

CITI MARKET PILOT 5 EXCESS RETURN INDEX

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PART 1

DESCRIPTION OF THE CITI MARKET PILOT 5 EXCESS RETURN INDEX

Overview

The Citi Market Pilot 5 Excess Return Index (the “**Index**”) was developed by Citigroup Global Markets Limited (the “**Index Sponsor**”). The description of the Index included in this Part 1 is based on rules formulated by the Index Sponsor (the “**Index Rules**”), which are set forth in Part 5 below. The Index launched on March 2, 2015 and, therefore, has a limited performance history.

The Index tracks the performance of the hypothetical, rules-based investment methodology described in this Part 1. Once each month, the Index applies a portfolio selection methodology to select a hypothetical investment portfolio to track for the next month. In general, if that hypothetical investment portfolio appreciates over the next month, the level of the Index will increase, and if that hypothetical investment portfolio depreciates over the next month, the level of the Index will decrease, subject to the excess return deduction, index fee, notional costs and other features of the Index described in more detail below.

The Index selects the hypothetical investment portfolio to track for each month using certain concepts drawn from the “modern portfolio theory” approach to asset allocation. Generally, modern portfolio theory holds that an optimal (or “efficient”) investment portfolio is one that maximizes expected return for any given level of risk, where “risk” is measured by the expected volatility of the portfolio. Further, modern portfolio theory suggests that the investment portfolio that achieves this result is likely to be a diversified portfolio of relatively uncorrelated assets. The Index seeks to implement these ideas in two ways. First, the Index will construct the hypothetical investment portfolio to be tracked for each month from a universe of eligible indices that represent a number of different asset classes and market sectors. Second, the Index will seek to select as the hypothetical investment portfolio to be tracked for each month, out of all possible hypothetical investment portfolios that could be constructed from this universe of eligible indices (and that meet certain conditions described below), the portfolio that has the highest expected return without exceeding the Index’s target volatility of 5%.

Table I below lists the eligible indices that may be used to construct the hypothetical investment portfolio to be tracked by the Index for any month. We refer to each of these eligible indices as an “**Eligible Constituent**”. We refer to the first eight Eligible Constituents in Table I below as the “**Eligible Market Constituents**” and to the last Eligible Constituent in Table I below as the “**Cash Constituent**”. Table I also indicates the maximum percentage weights for each Eligible Constituent and asset class, which are applied to limit concentration.

Table I

Asset Class	Eligible Constituent	Market Sector	Max. Percentage Weight	
<i>Eligible Market Constituents</i>			Market Sector	Asset Class
Global Equities	S&P 500 [®] Total Return Index	Large-cap U.S. equities	50%	80%
	MSCI Daily Total Return Net EAFE USD Index [®]	Developed market equities (excluding U.S. and Canada)	50%	
	MSCI Daily Total Return Net Emerging Markets USD Index	Emerging market equities	40%	
U.S. Treasuries	S&P U.S. 10-Year TIPS Index	Inflation-protected 10-year U.S. Treasury notes	50%	100%
	S&P/BGCantor 7-10 Year U.S. Treasury Bond Total Return Index	7- to 10-year U.S. Treasury notes	25%	
	S&P/BGCantor 10-20 Year U.S. Treasury Bond Total Return Index	10- to 20-year U.S. Treasury notes	25%	
Commodities	S&P GSCI [™] Light Energy Total Return Index	Broad-based commodity futures (with reduced exposure to energy futures)	20%	40%
	S&P GSCI [™] Gold Total Return Index	Gold futures	20%	
<i>Cash Constituent</i>				
Money Market	90 Day U.S. Treasury Bills	90-day U.S. Treasury bills	100%	100%

