such Sub-Index. If a suitable exchange exists, the suitable exchange will be deemed to be the primary exchange for such Sub-Index Constituent.

Merger, Tender Offer, Nationalization or Insolvency

If a merger event, tender offer, nationalization or insolvency occurs in relation to a Sub-Index Constituent and/or an issuer of a Sub-Index Constituent, the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, will make such determinations and/or adjustments that are required to be taken to account for such event. In particular, and without limitation, the Underlying Index Calculation Agent, in making such determination, will (a) make such adjustments to any one or more of the provisions of the Underlying Index rules and/or take such actions that are required to account for the merger event, tender offer, nationalization or insolvency and (b) determine the effective date of such adjustments. In making such determination, the Underlying Index Calculation Agent in consultation with the Underlying Index Sponsor may, without limitation, take into account any adjustment in respect of the merger event, tender offer, nationalization or insolvency made by a Related Exchange to options contracts or futures contracts on the relevant Sub-Index Constituent traded on that Related Exchange when determining the appropriate adjustment.

“Related Exchange” means, in relation to a stock, any exchange, trading system or quotation system on which, in the Underlying Index Calculation Agent determination, where derivatives linked to such share usually trade.

Market Disruption Events and their Consequences

If the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, determines that a Market Disruption Event occurs or subsists on any day, the Underlying Index Sponsor will determine whether the occurrence or existence of such Market Disruption Event is material in respect of the reconstitution of the Sub-Indices and/or the calculation of the Underlying Index Closing Levels.

In the event that the Underlying Index Sponsor determines that the occurrence or existence of a Market Disruption Event is material to such reconstitution or calculation, the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, will make such determinations and/or adjustments that, in its determination, are required to take account of such Market Disruption Event. In particular (and without limitation), the Underlying Index Calculation Agent, in making such determination, may:

- (a) if such day would otherwise be a Sub-Index Rebalancing Date or a Sub-Index Reconstitution Date;
 - (i) determine that such day shall still be such Sub-Index Rebalancing Date or Sub-Index Reconstitution Date, as the case may be, and determine any necessary values (including, without limitation, the Underlying Index Closing Levels and/or the closing price of any relevant Sub-Index Reconstitution Constituent on such day) by reference to the prevailing market conditions and such other factors it determines appropriate; or
 - (ii) determine that such day shall not be a Sub-Index Rebalancing Date or Sub-Index Reconstitution Date, as the case may be, and that the Sub-Index Rebalancing Date or the Sub-Index Reconstitution Date, as the case may be, will be such other day as the Underlying Index Calculation Agent shall select, in which case, the reconstitution or rebalancing, as the case may be, of the Sub-Index will instead take place on such new Sub-Index Rebalancing Date or Sub-Index Reconstitution Date, as the case may be; and
- (b) if such day is an Underlying Index Calculation Date but would not otherwise be a Sub-Index Rebalancing Date or a Sub-Index Reconstitution Date:
 - (i) calculate the relevant Underlying Index Closing Level having regard to the then prevailing market conditions, the last reported closing price of any relevant Sub-Index Reconstitution Constituent and/or such other conditions that the Underlying Index Calculation Agent determines relevant for the calculation of the relevant Underlying Index Closing Level; or
 - (ii) determine that no Underlying Index Closing Level will be calculated for such day.

“Sub-Index Reconstitution Constituent” means, in relation to a day, each Sub-Index Constituent on such day and, if such day falls on a Sub-Index Reconstitution Date, each Sub-Index Constituent comprising or which, but for the

occurrence of a Market Disruption Event, would comprise the Sub-Index reconstituted on such Sub-Index Reconstitution Date.

"Market Disruption Event" means, in relation to a Sub-Index Reconstitution Constituent, the occurrence or existence of:

- (a) any suspension of or limitation imposed on trading by any exchange or Related Exchange or otherwise and whether by reason of movements in price exceeding limits permitted by such exchange or Related Exchange or otherwise relating to (i) the exchange as a whole, (ii) such Sub-Index Reconstitution Constituent on the exchange or (iii) options contracts or futures contracts relating to such Sub-Index Reconstitution Constituent on the Related Exchange;
- (b) any event (other than an early closure covered in clause (c)) that disrupts or impairs the ability of market participants in general (i) to effect transactions in, or to obtain market values for, such Sub-Index Reconstitution Constituent on any relevant exchange or (ii) to effect transactions in, or obtain market values for options contracts or futures contracts relating to such Sub-Index Reconstitution Constituent on any relevant Related Exchange, in either case, at any time during either (1) the one-half hour period that ends at the Scheduled Closing Time (if the relevant day is an Underlying Index Calculation Date but not a Sub-Index Reconstitution Date) or (2) the regular trading session on the relevant exchange or Related Exchange without regard to after-hours trading or any other trading outside of the regular trading session hours on the relevant day (if such day is a Sub-Index Reconstitution Date);
- (c) the closure on any Underlying Index Calculation Date of any exchange or any Related Exchange prior to its scheduled closing time unless such earlier closing time is announced by such exchange or such Related Exchange, as the case may be, at least one hour prior to (i) the actual closing time for the regular trading session on such exchange or such Related Exchange on such Underlying Index Calculation Date or, if earlier, (ii) the submission deadline, if applicable, for orders to be entered into such exchange or such Related Exchange system for execution at the scheduled closing time on such Underlying Index Calculation Date;
- (d) with regards to a Sub-Index Constituent whose Relevant Currency is not U.S. dollars, the determination by the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, that as a result of the occurrence of an event which has or would have the effect of preventing, restricting or delaying Deutsche Bank AG, its affiliates or non-affiliated third parties from (i) converting the Relevant Currency of a Sub-Index Constituent into U.S. dollars through customary legal channels or transferring within or from the relevant jurisdiction either currency, (ii) converting such Relevant Currency into U.S. dollars at a rate at least as favourable as the rate for domestic institutions located in the relevant jurisdiction, (iii) delivering such Relevant Currency or U.S. dollars from accounts inside the relevant jurisdiction to accounts outside such jurisdiction or (iv) transferring such Relevant Currency or U.S. dollars between accounts inside the relevant jurisdiction or to a party that is a non-resident of such jurisdiction, the ability of Deutsche Bank AG, its affiliates or non-affiliated third parties to acquire, hold, transfer or realize or otherwise to effect transactions in relation to such Sub-Index Constituent is likely to be affected;
- (e) the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, determining that as a result of a relevant jurisdiction (i) imposing any controls or announcing its intention to impose any controls, (ii) implementing or announcing its intention to implement any laws or regulations or (iii) changing or announcing its intention to change the interpretation or administration of any laws or regulations, the ability of Deutsche Bank AG, its affiliates or non-affiliated third parties to acquire, hold, transfer or realize or otherwise to effect transactions in relation to such Sub-Index Reconstitution Constituent is likely to be affected; or
- (f) a general moratorium is declared in relation to banking activities in the country in which any exchange is located.

"Relevant Currency" means, in relation to a Sub-Index Constituent, the currency in which the closing price of such Sub-Index Constituent on the primary exchange is denominated.

Selection Disruption Events and Their Consequences

If the Underlying Index Calculation Agent, in consultation with the Underlying Index Sponsor, determines that it is unable to obtain from FactSet Research Systems Inc. or any successor ("**FactSet**") some or all of the data required to determine the relevant ADVs and/or Betas (a "**Selection Disruption Event**") on a Selection Date (a "**Selection Disruption Date**"), the Underlying Index Sponsor will determine whether the occurrence or existence of such Selection Disruption Event is material in respect of Sub-Index reconstitution.

In the event that the Underlying Index Sponsor determines that the occurrence or existence of a Selection Disruption Event is material, the Selection Date will be the first succeeding Underlying Index Calculation Date that is not a Disrupted Day and the relevant Sub-Index Reconstitution Date will be postponed accordingly. However, if the Underlying Index Sponsor determines that the relevant Selection Disruption Event is not, or will not be, temporary or each of the five Underlying Index Calculation Dates immediately following the Selection Disruption Date is a Disrupted Day, the Underlying Index Sponsor will:

- (a) make such determinations and/or adjustments that, in its determination, are required to take account of such Selection Disruption Event (including, without limitation, determining that the relevant Sub-Index reconstitution will not take place or, if the Selection Disruption Event is in relation to a data source, using an alternative data source in lieu of such disrupted data source); or
- (b) notwithstanding the section "*Change in Methodology of the Low Beta Factor Index or the Underlying Indices and Termination*," terminate the calculation and publication of the relevant Underlying Index.

"**Disrupted Day**" means any Underlying Index Calculation Date on which a Selection Disruption Event has occurred or is continuing.

Reference Index Event and its Consequences

Upon the occurrence of any Reference Index Event, the Underlying Index Sponsor will make such determinations and/or adjustments that, in its reasonable discretion, are required to take account of such event. In particular, and without limitation, the Underlying Index Sponsor, in exercising its reasonable discretion, may:

- (a) make such adjustments to the terms of the relevant Underlying Index (including, without limitation, selecting a successor Reference Index) as it considers reasonably appropriate;
- (b) decide that the day on which such event occurs will not be an Underlying Index Calculation Date or Trading Day; and/or
- (c) permanently cease to calculate and publish the relevant Underlying Index Closing Level and cancel the relevant Underlying Index.

"**Reference Index Event**" means a Reference Index Cancellation, Reference Index Disruption or Reference Index Modification.

"**Reference Index Cancellation**" means that at any relevant time the sponsor of the Reference Index or any successor sponsor permanently cancels the Reference Index.

"**Reference Index Disruption**" means that at any relevant time the sponsor of the Reference Index or any successor sponsor fails to disseminate the constituents of the Reference Index, calculate such Reference Index and/or publish the levels of such Reference Index or any other relevant data on any day on which such Reference Index details were scheduled to be published.