A “portfolio” is any combination of Eligible Constituents and their percentage weights, where the percentage weights add up to 100%. For example, one possible portfolio would consist of an equal allocation to each Eligible Market Constituent – that portfolio would consist of each Eligible Market Constituent and a percentage weight of 12.5% for each. Another possible portfolio might have a greater concentration in a smaller number of Eligible Market Constituents and consist of a 50% percentage weight in each of only two Eligible Market Constituents. It is important to understand that two different portfolios may be composed of exactly the same Eligible Constituents but allocate different percentage weights to those Eligible Constituents, and those portfolios are regarded as distinct portfolios for purposes of the Index because of the different percentage weights. We refer to all possible hypothetical investment portfolios that could be constructed from the Eligible Market Constituents, and that meet the weighting constraints indicated in Table I, as the “**Eligible Market Portfolios**”. We refer to the hypothetical investment portfolio that is selected as the portfolio to be tracked by the Index for any given month as the “**Selected Portfolio**” for that month.

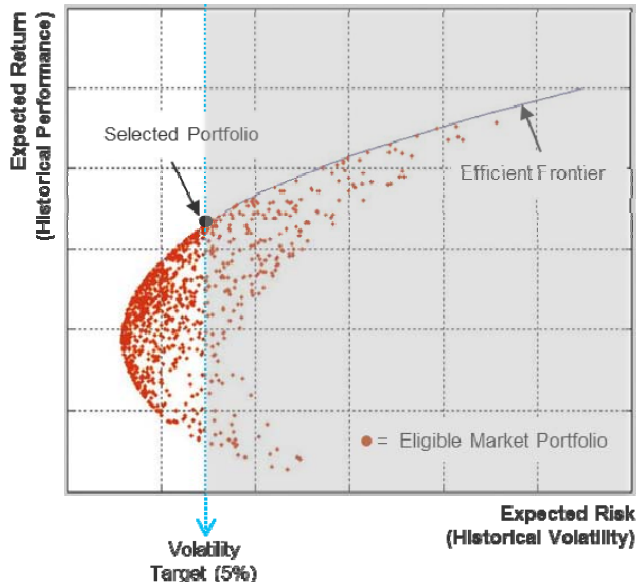
As stated above, the Index seeks to select, as the Selected Portfolio for each month, the Eligible Market Portfolio that has the highest expected return without exceeding an expected risk (*i.e.*, volatility) of 5%. The expected return of any Eligible Market Portfolio is the weighted sum of the expected returns of the Eligible Market Constituents that make up that Eligible Market Portfolio. Therefore, to determine the expected return of any Eligible Market Portfolio, the Index requires a measure of the expected return of each of its Eligible Market Constituents. The expected risk (*i.e.*, volatility) of any Eligible Market Portfolio depends on the expected risk (*i.e.*, volatility) of each of the Eligible Market Constituents that make up that Eligible Market Portfolio *and* on the expected degree of correlation among the returns of those Eligible Market Constituents. Therefore, to determine the expected risk of any Eligible Market Portfolio, the Index requires measures of both the expected volatility of each of the Eligible Market Constituents that make up that Eligible Market Portfolio and the expected degree of correlation among their returns.

The Index measures the expected returns and risk of the Eligible Market Constituents in an Eligible Market Portfolio, and the expected degree of correlation among their returns, based on historical measures of their daily returns, volatility and correlation. These historical measures are based on the daily returns of the Eligible Market Constituents over a historical Look-Back Period of approximately one year and are determined using calculations that give greater weight to more recent returns, as described in more detail under “—Selection Methodology” below. Using these historical measures, the Index identifies as the Selected Portfolio for each month the hypothetical investment portfolio that, out of all of the Eligible Market Portfolios, would have had the most favorable historical performance while having a historical volatility equal to or below the Index’s target volatility of 5%.

It is important to understand that modern portfolio theory prescribes a method for constructing an optimal investment portfolio *assuming that the expected returns and risk of the available assets, and the expected degree of correlation among their returns, are known*. Modern portfolio theory does not purport to tell an investor how to determine expected returns, risk or correlation. Therefore, any investment methodology that seeks to implement concepts drawn from modern portfolio theory, including the hypothetical investment methodology followed by the Index, must utilize its own method of determining expected returns, risk and correlation, and that method cannot be said to be derived from modern portfolio theory. Because there are many different ways in which expected returns, risk and correlation could be determined, there are many different ways that the concepts of modern portfolio theory could be implemented. The particular approach reflected in the Index may not be as successful as other approaches that could have been taken.

The process by which the Index selects a Selected Portfolio each month may be illustrated by the following hypothetical graph. Each point on the graph represents an Eligible Market Portfolio, with its location on the x-axis representing the historical volatility of that Eligible Market Portfolio and its location on the y-axis representing the historical performance of that Eligible Market Portfolio, in each case based on the historical returns, volatility and correlation of the Eligible Market Constituents that make up that Eligible Market Portfolio. By plotting all Eligible Market Portfolios on the graph, a so-called “efficient frontier” can be identified. The efficient frontier is the line marking the upper boundary of all the Eligible Market Portfolios on the graph. Each Eligible Market Portfolio that falls on that efficient frontier line represents the highest expected return (based on historical performance) out of all Eligible Market Portfolios having the same level of expected risk (based on historical volatility). The Selected Portfolio is the Eligible Market Portfolio that falls on the efficient frontier line with the highest expected return without exceeding the volatility target of 5%. A portion of the graph is shaded in gray to indicate that none of the Eligible Market Portfolios falling in that area of the graph (*i.e.*, exceeding a 5% historical volatility) will be selected as the Selected Portfolio. The graph below is a theoretical construct created for purposes of illustrating the Index’s

hypothetical investment portfolio selection process at a general level. It does not represent and may not resemble any actual graph of Eligible Market Portfolios.



There can be no assurance that the historical measures used by the Index to select the Selected Portfolio for each month will be indicative of the future performance and volatility of the Selected Portfolio. For example, historical returns, volatility and correlation will not necessarily reflect the most recent information available in the market about an Eligible Market Constituent, the relationship among Eligible Market Constituents or the economy generally. Any Eligible Market Constituent or Eligible Market Portfolio that may have had high returns historically could consistently generate low returns in the future as the market reflects new information. Any Eligible Market Constituent or Eligible Market Portfolio that may have had low volatility historically could consistently generate high volatility in the future (and vice versa). Furthermore, any combination of Eligible Market Constituents that had a low degree of correlation in the past could have a high degree of correlation in the future. In general, a portfolio of relatively uncorrelated assets will have a lower volatility at a portfolio level than a portfolio of more highly correlated assets, even though the individual volatilities of the underlying assets may be the same. Therefore, even if the volatilities of the Eligible Market Constituents in an Eligible Market Portfolio are the same in the future as they were historically, the volatility of the Eligible Market Portfolio may increase if the Eligible Market Constituents become more highly correlated with each other in the future than they were historically. Previously uncorrelated assets may become highly correlated in decline, particularly in times of financial stress. If future returns, volatility and correlation differ significantly from historical returns, volatility and correlation, the Selected Portfolio followed by the Index for any given month may, in hindsight, turn out to have been far from the optimal hypothetical investment portfolio for that month.

It is important to understand that the Eligible Market Constituents that make up the Selected Portfolio are not necessarily those that exhibited the highest historical returns or the lowest volatility. The Selected Portfolio may include Eligible Market Constituents that had negative historical returns or high historical volatility but that lowered the historical volatility of the Selected Portfolio overall because they exhibited low historical correlation with the other Eligible Market Constituents in the Selected Portfolio.