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

Index Sponsor and Underlying Index Sponsor

All determinations made by the Index Sponsor in respect of the Low Beta Factor Index 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. The Index Sponsor may delegate and/or transfer any of its obligations or functions under the terms of the Low Beta Factor Index to one or more third parties as it deems appropriate from time to time. The above paragraph is also applicable to the Underlying Index Calculation Agent and Underlying Index Sponsor (as appropriate) in respect of the Underlying Indices.

Change in Methodology of the Low Beta Factor Index or the Underlying Indices and Termination

The following paragraphs in this section are also applicable to the Underlying Index Calculation Agent and the Underlying Index Sponsor in respect of the Underlying Indices, with the Underlying Index Calculation Agent calculating and determining the Underlying Indices and the Underlying Index Sponsor having the authority to modify or change the methodology of the Underlying Indices (as described above).

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

Accordingly:

- (a) the Index Sponsor shall be entitled to make such modifications and/or changes as it, in its reasonable discretion, deems appropriate, including (without limitation):
 - (i) to correct any manifest error or proven error contained in the methodology described herein;
 - (ii) to cure, correct or supplement any contradictory or defective provision contained in the methodology described herein; and/or
 - (iii) if market, regulatory, juridical, financial, fiscal or other circumstances arise, which were not foreseeable by the Index Sponsor as at the Live Date and such circumstances have not been deliberately caused by the Index Sponsor and such circumstances would, in the determination of the Index Sponsor, necessitate or make desirable such a modification or change of the methodology described herein (including, but without limitation, a change in the frequency of calculation of any Index Closing Level) in order for the Low Beta Factor Index to continue being calculated and determined notwithstanding the relevant circumstances. In deciding what is necessary the Index Sponsor will consider and/or take into account what the Index Sponsor determines to be the intended strategy of the Low Beta Factor Index.
- (b) further, and without limitation to the above provisions, the Index Sponsor shall be entitled to make such modifications and/or changes as it in its reasonable discretion deems appropriate:
 - (i) to preserve the intended strategy of the Low Beta Factor Index where such modification and/or change is of a formal, minor or technical nature; and/or
 - (ii) if market, regulatory, juridical, financial, fiscal or other circumstances arise, which were not foreseen by the Index Sponsor as at the Live Date and such circumstances have not been deliberately caused by the Index Sponsor and in the determination of the Index Sponsor, such modifications and/or changes would assist in maintaining the intended strategy of the Low Beta Factor Index and/or would ensure that the Low Beta Factor Index can continue to be calculated and determined by the Index Sponsor in light of such circumstances.

In making such modifications however the Index Sponsor will ensure that such modifications or changes will result in a methodology that, in the Index Sponsor's determination, is consistent in its intended strategy with the methodology

described herein. The Index Sponsor may, in its discretion, at any time and without notice, terminate the calculation and publication of the Low Beta Factor Index.

Details of any adjustments made to the Low Beta Factor Index shall be made available by the Index Sponsor on its website and on application to the Index Sponsor's principal office in London. Access to any such publication may be restricted by means determined as appropriate by the Index Sponsor in its reasonable discretion including, but not limited to, password protection on the Index Sponsor's website.

The Cash Basket

The Cash Basket will reflect a notional amount of cash that will be balanced across four currencies: U.S. Dollars (USD), Euros (EUR), Japanese Yen (JPY) and British Pounds Sterling (GBP). The notional cash position in each of the currencies will be determined to broadly reflect the currency weighting of each such currency in the Reference Index. Because not all of the Reference Index Stocks are traded in these four currencies, the following mapping is used:

Trading Currency	Notional Currency
Australian Dollar "AUD"	USD
Canadian Dollar "CAD"	USD
Swiss Franc "CHF"	EUR
Danish Krone "DKK"	EUR
Euro "EUR"	EUR
British Pound "GBP"	GBP
Israeli New Shekel "ILS"	USD
Japanese Yen "JPY"	JPY
Hong Kong Dollar "HKD"	USD
Norwegian Krone "NOK"	EUR
New Zealand Dollar "NZD"	USD
Swedish Krona "SEK"	EUR
Singapore Dollar "SGD"	USD
United States Dollar "USD"	USD

The notional amount of cash in the Cash Basket will earn a notional amount of interest at the federal funds effective rate (for notional cash held in USD), the euro overnight index average (EONIA) rate (for notional cash held in EUR), the bank of Japan estimate unsecured overnight call rate (for notional cash held in JPY) and the sterling overnight index average (SONIA) rate (for notional cash held in GBP). The accrual of such interest will be reflected in the Cash Basket Level. The Cash Basket Level on any Index Calculation Date will be equal to the product of (a) the Cash Basket Level on the Index Reconstitution Date immediately preceding such Index Calculation Date and (b) the sum of the products of each currency's (i) notional weight on the immediately preceding July 1 and (ii) the level of such currency's Cash Index (as listed below) on such Index Calculation Date (converted into U.S. dollars by reference to the relevant exchange rate on such Index Calculation Date) divided by the level of such currency's Cash Index on the Index Reconstitution Date immediately preceding such Index Calculation Date (converted into U.S. dollars by reference to the relevant exchange rate on such Index Reconstitution Date). Because the Low Beta Factor Index takes a notional short position in the Cash Basket, the inclusion of the Cash Basket will result in a reduction in the level of the Low Beta Factor Index.

Currency	Cash Index
EUR	Deutsche Bank EONIA Total Return Index (Bloomberg ticker: DBDCONIA Index)
GBP	Deutsche Bank SONIA Total Return Index (Bloomberg ticker: DBMMSONI Index)
JPY	Deutsche Bank JPY Overnight Rate (Mid) Index (Bloomberg ticker: DBDCJPON Index)
USD	Deutsche Bank Fed Funds Effective Rate Total Return Index (Bloomberg ticker: DBMMFED1 Index)

Successor Cash Index Sponsor and Successor Cash Index

If at any relevant time, a Cash Index is:

- (a) not calculated and published by its sponsor (the “**Cash Index Sponsor**” but is calculated and published by a successor sponsor (the “**Successor Cash Index 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 Cash Index (a “**Successor Cash Index**”),

then in each case such Cash Index will be deemed to be (i) such Cash Index so calculated and published by the Successor Cash Index Sponsor or (ii) that Successor Cash Index, as the case may be.

Cash Index Events

If at any relevant time the Cash Index Sponsor or the Successor Cash Index Sponsor:

- (a) makes or announces that it will make a material change in the formula for or the method of calculating a Cash Index or in any other way materially modifies a Cash Index (other than a modification prescribed in that formula or method to maintain such Cash Index in the event of permitted changes in its constituents and/or other routine events (a “**Cash Index Modification**”);
- (b) permanently cancels a Cash Index (a “**Cash Index Cancellation**”);
- (c) fails to calculate a Cash Index and publish the levels of such Cash Index on an Index Calculation Date on which such Cash Index levels were scheduled to be published (a “**Cash Index Disruption**”); or
- (d) the Index Sponsor determines, in its sole and absolute discretion that any price, value or level of a Cash Index has been calculated by reference to incorrect data or to quotations by dealers that do not reflect the true market trading prices, values or levels of such Cash Index (a “**Cash Index Error**” and together with any Cash Index Modification, Cash Index Cancellation, or Cash Index Disruption, a “**Cash Index Event**”),

then, upon the occurrence of any Cash Index Event, the Index Sponsor may:

- (a) determine the level of such Cash Index at the relevant time using, in lieu of a published level for such Cash Index, the level of such Cash Index as at the relevant time as determined by the Index Sponsor in accordance with the formula for and method of calculating such Cash Index last in effect prior to the Cash Index Event or in accordance with any other formula for or method of calculating such Cash Index as the Index Sponsor determines to be appropriate for such purpose in its sole and absolute discretion;
- (b) select a successor Cash Index to replace such Cash Index in its sole and absolute discretion; or
- (c) permanently cease to calculate and publish the Low Beta Factor Index.

ANNEX IV

DEUTSCHE BANK EQUITY RISK-ADJUSTED MOMENTUM FACTOR USD — EXCESS RETURN INDEX

The Deutsche Bank Equity Risk-Adjusted Momentum Factor — USD — Excess Return Index (Bloomberg: DBGLSNMU <Index>) (the “**Momentum Factor Index**”) is a proprietary index of Deutsche Bank AG, London Branch (the “**Index Sponsor**”) and is intended to reflect the premium an investor would earn pursuing a momentum-driven strategy by taking notional long exposure to a portfolio of stocks ranked as high “momentum” stocks, tracked by the Deutsche Bank Equity Risk-Adjusted Momentum Factor — USD — Net Total Return Index (the “**Long Index**”), and notional short exposure to MSCI World — Gross Total Return — USD Index (the “**Short Index**”).

The Long Index is a proprietary stock index calculated, published and disseminated daily by Deutsche Bank AG, London Branch (the “**Long Index Sponsor**”). The stocks comprising the Long Index are selected from the stocks comprising the MSCI World Equal Weight — USD Index (the “**Reference Index**”) based on the momentum scores of these stocks calculated using each stock’s price momentum as reduced by its risk-adjusted idiosyncratic volatility. The Long Index will include the top 20% of the Reference Index stocks with the highest momentum scores, excluding certain Reference Index stocks on the basis of liquidity. The Long Index is rebalanced monthly and all constituents in the Long Index are given an equal weight on each monthly reconstitution date. The Long Index currently consists of one sub-index. If there are changes in the aggregate outstanding notional investment of financial products linked to the Long Index, it may be divided into multiple sub-indices or combined back into fewer sub-indices, subject to the requirement that there be at least one sub-index at all times.