If for any given month there is no Eligible Market Portfolio with a historical volatility that is less than or equal to 5%, the Selected Portfolio for that month would not be the Eligible Market Portfolio that maximizes historical performance for its level of risk, but rather would be the Eligible Market Portfolio with the lowest historical volatility, regardless of historical performance. In that event, the percentage weights of the Eligible Market Constituents in that Eligible Market Portfolio would be reduced on a pro rata basis and reallocated into the Cash Constituent to the extent necessary to reduce the expected volatility of the Selected Portfolio to 5% (assuming for these purposes that the Cash Constituent has no volatility). In this circumstance, the Selected Portfolio would not be determined according to principles drawn from modern portfolio theory, but instead would be determined in a manner designed to minimize risk (as measured by historical volatility). Furthermore, if the Eligible Market

Portfolio that is otherwise identified as the Selected Portfolio for any given month has a historical performance that is less than the 90-day U.S. Treasury bill rate on the relevant monthly Selection Day (as defined below), the Selected Portfolio will instead consist of a 100% allocation to the Cash Constituent. See “—Selection Methodology” below for more information about the methodology by which the Selected Portfolio for each month is selected.

It is important to understand that the measure of risk used by the Index is **not** a measure of the likelihood that any Eligible Market Constituent or Eligible Market Portfolio will decline in value or that the Index will decline in value. For purposes of the Index, “risk” refers to volatility, which is a statistical measure of how much variability there was in the daily returns of an Eligible Market Constituent or Eligible Market Portfolio over a given historical period. Any Eligible Market Constituent or Eligible Market Portfolio may have had low volatility historically but nevertheless experience significant declines in the future.

In recognition of that point, the Index contains an “extraordinary rebalancing” feature that will replace the Eligible Market Constituents in the Selected Portfolio with the Cash Constituent if the Selected Portfolio has declined by more than 8% over any 21 Index Business Day period. In that event, the Selected Portfolio will be reallocated out of the Eligible Market Constituents and into the Cash Constituent over an Extraordinary Rebalancing Period and will then remain 100% allocated to the Cash Constituent until the beginning of the next regular monthly Rebalancing Period, as described below. See “—Extraordinary Rebalancing” below for more information. It is important to understand that the Index is likely to continue to decline even after allocating 100% to the Cash Constituent. The Cash Constituent reflects an accrual at the 90-day U.S. Treasury bill rate. However, the excess return deduction will be at the federal funds effective rate. The federal funds effective rate is nearly certain to be, and historically has been, greater than the 90-day U.S. Treasury bill rate. As a result, the excess return deduction is nearly certain to be greater than the performance of the Cash Constituent, resulting in net negative Index performance. In addition, the index fee will be deducted, further reducing the Index performance. Therefore, at any time when the Index has 100% exposure to the Cash Constituent, the Index is nearly certain to decline. Furthermore, if the Eligible Market Constituents that composed the Selected Portfolio prior to an extraordinary rebalancing recover their losses after the Index has reallocated its exposure into the Cash Constituent, the Index will not participate in that recovery.

The Index is an “excess return” index, which means that, in calculating the performance of the Index, the performance of the Selected Portfolio will be reduced by a notional funding rate equal to federal funds effective rate. We refer to this deduction from the performance of the Selected Portfolio as the “excess return deduction”, and we refer to the performance of the Selected Portfolio, as reduced by the excess return deduction, as the “excess return performance” of the Selected Portfolio. The Index reflects the excess return performance of the Selected Portfolio, which means that the Index will not have positive returns unless the Selected Portfolio appreciates by more than the excess return deduction, and then only to the extent to which the appreciation of the Selected Portfolio exceeds the excess return deduction (as well as the index fee and notional costs described below). The Index will have negative returns if the excess return deduction is greater than the performance of the Selected Portfolio. The performance of the Index will also be reduced by deductions for an index fee and certain notional costs. For more details, see “—Excess Return Deduction” and “—Index Fee and Notional Costs” below.

The Index is also a “volatility target” index, which means that it adjusts its exposure to the excess return performance of the Selected Portfolio on a daily basis in an attempt to maintain a target volatility for the Index of approximately 5%, subject to a maximum exposure of 120% and a minimum exposure of 0%. We refer to the exposure that the Index has to the excess return performance of the Selected Portfolio at any time as its “**VT Exposure**” at that time. If the VT Exposure is less than 100% on any Index Business Day (which will occur if the volatility of the excess return performance of the Selected Portfolio is greater than 5% over the preceding 20 Index Business Days), the difference will be hypothetically allocated to uninvested cash, on which no interest or other return will accrue. For more details, see “—Volatility Target” below.

Although the Index uses certain concepts drawn from modern portfolio theory, it is important to understand that the Index contains a number of features that are not found in modern portfolio theory or that may be inconsistent with modern portfolio theory, and that the Index may not effectively implement modern portfolio theory. For example:

- Modern portfolio theory does not prescribe the manner in which expected return, risk or correlation should be measured, nor does it specify whether 5% is an appropriate level of expected volatility to target. Therefore, although the historical measures of returns, volatility and correlation used by the Index and the 5% volatility target are key features of the Index, they cannot be said to be drawn from modern portfolio theory. Other investment methodologies using the same modern portfolio theory concepts, but that

determine expected return, risk and correlation in different ways or that accept a greater or lesser level of expected risk, may perform significantly better than the Index.

- There is no single way to implement the concepts of modern portfolio theory, and the approach reflected in the Index may not be as successful as other approaches to implementing modern portfolio theory. For example, modern portfolio theory does not necessarily suggest the Index's approach of maximizing expected returns without exceeding a pre-defined level of expected risk. One alternative approach would be to maximize the *ratio* of expected returns to expected risk. For example, if there are two portfolios, one with a 10% expected return and a 5% expected risk (Portfolio A) and one with a 9.8% expected return and a 2.5% expected risk (Portfolio B), the Index would select Portfolio A, because Portfolio A has a higher expected return than Portfolio B and its volatility did not exceed 5%. However, Portfolio B might be viewed as a more optimal portfolio, because although it had a slightly lower expected return than Portfolio A, it had a significantly lower volatility, and therefore a significantly higher ratio of expected return to expected risk. Therefore, the Selected Portfolio that the Index selects may not be the optimal portfolio under alternative approaches to implementing modern portfolio theory.
- Under modern portfolio theory, if the assumption is made that investors can lend or borrow at a risk-free rate, there is a single optimal investment portfolio of risky assets that all rational investors would select, regardless of risk tolerance (assuming identical views about expected return, volatility and correlation). All investors would hold the same risky portfolio and would differ only in the amount they would allocate between that risky portfolio and the risk-free asset, or in the amount that they would borrow at the risk-free rate in order to invest in the risky portfolio. An approach designed to implement this feature of modern portfolio theory would identify the optimal portfolio as the one that lies at the point of tangency between the efficient frontier and a line that meets the expected return axis (see the graph above) at the risk-free rate, without a target volatility requirement and without seeking to maximize expected returns below a target volatility level. This approach would seek to achieve the target volatility only after the optimal portfolio is identified and would do so by adding either a lending or a borrowing component at the risk-free rate. The approach reflected in the Index, which imposes a target volatility requirement in the selection of the Selected Portfolio and does not reflect either lending or borrowing at the risk-free rate, is entirely different from this approach and will select an entirely different Selected Portfolio. Therefore, the Index does not reflect modern portfolio theory where the assumption is made that investors can lend or borrow at a risk-free rate. Although it may not be possible for most investors to borrow at a risk-free rate, there may be practical approaches that use concepts drawn from this approach to modern portfolio theory, and these approaches may be more successful, and more faithful to modern portfolio theory, than the approach reflected in the Index.
- The Index does not construct hypothetical investment portfolios from all assets that would be available to an investor, but only from the limited universe of Eligible Constituents. Although the Eligible Constituents cover a number of different asset classes, they include only a limited number of market sectors within those asset classes. For example, the equities asset class includes large-capitalization U.S. stocks but not mid- or small-capitalization U.S. stocks; the commodities asset class includes very limited exposure to energy commodities like oil or natural gas; and the only fixed income instruments that are included are selected U.S. Treasury bonds of a certain maturity. Moreover, the Eligible Constituents exclude a number of major asset classes altogether, such as currencies and real estate. The Index might have achieved a better return if the universe of Eligible Constituents were more representative of the universe of assets available to an investor.
- The Index applies weighting constraints to the percentage weights that may be assigned to Eligible Market Constituents, which may result in the selection of a Selected Portfolio that is different from the hypothetical investment portfolio that would be selected in the absence of those constraints.
- If no Eligible Market Portfolio has a historical volatility that is less than or equal to 5%, the Selected Portfolio for any given month will not be selected pursuant to concepts drawn from modern portfolio theory, but instead will be the Minimum Volatility Portfolio. In addition, if the Selected Portfolio otherwise chosen has a historical performance below the 90-day U.S. Treasury bill rate, or if an Extraordinary Rebalancing Event occurs, the Selected Portfolio will be allocated 100% into the Cash Constituent.