The Short Index and Reference Index are benchmark stock indices calculated, published and disseminated daily by MSCI Inc. (the “**Short Index Sponsor**” for the Short Index and the “**Reference Index Sponsor**” for the Reference Index). The Short Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of certain developed equity markets in U.S. dollar values. The Reference Index includes the same constituent stocks as the Short Index, but, unlike the Short Index, all constituents of the Reference Index are given an equal weight. Both the Short Index and the Reference Index are rebalanced in February, May, August and November. As of May 31, 2016, the Short Index and the Reference Index comprise over 1,639 large and mid-cap equity securities from the following 23 developed equity markets: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States.

The concept of momentum investing is founded on the market observation that stocks that have recently performed well will continue to perform well and stocks that have recently performed poorly will continue to perform poorly, and therefore, that stocks with high momentum will tend to outperform the market over the long run. However, it has also been observed that stocks that display momentum and have high idiosyncratic volatility tend not only to have high momentum, but also experience sharp declines in stock returns, thereby diminishing the momentum effect. Because stocks with high idiosyncratic volatility may be prone to sharp declines in stock returns, a stock’s idiosyncratic volatility is subtracted from the price momentum when computing the momentum score, thereby reflecting the view that low idiosyncratic volatility is a positive signal and signifies a stock with sustainable price momentum. The fact that a stock has high momentum does not necessarily imply that it has had positive returns. In a down market, a stock may be classified as high momentum because it has a smaller negative return as compared to other stocks in the declining market.

The idiosyncratic volatility of a stock is the standard deviation of such stock’s residual returns, calculated based on such stock’s beta. Beta is a number used to describe the relationship between a specific asset’s return and the market’s return as a whole. An asset has a beta of zero if its returns change independently of changes in the market’s returns. A positive beta means that the asset’s returns generally follow the market’s return, in the sense that they tend to be both above their respective averages together or below their respective averages together. A negative beta means that the asset’s returns generally move in opposition to the market’s returns: one will tend to be above its average when the other is below its average. The return of a stock on any particular day will generally vary from the result expected by the stock’s beta alone. Therefore, the return of a stock on any day could be viewed as (a) the stock’s beta times the market’s performance plus (b) the residual return, which, of course, can be positive or negative. The residual return accounts for the price of the stock not behaving as predicted by the stock’s beta. A stock may behave differently than its beta would predict due to any factor that has an effect on the stock, but does not have the same effect on the market. For example, any unexpected news about a company that causes a sharp change in the performance of the company’s stock will likely cause the stock’s return to deviate from its beta to the market. The extent of deviation from the expected return of the stock predicted by the stock’s beta is referred to as the stock’s idiosyncratic volatility.

The Momentum Factor Index seeks to implement this momentum-driven strategy by taking a notional long position in the Long Index comprising stocks with high momentum scores and a notional short position in the Short Index

reflecting the market performance of developed equity markets. For purpose of the Long Index, the price momentum of each stock is calculated as the 11-month price return of the stock and the idiosyncratic volatility of each stock is calculated as the rolling one-year idiosyncratic volatility of such stock relative to the Reference Index. Prior to subtracting a stock's idiosyncratic volatility from the price momentum to determine the momentum score, the idiosyncratic volatility of each stock is itself adjusted by a factor (the "**Risk Adjustment Factor**") measuring the relationship between the stock returns attributable to price momentum and the stock returns attributable to idiosyncratic volatility in the general market. This adjustment by the Risk Adjustment Factor is to ensure that the deduction of the idiosyncratic volatility of each stock from its price momentum is proportional to the general impact of idiosyncratic volatility on price momentum. Using these two metrics, a stock with a relatively high price momentum and low risk-adjusted idiosyncratic volatility is more likely to be selected as one of the high momentum stocks tracked by the Long Index. Generally, the performance of the Momentum Factor Index will be positive, reflecting the premium an investor would earn, if the high momentum stocks tracked by the Long Index outperform the stocks tracked by the Short Index, and negative, reflecting the loss an investor would suffer, if the high momentum stocks tracked by the Long Index underperform the stocks tracked by the Short Index. Whether the Long Index and the Short Index go up or down, if the Long Index outperforms the Short Index sufficiently to offset the cost deductions described below, the level of the Momentum Factor Index will increase; conversely, if the Long Index underperforms the Short Index the level of the Momentum Factor Index will decrease.

The Momentum Factor Index is subject to a daily deduction for the sum of the cost of hypothetically implementing the notional long position in the Long Index at a rate of 0.40% per annum (the "**Long Leg Cost Rate**") and the cost of implementing the notional short position in the Short Index at a rate of 0.45% per annum (the "**Short Leg Cost Rate**"). In addition, calculation of the Long Index includes a cost deduction of 0.02% in connection with reconstitution of the relevant sub-indices, subject to certain adjustments. As a result of this deduction, the level of the Momentum Factor Index will be lower than would otherwise be the case if such costs were not included.

The Momentum Factor Index has been calculated on a live basis since October 22, 2013 (the "**Live Date**") and has been retrospectively calculated using the same methodology as described herein since January 9, 2001 (the "**Index Commencement Date**"), except that such retrospective calculations prior to the Live Date used historical stock prices (adjusted to reflect historical corporate events) provided by dbGrade which uses FAME (database) for retrospectively calculating the Long Index. Such adjustments to the historical stock prices provided by dbGrade may be different from the adjustments for corporate events set forth below. Therefore, the Momentum Factor Index has limited performance history and no actual investment which allowed tracking of the performance of the Momentum Factor Index was possible before the Live Date. The Index Sponsor will calculate the level of the Momentum Factor Index (the "**Index Closing Level**") on each Index Calculation Date as described below under "*Calculation of the Index Closing Level.*" The Index Closing Level on the Index Commencement Date was set at 1,000.

Calculation of the Index Closing Level

The Momentum Factor Index is rebalanced on each monthly Index Reconstitution Date, which is typically the 6th calendar day of each month. The Index Closing Level will generally increase if the Long Index outperforms the Short Index measured during the period from the previous Index Reconstitution Date to the day of calculation, and decrease if the Long Index underperforms the Short Index measured during the same period. The Index Closing Level on each Index Calculation Date will reflect its notional long exposure to the Long Index and notional short exposure to the Short Index, subject to deduction on a daily basis for notional costs assessed at the sum of the Long Leg Cost Rate and Short Leg Cost Rate. The Index Closing Level is calculated using the following formula:

$$IL(t) = IL(t_R) \times \left(1 + \frac{TIL(t)}{TIL(t_R)} - LLC \times \frac{ACT(t_R, t)}{365} - \frac{RIL(t)}{RIL(t_R)} - SLC \times \frac{ACT(t_R, t)}{365} \right)$$

where:

$IL(t)$ is the Index Closing Level on such Index Calculation Date.

$IL(t_R)$ is the Index Closing Level on the Index Reconstitution Date immediately preceding such Index Calculation Date.

$TIL(t)$ is the closing level of the Long Index (the "**Long Index Closing Level**") on such Index Calculation Date.

$TIL(t_R)$	is the Long Index Closing Level on the Index Reconstitution Date immediately preceding such Index Calculation Date.
$RIL(t)$	is the closing level of the Short Index (the “ Short Index Closing Level ”) on such Index Calculation Date.
$RIL(t_R)$	is the Short Index Closing Level on the Index Reconstitution Date immediately preceding such Index Calculation Date.
LLC	is the Long Leg Cost Rate of 0.40% per annum.
SLC	is the Short Leg Cost Rate of 0.45% per annum.
$ACT(t_R, t)$	is the number of calendar days from, but excluding, the Index Reconstitution Date immediately preceding such Index Calculation Date to, and including, such Index Calculation Date.

“**Index Calculation Date**” means each Long Index Calculation Date (as defined below, subject to adjustment by the Long Index Sponsor) and is expected to be each Index Business Day.

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

“**Index Reconstitution Date**” means the 6th calendar day of each calendar month, or if such day is not a MSCI Trading Day, the first MSCI Trading Day immediately following such day.

“**MSCI Trading Day**” means a Trading Day in relation to all stock constituents of the Reference Index.

“**Trading Day**” means (a) in relation to a stock, any day on which the primary exchange relating to such stock is scheduled to be open for its usual trading session, (b) in relation to the Long Index, any day that is a Trading Day in relation to all of its sub-indices; or (c) in relation to a sub-index of the Long Index, any day that is a Trading Day in relation to all constituents of such sub-index and, if relevant, all stocks comprising the new constituents.

The Index Sponsor will publish the Index Closing Level for each Index Business Day as soon as reasonably practicable after 16:00 London time on the next Index Business Day following such Index Business Day at the Index Sponsor’s principal office in London, on the Index Sponsor’s website under the heading “DB Equity Risk-Adjusted Momentum Factor Index — USD — Excess Return,” on Bloomberg page “DBGLSNMU” and Reuters page “.DBGLSNMU”, or at such other information sources as the Index Sponsor may select from time to time at its sole and absolute discretion. The Index Sponsor may, at any time and without notice, increase the frequency of publication of the Index Closing Level.

Long Index

The Deutsche Bank Equity Risk-Adjusted Momentum Factor — USD — Net Total Return Index, which we refer to as the Long Index, is designed to reflect the performance of a monthly rebalanced notional portfolio of high momentum stocks representing the top 20% of the constituent stocks comprising the Reference Index with the highest risk-adjusted momentum scores (the “**Momentum Scores**”), excluding certain stocks in the Reference Index on the basis of liquidity. For each constituent stock of the Reference Index (a “**Reference Index Stock**”), the Momentum Score of such Reference Index Stock, if available, is calculated using its price momentum *minus* its risk-adjusted idiosyncratic volatility as described below. The Long Index is rebalanced monthly and the selected constituent stocks are equally weighted on each reconstitution date, as further described below. The calculation of the Long Index includes a cost deduction of 0.02% in connection with reconstitution of its relevant sub-indices, subject to certain adjustments as described below.