- The Index’s excess return deduction and the index fee will exert a drag on Index performance. Even if the Selected Portfolio proves to be the optimal portfolio under modern portfolio theory, the Index will always underperform the Selected Portfolio, perhaps significantly.
- Modern portfolio theory does not suggest monthly rebalancing or daily VT Exposure adjustments to maintain a constant volatility, both of which may have an adverse effect on Index performance as a result of the incurrence of notional transaction costs at the time of each rebalancing or adjustment. In addition, the Index’s daily adjustment of VT Exposure may cause the Index to have more or less than 100% exposure to the excess return performance of the Selected Portfolio at any given time.

The Selected Portfolio is described as a hypothetical investment portfolio because there is no actual portfolio of assets to which any investor is entitled or in which any investor has any ownership or other interest. The Index is merely a mathematical calculation that is performed by reference to hypothetical positions in the Eligible Constituents included in the Selected Portfolio and the other Index Rules, as described in this Part 1.

The Index Rules set forth the specific rules governing the Index. This description of the Index is only a summary of those Index Rules. You should understand that this summary does not describe the mathematical terms used in calculating the Index, and as a result is more general than the precise mathematical formulations used to calculate the Index. The mathematical calculation of the Index is described in the Index Rules. The Index will be governed by and calculated in accordance with the mathematical and other terms set forth in the Index Rules, and not this description of the Index. If this description of the Index conflicts with the Index Rules, the Index Rules control.

Descriptions of each of the Eligible Constituents are set forth below in Part 4. The Index Sponsor is not affiliated with the sponsors of any of the Eligible Market Constituents. All information relating to the Eligible Market Constituents is based on publicly available information and has not been independently verified.

Selection Methodology

On the second to last Index Business Day of each month (each, a “**Selection Day**”), the Index seeks to identify the Eligible Market Portfolio that, of all Eligible Market Portfolios that could be constructed from the Eligible Market Constituents, has the greatest expected return without exceeding the expected risk target of 5%. To be an Eligible Market Portfolio, the following conditions must be met:

- (i) the percentage weights allocated to all Eligible Market Constituents must total 100%;
- (ii) the percentage weight of each Eligible Market Constituent must not exceed its maximum percentage weight, as indicated in Table I above; and
- (iii) the aggregate percentage weight of all Eligible Market Constituents in any single asset class must not exceed the applicable maximum percentage weight for that asset class, as indicated in Table I above.

An Eligible Market Portfolio may, but need not, include all of the Eligible Market Constituents. An Eligible Market Portfolio may include as few as two, or as many as all eight, of the Eligible Market Constituents.

The Index calculates the expected return of an Eligible Market Portfolio based on its historical performance, and the expected risk of an Eligible Market Portfolio based on its historical volatility.

- *Historical performance.* The historical performance of an Eligible Market Portfolio as of a Selection Day is calculated based on the exponentially weighted moving average of the daily returns of each of its Eligible Market Constituents over the historical period of 252 Index Business Days ending on that Selection Day (approximately one year), which we refer to as the “**Look-Back Period**”. An exponentially weighted moving average is a type of weighted average that gives exponentially greater weight to more recent daily returns, as illustrated in the chart below. As a result, more recent daily returns will have a greater effect than older daily returns in determining the historical performance of each Eligible Market Portfolio.

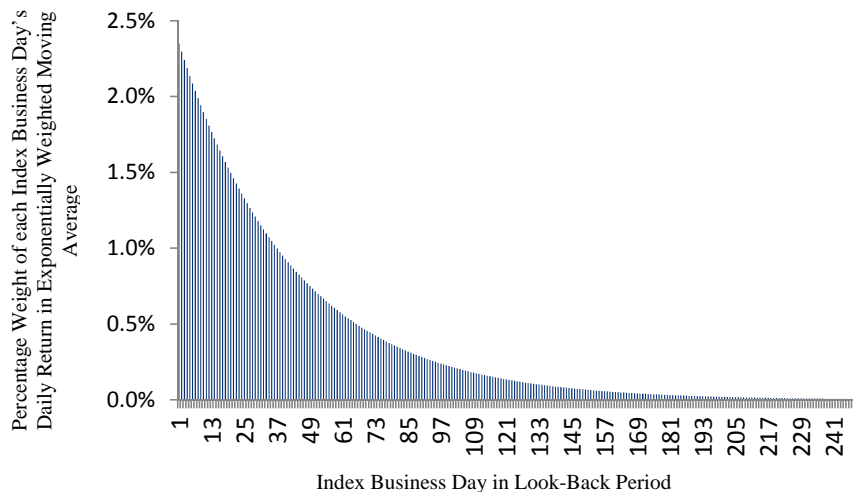
This measure of the historical performance of an Eligible Market Portfolio differs from other ways in which historical performance could be measured. For example, the exponentially weighted moving average of daily returns could indicate positive historical performance even if the Eligible Market Portfolio has declined overall from the beginning to the end of the Look-Back Period, and vice versa. The Index

uses an exponentially weighted moving average of daily returns in an attempt to reflect more recent trends in the performance of the Eligible Market Portfolios, but there can be no assurance that any trends, if they exist, will continue, or that they will be accurately captured by the exponentially weighted moving average used by the Index, or that this particular measure of historical performance on any Selection Day will be an effective predictor of the future performance of the Eligible Market Portfolios over the next month.

- Historical volatility.* The historical volatility of an Eligible Market Portfolio as of a Selection Day is calculated in a manner that is similar to the manner in which the historical performance is determined – that is, the historical volatility measure is an exponentially weighted moving average volatility calculated over the Look-Back Period that gives exponentially greater weight to more recent volatility. The historical volatility of an Eligible Market Portfolio as of a Selection Day is determined based on the historical volatility of each of the Eligible Market Constituents that make up that Eligible Market Portfolio, as well as the degree of historical correlation among the Eligible Market Constituents. For this purpose, the historical volatility of the Eligible Market Constituents is a statistical measure of the degree of variability of the exponentially weighted daily returns of the Eligible Market Constituents over the Look-Back Period, and the historical correlation among the Eligible Market Constituents is a statistical measure of the degree to which the exponentially weighted daily returns of the Eligible Market Constituents were similar to each other over the Look-Back Period in terms of timing and direction (*i.e.*, positive or negative). An Eligible Market Portfolio with a lower degree of correlation among its Eligible Market Constituents will have a lower volatility than an Eligible Market Portfolio with a higher degree of correlation among its Eligible Market Constituents, even if the volatilities of the individual Eligible Market Constituents are the same.

In this document, the concept that we refer to as “correlation” is, in technical terms, actually “covariance”. We use the term “correlation” rather than “covariance” because correlation has a more commonly understood meaning and because that meaning – which refers to the degree of similarity between the returns of two or more assets – applies both to correlation and covariance at a general level. However, we note that correlation and covariance are technically distinct concepts.