The Long Index is a total return index whose index level reflects cash dividend reinvestment, meaning that it measures the market performance of its constituent stocks in terms of both price performance and income from cash dividend payments. Cash dividends are deemed reinvested in the Long Index on the day the dividend-paying stock is quoted ex-dividend. The Long Index is a net total return index calculated so that the amount of cash dividend reinvested is equal to the cash dividend distributed after taking account of the hypothetical tax rate (the “**Withholding Tax Rate**”) at which the relevant jurisdiction generally taxes (or imposes a withholding tax upon) cash dividends paid by corporations

incorporated in such jurisdiction to a non-resident of the relevant jurisdiction as determined by the Long Index Calculation Agent by reference to established industry sources.

The Long Index is calculated after converting the trading prices of its constituent stocks into U.S. dollars at the relevant exchange rates. The Long Index has been calculated on a live basis since the Live Date of the Momentum Factor Index and has been retrospectively calculated since the Index Commencement Date. Therefore, the Long Index has limited performance history and no actual investment that allowed tracking of the performance of the Long Index was possible before the Live Date. Deutsche Bank AG, London Branch (the “**Long Index Calculation Agent**”) will calculate the Long Index Closing Level on each Long Index Calculation Date as described below under “*Calculation of the Sub-Index Closing Level*” and “*Long Index Construction and Calculation*.” The Long Index Closing Level was set at 1,000 on the Index Commencement Date.

The “**Long Index Calculation Date**” means any weekday on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealings in foreign exchange and foreign currency deposits) in London.

Addition or Deletion of Sub-Indices

The Long Index currently consists of one sub-index (“**Sub-Index 1**”). If there are changes in the aggregate outstanding notional investment of financial products linked to the Long Index, one or more additional sub-indices (each, a “**Sub-Index**”, and together with Sub-Index 1, the “**Sub-Indices**”) may be created and added to the Long Index. Similarly, Sub-Indices may also be removed from the Long Index, subject to the requirement that there be at least one Sub-Index at all times. See “*Long Index Construction and Calculation*” below for more information about the addition and deletion of Sub-Indices. Each Sub-Index is reconstituted on a monthly basis and its constituents (the “**Sub-Index Constituents**”) will be selected at the same time using the same criteria as further detailed below under “*Sub-Index Reconstitution*,” except that each Sub-Index will have its own reconstitution dates (each, a “**Sub-Index Reconstitution Date**”).

Sub-Index Reconstitution

On the last Long Index Calculation Date of each calendar month (the “**Selection Date**”), the Long Index Calculation Agent will select, for each Sub-Index of the Long Index to be reconstituted in the immediately following calendar month, the Sub-Index Constituents from the Reference Index Stocks based on their Momentum Scores on such Selection Date.

Identifying the Selection Pool Stocks

The Long Index Calculation Agent will first identify the Reference Index Stocks on such Selection Date, and select from the Reference Index Stocks the eligible “**Selection Pool Stocks**” by excluding those stocks (a) whose Price Momentum Score (as defined below), Idiosyncratic Volatility Score (as defined below) and/or average daily trading volume in the previous 60 weekdays (the “**ADV**”) cannot be determined by the Long Index Calculation Agent or (b) whose ADV is ranked lower than the 20th percentile among the Reference Index Stocks.

Calculating the Price Momentum Score

On each Selection Date, the Long Index Calculation Agent will determine the Price Momentum Score of each Selection Pool Stock.

The Long Index Calculation Agent will first calculate the 11-month price return (the “**Price Momentum**”) of each Selection Pool Stock, which is equal to (a) the closing price of such Selection Pool Stock on the last Long Index Calculation Date in the calendar month immediately preceding the Selection Date divided by the closing price of such Selection Pool Stock on the last Long Index Calculation Date in the twelfth calendar month immediately preceding the Selection Date *minus* (b) 1 (one).

Based on the Price Momentum of each Selection Pool Stock, the Long Index Calculation Agent will rank each Selection Pool Stock from highest to lowest and then calculate the “**Price Momentum Score**” for such Selection Pool Stock by applying the Inverse Standard Normal Cumulative Distribution Function in Microsoft Excel to the ratio of (a) their respective rankings divided by (b) 1 (one) plus the number of Selection Pool Stocks. The purpose of this step is to assign increasingly higher scores to the stocks whose Price Momentum is ranked further above the mean, and increasingly lower scores to the stocks whose Price Momentum is ranked further below the mean. For example, if there are 100 Selection Pool Stocks, the difference between the Price Momentum Score of stocks ranked 51 and 52 will be relatively small (as

they are both very close to the mean) while such difference in score between stocks ranked 91 and 92 will be greater (as they are farther away from the mean). This serves to differentiate to a greater degree stocks whose scores are far away from the mean (either positively or negatively).

Calculating the Idiosyncratic Volatility Score

On each Selection Date, the Long Index Calculation Agent will also determine the Idiosyncratic Volatility Score of each Selection Pool Stock in accordance with the following four steps.

First, the Long Index Calculation Agent determines the one-year rolling beta of each Selection Pool Stock relative to the Reference Index on the Selection Date (the “**Beta**”) by *dividing* (a) the covariance of the daily returns of such Selection Pool Stock (adjusted for changes in the applicable exchange rate) and the Reference Index *by* (b) the variance of the daily return of the Reference Index, each calculated using daily returns over one year (264 weekdays) preceding the Selection Date. Covariance is a measure of the extent to which the prices of two assets move together and thus provides a measure of the strength and magnitude of the correlation between two assets. Variance is the square of volatility.

Second, the Long Index Calculation Agent will calculate the Residual Return of such Selection Pool Stock on each of the 264 weekdays preceding the Selection Date. The “**Residual Return**” is the portion of a Selection Pool Stock’s return that is not accounted for by such Selection Pool Stock’s Beta. The Residual Return on each weekday is equal to (a) the return of such Selection Pool Stock (adjusted for changes in the applicable exchange rate) on such weekday minus (b) the product of the Beta of such Selection Pool Stock on the Selection Date and the return of the Reference Index on such weekday.

Third, the Long Index Calculation Agent will calculate the “**Idiosyncratic Volatility**” of such Selection Pool Stock, which is the standard deviation of such Selection Pool Stock’s Residual Returns over the 264 weekdays preceding the Selection Date.

Fourth, the Long Index Calculation Agent will rank each Selection Pool Stock from highest to lowest based on its Idiosyncratic Volatility and determine the “**Idiosyncratic Volatility Score**” for such Selection Pool Stock by applying the Inverse Standard Normal Cumulative Distribution Function in Microsoft Excel to the ratio of (a) their respective rankings divided by (b) 1 (one) plus the number of Selection Pool Stocks.

Calculating the Momentum Score

Using the Price Momentum Score and Idiosyncratic Volatility Score of each Selection Pool Stock, the Long Index Calculation Agent will then calculate the Momentum Score for such Selection Pool Stock on the Selection Date, which is equal to (a) the Price Momentum Score of such Selection Pool Stock minus (b) the product of (i) the Risk Adjustment Factor on the Selection Date and (ii) the Idiosyncratic Volatility Score of such Selection Pool Stock.

The Risk Adjustment Factor measures the relationship between the stock returns attributable to price momentum as tracked by the Deutsche Bank Price Momentum Sub-Factor Index — USD (the “**Price Momentum Sub-Factor Index**”) and the stock returns attributable to idiosyncratic volatility as tracked by the Deutsche Bank Idiosyncratic Volatility Sub-Factor Index — USD (the “**Idiosyncratic Volatility Sub-Factor Index**”) in the general market.

- The Risk Adjustment Factor on the Selection Date is calculated as (a) the covariance of the Price Momentum Sub-Factor Index and the Idiosyncratic Volatility Sub-Factor Index divided by (b) the variance of the Idiosyncratic Volatility Index, each calculated using data over one year (264 weekdays) preceding the Selection Date. The Risk Adjustment Factor is applied to the Idiosyncratic Volatility Score to ensure that the deduction of the Idiosyncratic Volatility Score from the Price Momentum Score is proportional to the general impact of idiosyncratic volatility on price momentum. For example, if price momentum and idiosyncratic volatility are positively correlated but the stock returns attributable to price momentum are greater than the stock returns attributable to idiosyncratic volatility, the deduction of the Idiosyncratic Volatility Score will be scaled up by a Risk Adjustment Factor of greater than 1 to reflect the fact that a smaller move in the stock returns attributable to idiosyncratic volatility explains a larger move in the stock returns attributable to price momentum. Conversely, if the stock returns attributable to price momentum are smaller than the stock returns attributable to idiosyncratic volatility, the deduction of the Idiosyncratic Volatility Score will be scaled down by a Risk Adjustment Factor of less than 1 to reflect the fact that a larger move in the stock returns attributable to idiosyncratic volatility explains a smaller move in the stock returns attributable to price momentum.

- The Price Momentum Sub-Factor Index is intended to reflect the stock returns attributable to price momentum (without any adjustment to idiosyncratic volatility) by taking notional long exposure to a monthly rebalanced portfolio of high momentum stocks representing the top 20% of the Reference Index Stocks with the highest Price Momentum Scores and notional short exposure to a monthly rebalanced portfolio of low momentum stocks representing the bottom 20% of the Reference Index Stocks with the lowest Price Momentum Scores.
- The Idiosyncratic Volatility Index is intended to reflect the stock returns attributable to idiosyncratic volatility by taking notional long exposure to a monthly rebalanced portfolio of high idiosyncratic volatility stocks representing the top 20% of the Reference Index Stocks with the highest Idiosyncratic Volatility Scores, and notional short exposure to a monthly rebalanced portfolio of low momentum stocks representing the bottom 20% of the Reference Index Stocks with the lowest Idiosyncratic Volatility Scores.

Selecting the Sub-Index Constituents

After the Long Index Calculation Agent determines the Momentum Score of each Selection Pool Stock on the relevant Selection Date, the Selection Pool Stocks will be ranked by their Momentum Scores from highest to lowest. Each Sub-Index of the Long Index will comprise the top 20% of the Selection Pool Stocks with the highest Momentum Scores. Each Selection Pool Stock identified in the manner described above will be a Sub-Index Constituent for the relevant Sub-Index following its Sub-Index Reconstitution Date. The Sub-Index Constituents will be equally weighted on the Sub-Index Reconstitution Date and the “**New Weight**” of each Sub-Index Constituent will be equal to 1 (one) divided by the number of Sub-Index Constituents. We refer to each Sub-Index Constituent comprising a Sub-Index following a Sub-Index Reconstitution Date, as a new Sub-Index Constituent, and each Sub-Index Constituent comprising a Sub-Index on or prior to a Sub-Index Reconstitution Date, as a previous Sub-Index Constituent.

Calculation of the Sub-Index Closing Level

For each Sub-Index of the Long Index, the Long Index Calculation Agent will calculate the closing level of such Sub-Index (the “**Sub-Index Closing Level**”) on each Long Index Calculation Date based on the performance of the Sub-Index Constituents on such Long Index Calculation Date, determined after converting the closing price of each Sub-Index Constituent into U.S. dollars. If, on a Sub-Index Reconstitution Date, one or more new Sub-Index Constituents for a Sub-Index is determined to be a “**Restricted Stock**” that Deutsche Bank AG and/or any of its affiliates is restricted from dealing in pursuant to regulatory or legal obligations or internal policies, the Long Index Calculation Agent will remove such stocks from the Sub-Index Constituents and replace such stocks with a notional Cash Amount (as defined below) deemed to be included in such Sub-Index effective on the immediately following Long Index Calculation Date.

The Sub-Index Closing Level is calculated using the following formula:

$$CSIL(t) = SICA(t) + \sum P_i(t) \times FX_i(t) \times N_i(t)$$

where:

$CSIL(t)$ is the Sub-Index Closing Level of a Sub-Index on the relevant Long Index Calculation Date.

$SICA(t)$ is the Cash Amount of such Sub-Index on such Long Index Calculation Date.

$P_i(t)$ is the closing price of a Sub-Index Constituent on such Long Index Calculation Date.

$FX_i(t)$ is the exchange rate between the relevant currency of such Sub-Index Constituent and U.S. dollars on such Long Index Calculation Date.

$N_i(t)$ is the Unit Weight of such Sub-Index Constituent on such Long Index Calculation Date, as described below under “*Determining the Unit Weight*.”

\sum is the operation of adding a series of numbers.

Because the closing price of each Sub-Index Constituent is converted into U.S. dollars for purposes of calculating the Sub-Index Closing Level, the Long Index and the Momentum Factor Index will be exposed to currency exchange rate risk with respect to each of the currencies in which the Sub-Index Constituents trade. Exposure to currency changes will depend on the extent to which such currencies strengthen or weaken against the U.S. dollar and the relative weight of the

Sub-Index Constituents denominated in each such currency. A net depreciation of the U.S. dollar against the currencies in which the Sub-Index Constituents trade will result in an increase in the level of the Long Index. Conversely, a net appreciation of U.S. dollar against such currencies will result in a decrease in the level of the Long Index. Fluctuations in currency exchange rates can have a continuing impact on the levels the Long Index and the Momentum Factor Index.

On the Long Index Calculation Date immediately following a Sub-Index Reconstitution Date, the **"Cash Amount"** is equal to the sum of, for all such Restricted Stocks, the *product of* (a) the Sub-Index Closing Level on such Sub-Index Reconstitution Date (calculated by reference to the previous Sub-Index Constituents), (b) 1 (one) minus the Total Reconstitution Cost on such Sub-Index Reconstitution Date and (c) the New Weight of such stock prior to its removal.

Determining the Unit Weights

Following each Selection Date, the Long Index Calculation Agent will reconstitute each Sub-Index on its immediately following Sub-Index Reconstitution Date by replacing the previous Sub-Index Constituents with the equally weighted new Sub-Index Constituents. In order to do so, the Long Index Calculation Agent will calculate the Unit Weight of each new Sub-Index Constituent applicable after reconstitution. The Unit Weight of each new Sub-Index Constituent is equal to the notional number of units required to give equal weighting to each Sub-Index Constituent in the Sub-Index, reduced by a pro rata share of the Total Reconstitution Cost incurred in connection with notionally replacing and rebalancing the previous Sub-Index Constituents with the new Sub-Index Constituents.

If at any time any Sub-Index Constituent is expected to pay a cash dividend, the Unit Weight of such Sub-Index Constituent will be increased on the day such Sub-Index Constituent is traded ex-dividend on its primary exchange to account for the reinvested dividend after taking into account the Withholding Tax Rate. The Unit Weight may also be adjusted to take into account certain corporate events that impact a Sub-Index Constituent. Please see below under *"Corporate Events and Their Consequences"* for more information.

The **"Unit Weight"** of each new Sub-Index Constituent is equal to the product of:

- (a) the Sub-Index Closing Level on such Sub-Index Reconstitution Date (calculated by reference to the previous Sub-Index Constituents) times the New Weight of such Sub-Index Constituent on such Sub-Index Reconstitution Date divided by the closing price of such Sub-Index Constituent on such Sub-Index Reconstitution Date, converted into U.S. dollars by reference to the relevant exchange rate; and
- (b) 1(one) minus the Total Reconstitution Cost.

The **"Total Reconstitution Cost"** on each Sub-Index Reconstitution Date is the total cost incurred in connection with notionally selling the previous Sub-Index Constituents, buying the new Sub-Index Constituents and rebalancing the previous Sub-Index Constituents that are also new Sub-Index Constituents. The Total Reconstitution Cost is equal to the sum of, for each stock which is a previous Sub-Index Constituent and/or a new Sub-Index Constituent (other than any stock which is determined to be a Restricted Stock on such Sub-Index Reconstitution Date), the product of (a) the Reconstitution Cost of such stock and (b) the absolute value of the difference between:

- (a) the New Weight of such stock; and
- (b) the ratio of (i) the product of (1) the Unit Weight of such stock on such Sub-Index Reconstitution Date and (2) the closing price of such stock on such Sub-Index Reconstitution Date, converted into U.S. dollars by reference to the relevant exchange rate divided by (ii) the Sub-Index Closing Level on such Sub-Index Reconstitution Date (calculated by reference to the previous Sub-Index Constituents).

For the purposes of this calculation, the Unit Weight for each new Sub-Index Constituent that is not a previous Sub-Index Constituent is equal to zero, and the New Weight for each previous Sub-Index Constituent that is not a new Sub-Index Constituent is equal to zero.

The **"Reconstitution Cost"** is a per unit cost of 0.02% for the Long Index. *The Reconstitution Cost may be adjusted by the Long Index Sponsor by an amount necessary to cover any change in the cost of transacting in such stock on the relevant exchange due to any increase or imposition of financial transactions tax by a relevant taxing authority, if applicable. Any change in the Reconstitution Cost will only become effective following the publication of a notice on the Long Index Sponsor's website specifying such change in the Reconstitution Cost.*

Long Index Construction and Calculation

On the 15th calendar day of each calendar month, if the Long Index Sponsor determines that the aggregate outstanding notional investment of the financial products linked in whole or in part to the Long Index or the Euro denominated version of the Long Index has reached a higher Sub-Index Determination Band (as defined below) or fallen into a lower Sub-Index Determination Band, the Long Index Sponsor will determine whether the existence of such event is material in respect of the reconstitution of the existing Sub-Index or Sub-Indices. If the Long Index Sponsor determines that such event is material, the Long Index Sponsor will add (if the total notional investment has increased) or remove (if the total notional investment has decreased) one or more Sub-Indices as determined in its reasonable discretion. The Long Index Sponsor will publish its determination at least 10 calendar days prior to effecting such change.

“Sub-Index Determination Band” means, each of:

- (a) EUR 0 to EUR 200,000,000 (inclusive);
- (b) EUR 200,000,001 to EUR 400,000,000 (inclusive);
- (c) EUR 400,000,001 to EUR 600,000,000 (inclusive);
- (d) EUR 600,000,001 to EUR 800,000,000 (inclusive); and
- (e) thereafter, each band from, but excluding, the upper end of the previous Sub-Index Determination Band to, and including, the next multiple of EUR 200,000,000.

If an additional Sub-Index is, or Sub-Indices are, created and added, the Long Index will be rebalanced among Sub-Indices on the 1st calendar day of each month (each, a **“Sub-Index Rebalancing Date”**) so that each of the Sub-Indices will be equally weighted.

Following the initial constitution of the Long Index and its Sub-Index 1, the Long Index Calculation Agent will continue to reconstitute Sub-Index 1 every month on the relevant Sub-Index Reconstitution Date. In relation to any additional Sub-Index, the Long Index Calculation Agent will reconstitute such Sub-Index on each monthly Sub-Index Reconstitution Date for such additional Sub-Index using the new Sub-Index Constituents identified on the relevant Selection Date.

The Long Index Calculation Agent will calculate the Long Index Closing Level on each Long Index Calculation Date. The Long Index Closing Level is equal to the sum of, for each Sub-Index of the Long Index, the *product of* (a) the Sub-Index Closing Level of such Sub-Index and (b) the Sub-Index Weight of such Sub-Index on such Long Index Calculation Date.

The Long Index Calculation Agent will determine, on each Sub-Index Rebalancing Date, the **“Sub-Index Weight”** of each Sub-Index so that each Sub-Index has an equal impact on the overall Long Index Closing Level. The Sub-Index Weight of each Sub-Index effective on the immediately following Calculation Date is equal to:

- (a) the sum of (i) the Long Index Closing Level on such Sub-Index Rebalancing Date and (ii) the total dividend adjustment amount that reflects the difference between the expected dividends and the actual dividends paid (after taking account of the Withholding Tax Rate in the case of the Long Index) on such Sub-Index Rebalancing Date following the adjustment on such Sub-Index Rebalancing Date; divided by
- (b) the product of (i) the Sub-Index Closing Level on such Sub-Index Rebalancing Date and (ii) the number of Sub-Indices constituting the Long Index immediately following such Sub-Index Rebalancing Date.

The Long Index Sponsor will publish the Long Index Closing Levels on each Long Index Calculation Date as soon as reasonably practicable after 16:00 London time on the next Long Index Calculation Date following such Long Index Calculation Date at the Long Index Sponsor's principal office in London, on the Long Index Sponsor's website, on Bloomberg and/or Reuters, or at such other information sources as the Long Index Sponsor may select from time to time at its sole and absolute discretion. The Long Index Sponsor may, at any time and without notice, either permanently or temporarily increase the frequency of publication of the Long Index Closing Levels.

Corporate Events and Their Consequences

The following sections describe how the Long Index will be adjusted to reflect certain corporate events and to preserve the economic value of such Long Index. In circumstances where the holder of a stock would be required to choose between several alternative options, such as cash or shares distribution, the Long Index Calculation Agent, in consultation with the Long Index Sponsor, will determine which alternative is to be taken and adjust the Long Index accordingly.

Stock Reclassification, Stock Distribution, Spin-off or Rights Issuance

Following the declaration by the issuer of a Sub-Index Constituent of the terms of any stock reclassification, stock distribution, spin-off or rights issuance (each, an “**Adjustment Event**”), the Long Index Calculation Agent will adjust the Unit Weight of such Sub-Index Constituent or the Cash Amount (if any Sub-Index Constituent or any distributed asset is removed from the relevant Sub-Index due to such Adjustment Event) to take into account the dilutive or concentrative effect of such Adjustment Event on the theoretical value of the affected Sub-Index Constituent in accordance with the formulaic rules of the Long Index.

Other Potential Adjustment Events

Following the declaration by an issuer of the terms of any Other Potential Adjustment Event, the Long Index Calculation Agent, in consultation with the Long Index Sponsor, will determine in its reasonable discretion whether such Other Potential Adjustment Event has a dilutive or concentrative effect on the theoretical value of the relevant Sub-Index Constituent. In determining the impact on such theoretical value, the Long Index Calculation Agent may take into account any tax, duty, withholding, deduction or other charge which would be sustained or incurred by a holder of such Sub-Index Constituent that is a financial institution resident in Germany as a result of such Other Potential Adjustment Event. If the Long Index Calculation Agent determines that such Other Potential Adjustment Event has a dilutive or concentrative effect on the theoretical value of the relevant Sub-Index Constituent, then in relation to such Sub-Index Constituent and Sub-Index, the Long Index Calculation Agent, in consultation with the Long Index Sponsor, will make such determinations and/or adjustments that in its reasonable discretion are required to take account of such event, including (a) adjusting the Unit Weight of such Sub-Index Constituent and/or the formula for determining the Long Index Closing Level and/or any other provisions of the rules of the Long Index and (b) determine the effective date of such adjustment.

“**Other Potential Adjustment Event**” means any of the following:

- (a) a call by the issuer of a Sub-Index Constituent in respect of such Sub-Index Constituent that is not yet fully paid;
- (b) a repurchase by the issuer of a Sub-Index Constituent or any of its affiliates of the relevant Sub-Index Constituent whether out of profits or capital and whether the consideration for such repurchase is cash, securities or otherwise;
- (c) in respect of the issuer of a Sub-Index Constituent, an event that results in any shareholder rights being distributed, or becoming separated from shares of common stock or other shares of the capital stock of the issuer of such Sub-Index Constituent pursuant to a shareholder rights plan or arrangement directed against hostile takeovers that provides for a distribution of preferred stock, warrants, debt instruments or stock rights at a price below their market value upon the occurrence of certain events;
- (d) any redemption of shareholder rights referred to in (c) above; or
- (e) any other event that may have, in the opinion of the Long Index Sponsor, a dilutive, concentrative or other effect on the theoretical value of a Sub-Index Constituent.

Delisting

Upon the announcement of a delisting of a Sub-Index Constituent by its primary exchange, the Long Index Calculation Agent, in consultation with the Long Index Sponsor, will determine whether a suitable exchange for such Sub-Index Constituent exists. If no suitable exchange exists, the Long Index Calculation Agent will (a) increase the Cash Amount of each relevant Sub-Index to an amount to offset the removal of the delisted Sub-Index Constituent and (b) remove such delisted Sub-Index Constituent from such Sub-Index. If a suitable exchange exists, the suitable exchange will be deemed to be the primary exchange for such Sub-Index Constituent.

Merger, Tender Offer, Nationalization or Insolvency

If a merger event, tender offer, nationalization or insolvency occurs in relation to a Sub-Index Constituent and/or an issuer of a Sub-Index Constituent, the Long Index Calculation Agent, in consultation with the Long Index Sponsor, will make such determinations and/or adjustments that are required to be taken to account for such event. In particular, and without limitation, the Long Index Calculation Agent, in making such determination, will (a) make such adjustments to any one or more of the provisions of the Long Index rules and/or take such actions that are required to account for the merger event, tender offer, nationalization or insolvency and (b) determine the effective date of such adjustments. In making such determination, the Long Index Calculation Agent in consultation with the Long Index Sponsor may, without limitation, take into account any adjustment in respect of the merger event, tender offer, nationalization or insolvency made by a Related Exchange to options contracts or futures contracts on the relevant Sub-Index Constituent traded on that Related Exchange when determining the appropriate adjustment.

“Related Exchange” means, in relation to a stock, any exchange, trading system or quotation system on which, in the Long Index Calculation Agent determination, where derivatives linked to such share usually trade.

Market Disruption Events and their Consequences

If the Long Index Calculation Agent, in consultation with the Long Index Sponsor, determines that a Market Disruption Event occurs or subsists on any day, the Long Index Sponsor will determine whether the occurrence or existence of such Market Disruption Event is material in respect of the reconstitution of the Sub-Indices and/or the calculation of the Long Index Closing Levels.

In the event that the Long Index Sponsor determines that the occurrence or existence of a Market Disruption Event is material to such reconstitution or calculation, the Long Index Calculation Agent, in consultation with the Long Index Sponsor, will make such determinations and/or adjustments that, in its determination, are required to take account of such Market Disruption Event. In particular (and without limitation), the Long Index Calculation Agent, in making such determination, may:

- (a) if such day would otherwise be a Sub-Index Rebalancing Date or a Sub-Index Reconstitution Date;
 - (i) determine that such day shall still be such Sub-Index Rebalancing Date or Sub-Index Reconstitution Date, as the case may be, and determine any necessary values (including, without limitation, the Long Index Closing Levels and/or the closing price of any relevant Sub-Index Reconstitution Constituent on such day) by reference to the prevailing market conditions and such other factors it determines appropriate; or
 - (ii) determine that such day shall not be a Sub-Index Rebalancing Date or Sub-Index Reconstitution Date, as the case may be, and that the Sub-Index Rebalancing Date or the Sub-Index Reconstitution Date, as the case may be, will be such other day as the Long Index Calculation Agent shall select, in which case, the reconstitution or rebalancing, as the case may be, of the Sub-Index will instead take place on such new Sub-Index Rebalancing Date or Sub-Index Reconstitution Date, as the case may be; and
- (b) if such day is an Long Index Calculation Date but would not otherwise be a Sub-Index Rebalancing Date or a Sub-Index Reconstitution Date:
 - (i) calculate the Long Index Closing Level having regard to the then prevailing market conditions, the last reported closing price of any relevant Sub-Index Reconstitution Constituent and/or such other conditions that the Long Index Calculation Agent determines relevant for the calculation of the Long Index Closing Level; or
 - (ii) determine that no Long Index Closing Level will be calculated for such day.

“Sub-Index Reconstitution Constituent” means, in relation to a day, each Sub-Index Constituent on such day and, if such day falls on a Sub-Index Reconstitution Date, each Sub-Index Constituent comprising or which, but for the occurrence of a Market Disruption Event, would comprise the Sub-Index reconstituted on such Sub-Index Reconstitution Date.

“Market Disruption Event” means, in relation to a Sub-Index Reconstitution Constituent, the occurrence or existence of:

- (a) any suspension of or limitation imposed on trading by any exchange or Related Exchange or otherwise and whether by reason of movements in price exceeding limits permitted by such exchange or Related Exchange or otherwise relating to (i) the exchange as a whole, (ii) such Sub-Index Reconstitution Constituent on the exchange or (iii) options contracts or futures contracts relating to such Sub-Index Reconstitution Constituent on the Related Exchange;
- (b) any event (other than an early closure covered in clause (c)) that disrupts or impairs the ability of market participants in general (i) to effect transactions in, or to obtain market values for, such Sub-Index Reconstitution Constituent on any relevant exchange or (ii) to effect transactions in, or obtain market values for options contracts or futures contracts relating to such Sub-Index Reconstitution Constituent on any relevant Related Exchange, in either case, at any time during either (1) the one-half hour period that ends at the Scheduled Closing Time (if the relevant day is an Long Index Calculation Date but not a Sub-Index Reconstitution Date) or (2) the regular trading session on the relevant exchange or Related Exchange without regard to after-hours trading or any other trading outside of the regular trading session hours on the relevant day (if such day is a Sub-Index Reconstitution Date);
- (c) the closure on any Long Index Calculation Date of any exchange or any Related Exchange prior to its scheduled closing time unless such earlier closing time is announced by such exchange or such Related Exchange, as the case may be, at least one hour prior to (i) the actual closing time for the regular trading session on such exchange or such Related Exchange on such Long Index Calculation Date or, if earlier, (ii) the submission deadline, if applicable, for orders to be entered into such exchange or such Related Exchange system for execution at the scheduled closing time on such Long Index Calculation Date ;
- (d) with regards to a Sub-Index Constituent whose Relevant Currency is not U.S. dollars, the determination by the Long Index Calculation Agent, in consultation with the Long Index Sponsor, that as a result of the occurrence of an event which has or would have the effect of preventing, restricting or delaying Deutsche Bank AG, its affiliates or non-affiliated third parties from (i) converting the Relevant Currency of a Sub-Index Constituent into U.S. dollars through customary legal channels or transferring within or from the relevant jurisdiction either currency, (ii) converting such Relevant Currency into U.S. dollars at a rate at least as favourable as the rate for domestic institutions located in the relevant jurisdiction, (iii) delivering such Relevant Currency or U.S. dollars from accounts inside the relevant jurisdiction to accounts outside such jurisdiction or (iv) transferring such Relevant Currency or U.S. dollars between accounts inside the relevant jurisdiction or to a party that is a non-resident of such jurisdiction, the ability of Deutsche Bank AG, its affiliates or non-affiliated third parties to acquire, hold, transfer or realize or otherwise to effect transactions in relation to such Sub-Index Constituent is likely to be affected;
- (e) the Long Index Calculation Agent, in consultation with the Long Index Sponsor, determining that as a result of a relevant jurisdiction (i) imposing any controls or announcing its intention to impose any controls, (ii) implementing or announcing its intention to implement any laws or regulations or (iii) changing or announcing its intention to change the interpretation or administration of any laws or regulations, the ability of Deutsche Bank AG, its affiliates or non-affiliated third parties to acquire, hold, transfer or realize or otherwise to effect transactions in relation to such Sub-Index Reconstitution Constituent is likely to be affected; or
- (f) a general moratorium is declared in relation to banking activities in the country in which any exchange is located.

“Relevant Currency” means, in relation to a Sub-Index Constituent, the currency in which the closing price of such Sub-Index Constituent on the primary exchange is denominated.

Selection Disruption Events and Their Consequences

If the Long Index Calculation Agent, in consultation with the Long Index Sponsor, determines that it is unable to obtain some or all of the data required to determine the relevant ADVs, Price Momentum Scores, the Idiosyncratic Volatility Scores, the Risk Adjustment Factor and/or the Momentum Scores (a **“Selection Disruption Event”**) on a Selection Date (a **“Selection Disruption Date”**), the Long Index Sponsor will determine whether the occurrence or existence of such Selection Disruption Event is material in respect of Sub-Index reconstitution.

In the event that the Long Index Sponsor determines that the occurrence or existence of a Selection Disruption Event is material, the Selection Date will be the first succeeding Long Index Calculation Date that is not a Disrupted Day and the relevant Sub-Index Reconstitution Date will be postponed accordingly. However, if the Long Index Sponsor determines that the relevant Selection Disruption Event is not, or will not be, temporary or each of the five Long Index Calculation Dates immediately following the Selection Disruption Date is a Disrupted Day, the Long Index Sponsor will:

- (a) make such determinations and/or adjustments that, in its determination, are required to take account of such Selection Disruption Event (including, without limitation, determining that the relevant Sub-Index reconstitution will not take place or, if the Selection Disruption Event is in relation to a data source, using an alternative data source in lieu of such disrupted data source); or
- (b) notwithstanding the section “*Change in Methodology of the Momentum Factor Index or the Long Index and Termination*,” terminate the calculation and publication of the Long Index.

“**Disrupted Day**” means any Long Index Calculation Date on which a Selection Disruption Event has occurred or is continuing.

Short Index

*We have derived all information contained in this description regarding the Short Index, including, without limitation, its make-up, method of calculation and changes in index components, from publicly available information. We have not participated in the preparation of, or verified, such publicly available information. Such information reflects the policies of, and is subject to change by, MSCI Inc. (“**MSCI**”). The Short Index Sponsor has no obligation to continue to publish, and may discontinue publication of, the Short Index.*

The MSCI World — Gross Total Return — USD Index (Bloomberg page: “GDDUWI <index>”), which we refer to as the Short Index, is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of certain developed equity markets in U.S. dollar values. As of May 31, 2016, the Short Index consists of over 1,639 large and mid-cap equity securities from the following 23 developed equity markets: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States.

The Short Index is a total return index whose index level reflects gross dividends, meaning that it measures the market performance in terms of both price performance and income from dividend payments pursuant to the MSCI Daily Total Return methodology. Under such methodology, dividends are notionally reinvested in the Short Index on the day the relevant security is quoted ex-dividend. The amount reinvested is the entire dividend distributed to holders of the relevant security, but does not include tax credits.

Index Construction

The Short Index is a member of the MSCI Global Investable Market Index family, calculated, maintained and published by MSCI. The current index calculation methodology used to formulate the MSCI Global Investable Market Indices (the “**MSCI Global Investable Market Indices Methodology**”) was implemented as of June 1, 2008. The MSCI Global Investable Market Indices Methodology involves the following steps:

- (a) *Defining the Equity Universe.* MSCI begins with securities listed in countries included in the MSCI Global Investable Market Indices. Of these countries, as of May 31, 2016, 23 are classified as developed markets and 22 as emerging markets. All listed equity securities and listed securities that exhibit characteristics of equity securities, except mutual funds, ETFs, equity derivatives, limited partnerships and most investment trusts, are eligible for inclusion in the equity universe. Real estate investment trusts in some countries and certain income trusts in Canada are also eligible for inclusion. Each company and its securities are classified in only one country.
- (b) *Determining the Market Investable Equity Universe for Each Market.* The equity universe in each market is derived by applying certain investability screens, such as minimum market capitalization, free float, liquidity, permitted foreign holding and length of trading, to individual companies and securities in the equity universe of that market. Some investability requirements are applied at the individual security level and some at the overall company level, represented by the aggregation of individual securities of the company. As a result, the inclusion or exclusion of one security does not imply the automatic inclusion or exclusion of other securities of the same company.

- (c) *Determining Market Capitalization Size-Segments for Each Market.* In each market, MSCI creates an Investable Market Index, Standard Index, Large Cap Index, Mid Cap Index and Small Cap Index (each, a **"Size-Segment Index"**). The Standard Index is the aggregation of the Large Cap Index and the Mid Cap Index. The Investable Market Index is the aggregation of the Standard Index and the Small Cap Index. In order to create size components that can be meaningfully aggregated into composites, individual market size segments balance the following two objectives:
 - (i) Achieving global size integrity by ensuring that companies of comparable and relevant sizes are included in a given size segment across all markets in the composite universe; and
 - (ii) Achieving consistent market coverage by ensuring that each market's size segment is represented in its proportional weight in the composite universe.
- (d) *Applying Final Size-Segment Investability Requirements.* In order to enhance the replicability of Size-Segment Indices, additional size-segment investability requirements are set for the Investable Market Indices and the Standard Indices. These investability requirements include minimum free float market capitalization, minimum liquidity and minimum foreign room. Companies that do not meet these investability screens are not included in any of the indices within the MSCI Global Investable Market Index family.
- (e) *Applying Index Continuity Rules for the Standard Index.* In order to achieve index continuity, as well as provide some basic level of diversification within a market index, notwithstanding the effect of other index construction rules, a minimum number of five constituents will be maintained for a developed market Standard Index and a minimum number of three constituents will be maintained for an emerging market Standard Index.

After application of the above construction rules and guidelines, the Short Index is then constructed to include the Standard Indices for the developed markets included in the Short Index.

Weighting

The Short Index is market capitalization weighted adjusted by free float, meaning that each component security is included in the Short Index at the value of their free public float, as measured based on its foreign inclusion factor (the **"Foreign Inclusion Factor"**). In cases where other foreign investment restrictions exist that materially limit the ability of international investors to freely invest in a particular equity market, sector or security, a limited investability factor (the **"Limited Investability Factor"**) may also be applied to the free float to insure that the investability objectives of the indices can be achieved.

MSCI defines the Foreign Inclusion Factor of a security as the proportion of shares outstanding that are deemed to be available for purchase in the public equity markets by international investors. To determine the Foreign Inclusion Factor of a security, MSCI considers the limitations on the investment opportunities for international investors including: strategic stakes in a company held by private or public shareholders whose investment objective indicates that the shares held are not likely to be available in the market, limits on the proportion of a security's share capital authorized for purchase by non-domestic investors, or other foreign investment restrictions which materially limit the ability of foreign investors to freely invest in a particular equity market, sector or security.

A component security's Foreign Inclusion Factor is (i) rounded up to the closest 5% for component securities with free float equal to or exceeding 15% or (ii) rounded up to the closest 1% for component securities with free float less than 15%. For example, a component security with a free float of 23.2% will be included in the Short Index at 25% of its market capitalization. Typically, securities with a Foreign Inclusion Factor of 15% or less will not be eligible for inclusion in MSCI's indices.

Once the Foreign Inclusion Factor has been determined for a security, the security's total market capitalization is then adjusted by such Foreign Inclusion Factor, resulting in the free float-adjusted market capitalization figure for the security. Market capitalization weighting, combined with a consistent target of capturing 99% of free float-adjusted market capitalization, aims to ensure that each country's weight in the Short Index approximates its weight in the total universe of developed markets and emerging markets.

Index Calculation

The Short Index is a total return index whose index level reflects both the performance of the component securities underlying the Short Index and the result of a notional reinvestment of dividend payments made to the holders of the component securities into the Short Index. Dividends are notionally reinvested in the Short Index on the day the relevant security is quoted ex-dividend.

Because the closing prices of the component securities are converted into U.S. dollars for purposes of calculating the value of the Short Index, the Short Index will be exposed to currency exchange rate risk with respect to each of the currencies in which the component securities trade. Exposure to currency changes will depend on the extent to which such currencies strengthen or weaken against the U.S. dollar and the relative weight of the component securities denominated in each such currency. The devaluation of the U.S. dollar against the currencies in which the component securities trade will result in an increase in the level of the Short Index. Conversely, if the U.S. dollar strengthens against such currencies, the level of the Short Index will decrease. Fluctuations in currency exchange rates can have a continuing impact on the level of the Short Index. The return on an index composed of the component securities of the Short Index where the closing price is not converted into U.S. dollars can be significantly different from the return on the Short Index, which is converted into U.S. dollars.

Index Maintenance

The MSCI Global Investable Market Indices are maintained with the objective of reflecting, on a timely basis, the evolution of the underlying equity markets. In maintaining the MSCI Global Investable Market Indices, emphasis is also placed on its continuity, replicability and minimizing index turnover. Among other things, maintaining the MSCI Global Investable Market Indices involves making: additions to and deletions from the index, changes in number of shares, and changes in Foreign Inclusion Factors as a result of updated free float estimates. Index maintenance of the MSCI Global Investable Market Indices (including the Standard Indices) for the developed markets is, in turn, reflected in the Short Index.

MSCI classifies index maintenance in three broad categories. The first consists of ongoing event-related changes, such as mergers and acquisitions, which are generally implemented in the indices at the time of event. The second category consists of quarterly index reviews, aimed at promptly reflecting other significant market events. The third category consists of semi-annual full index reviews that systematically re-assess the various dimensions of the equity universe for all markets simultaneously and are conducted on a fixed semi-annual timetable.

Ongoing event-related changes to the indices are the result of mergers, acquisitions, spin-offs, bankruptcies, reorganizations and other similar corporate events. They can also result from capital reorganizations in the form of rights issues, bonus issues, public placements and other similar corporate actions that take place on a continuing basis. These changes are reflected in the MSCI Global Investable Market Indices at the time of the event. All changes resulting from corporate events are announced prior to their implementation, provided all necessary information on the event is available.

The quarterly index review process is designed to ensure that the indices continue to be an accurate reflection of evolving equity markets. This is achieved by a timely reflection of significant market driven changes that were not captured in the index at the time of their actual occurrence but are significant enough to be reflected before the next semi-annual index review. Quarterly index reviews may result in additions or deletions due to migration to another Size Segment Index and changes in Foreign Inclusion Factor and in number of shares. Changes in the number of shares are generally small and result from, for example, exercise of options or warrants, conversion of convertible bonds or other instruments or share buybacks. The implementation of changes resulting from quarterly index reviews occurs as of the close of the last business day of each February and August. The results of the quarterly index reviews are announced at least two weeks prior to their implementation.

The objective of the semi-annual index review is to systematically re-assess the various dimensions of the equity universe for all markets simultaneously. During each semi-annual index review, the equity universe is updated and the minimum size guidelines are recalculated for each segment market. Then, the following index maintenance activities are undertaken for each market: updating the market investable equity universe, reassessing the number of companies in each segment and the market size-segment cutoffs; assigning companies to the size-segments; assessing conformity with the final size-segment investability requirements. The results of the semi-annual index reviews are announced at least two weeks in advance of their effective implementation dates as of the close of the last business day of May and November.

Market Reclassifications

During an annual market classification review, MSCI analyzes and seeks feedback on those markets it has placed under review for potential market reclassification based on extensive discussions with the investment community. MSCI examines each country's economic development, size, liquidity and market accessibility in order to be classified in a given investment market (i.e., stand-alone, frontier, emerging or developed market). Each June, MSCI communicates its conclusions from discussions with the investment community on the list of countries under review and announces the new list of countries, if any, under review for potential market reclassification in the upcoming cycle.

Adjustments to the Short Index and the Reference Index

The following subsections in this section are also applicable to the Reference Index Sponsor and the successor sponsor to the Reference Index in respect of the Reference Index, as applicable.

Successor Short Index Sponsor and Successor Short Index

If at any relevant time, the Short Index is:

- (a) not calculated and published by the Short Index Sponsor but is calculated and published by a successor sponsor (the "**Successor Short Index 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 Short Index (a "**Successor Short Index**"),

then in each case the Short Index will be deemed to be (i) such Short Index so calculated and published by that Successor Short Index Sponsor or (ii) that Successor Short Index, as the case may be.

For the avoidance of doubt, the provisions of this sub-Section shall apply to each Successor Short Index and each Successor Short Index Sponsor mutatis mutandis as if such Successor Short Index is the Short Index and such Successor Short Index Sponsor is the Short Index Sponsor.

Short Index Events

If at any relevant time the Short Index Sponsor or the Successor Short Index Sponsor:

- (a) makes or announces that it will make a material change in the formula for or the method of calculating the Short Index or in any other way materially modifies the Short Index (other than a modification prescribed in that formula or method to maintain the Short Index in the event of permitted changes in its constituents and/or other routine events (a "**Short Index Modification**");
- (b) permanently cancels the Short Index (a "**Short Index Cancellation**");
- (c) fails to calculate the Short Index and publish the levels of the Short Index on an Index Calculation Date on which such Short Index levels were scheduled to be published (a "**Short Index Disruption**"); or
- (d) the Index Sponsor determines, in its sole and absolute discretion, that any price, value or level of the Short Index has been calculated by reference to incorrect data or to quotations by dealers that do not reflect the true market trading prices, values or levels of the Short Index (a "**Short Index Error**" and together with any Short Index Modification, Short Index Cancellation, or Short Index Disruption, a "**Short Index Event**"),

then, upon the occurrence of any Short Index Event, the Index Sponsor may:

- (a) determine the level of the Short Index at the relevant time using, in lieu of a published level for the Short Index, the level of the Short Index as at the relevant time as determined by the Index Sponsor in accordance with the formula for and method of calculating the Short Index last in effect prior to the Short Index Event or in accordance with any other formula for or method of calculating the Short Index as the Index Sponsor determines to be appropriate for such purpose in its sole and absolute discretion;

- (b) select a successor Short Index to replace the Short Index in its sole and absolute discretion; or
- (c) permanently cease to calculate and publish the Momentum Factor Index.

Index Sponsor and Long Index Sponsor

All determinations made by the Index Sponsor in respect of the Momentum Factor Index 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. The Index Sponsor may delegate and/or transfer any of its obligations or functions under the terms of the Momentum Factor Index to one or more third parties as it deems appropriate from time to time. The above paragraph is also applicable to the Long Index Calculation Agent and Long Index Sponsor (as appropriate) in respect of the Long Index.

Change in Methodology of the Momentum Factor Index or the Long Index and Termination

The following paragraphs in this section are also applicable to the Long Index Calculation Agent and the Long Index Sponsor in respect of the Long Index, with the Long Index Calculation Agent calculating and determining the Long Index and the Long Index Sponsor having the authority to modify or change the methodology of the Long Index (as described above).

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

Accordingly:

- (a) the Index Sponsor shall be entitled to make such modifications and/or changes as it, in its reasonable discretion, deems appropriate, including (without limitation):
 - (i) to correct any manifest error or proven error contained in the methodology described herein;
 - (ii) to cure, correct or supplement any contradictory or defective provision contained in the methodology described herein; and/or
 - (iii) if market, regulatory, juridical, financial, fiscal or other circumstances arise, which were not foreseeable by the Index Sponsor as at the Live Date and such circumstances have not been deliberately caused by the Index Sponsor and such circumstances would, in the determination of the Index Sponsor, necessitate or make desirable such a modification or change of the methodology described herein (including, but without limitation, a change in the frequency of calculation of any Index Closing Level) in order for the Momentum Factor Index to continue being calculated and determined notwithstanding the relevant circumstances. In deciding what is necessary the Index Sponsor will consider and/or take into account what the Index Sponsor determines to be the intended strategy of the Momentum Factor Index.
- (b) further, and without limitation to the above provisions, the Index Sponsor shall be entitled to make such modifications and/or changes as it in its reasonable discretion deems appropriate:
 - (i) to preserve the intended strategy of the Momentum Factor Index where such modification and/or change is of a formal, minor or technical nature; and/or
 - (ii) if market, regulatory, juridical, financial, fiscal or other circumstances arise, which were not foreseen by the Index Sponsor as at the Live Date and such circumstances have not been deliberately caused by the Index Sponsor and in the determination of the Index Sponsor, such modifications and/or changes would assist in maintaining the intended strategy of the Momentum Factor Index and/or would ensure that the Momentum Factor Index can continue to be calculated and determined by the Index Sponsor in light of such circumstances.

In making such modifications however the Index Sponsor will ensure that such modifications or changes will result in a methodology that, in the Index Sponsor's determination, is consistent in its intended strategy with the methodology described herein. The Index Sponsor may, in its discretion, at any time and without notice, terminate the calculation and publication of the Momentum Factor Index.

Details of any adjustments made to the Momentum Factor Index shall be made available by the Index Sponsor on its website and on application to the Index Sponsor's principal office in London. Access to any such publication may be restricted by means determined as appropriate by the Index Sponsor in its reasonable discretion including, but not limited to, password protection on the Index Sponsor's website.