The chart below illustrates the effect of the exponential weighting in the calculations described above. For each Index Business Day in the Look-Back Period, the chart indicates the percentage weight that will be given to the daily return of an Eligible Market Constituent on that Index Business Day in calculating the exponentially weighted moving average of that Eligible Market Constituent’s daily returns over the Look-Back Period. For example, the return on Day 1 in the Look-Back Period (*i.e.*, the most recent day in the Look-Back Period) has an approximately 2.3495% weight in calculating the exponentially weighted moving average. Day 2 in the Look-Back Period has a slightly smaller percentage weight than the percentage weight given to the daily return on Day 1, and each subsequent earlier Index Business Day has a progressively smaller percentage weight until Day 252 in the Look-Back Period (*i.e.*, the earliest day in the Look-Back Period), which has a percentage weight that is very nearly zero. The percentage weights given to each Index Business Day in the Look-Back Period add up to 100%. As the chart illustrates, the most recent daily returns have a significantly greater weight than older daily returns in determining the exponentially weighted moving average.



On each Selection Day, the Index uses the historical returns and volatility of, and correlation among, the Eligible Market Constituents (measured based on the exponentially weighted moving average of daily returns as described above) as inputs to an optimization model. That optimization model is designed to identify the Eligible Market Portfolio – that is, the combination of Eligible Market Constituents and percentage weights meeting the weighting constraints specified above – that would have had the greatest historical performance (*i.e.*, the greatest exponentially weighted moving average of daily returns) over the Look-Back Period out of all possible Eligible Market Portfolios, without having a historical volatility that exceeds the Index’s volatility target of 5%. That Eligible Market Portfolio will be the Selected Portfolio for the next month, except as described below.

If no such Eligible Market Portfolio can be found because every Eligible Market Portfolio would have had a historical volatility greater than the 5% volatility target, the Index will no longer seek to identify the Eligible Market Portfolio that would have had the greatest historical performance for a given level of historical volatility. Instead, the Index will identify the “**Minimum Volatility Portfolio**”, which is the Eligible Market Portfolio that would have had the lowest historical volatility of all possible Eligible Market Portfolios, regardless of the historical performance of that Eligible Market Portfolio. In this circumstance, the Selected Portfolio for the next month will be the Minimum Volatility Portfolio, but with a pro rata allocation of percentage weight away from the Eligible Market Constituents in the Minimum Volatility Portfolio and into the Cash Constituent to the extent necessary to result in a historical volatility of the Selected Portfolio equal to 5% (assuming for these purposes that the Cash Constituent has no volatility).

If the Selected Portfolio that is selected by the above rules would have had a historical performance that is less than or equal to the 90-day U.S. Treasury bill rate on the Selection Day, then the Selected Portfolio for the next month will not be determined as described above and, instead, will consist of a 100% allocation to the Cash Constituent.

After the Selected Portfolio is determined on a Selection Day, the Index will be rebalanced to track that Selected Portfolio during the immediately following Rebalancing Period (as defined below).

There can be no assurance that the selection methodology employed by the Index will result in positive Index performance. See “Risk Factors Relating to the Citi Market Pilot 5 Excess Return Index” in Part 2 below for a discussion of significant risks relating to the Index.

Monthly Rebalancing

The Selected Portfolio determined on each monthly Selection Day is given effect in the Index over the course of a “**Rebalancing Period**”, which is the period of five Index Business Days beginning on the second Index Business Day following the Selection Day (so that the first Index Business Day in each Rebalancing Period is the first Index Business Day of each calendar month). Over the five-day Rebalancing Period, the Index gradually rolls out of the old Selected Portfolio and into the new Selected Portfolio at a rate of 20% per day. On the last Index Business Day of the Rebalancing Period, each Eligible Constituent included in the new Selected Portfolio will be given a unit weight that results in that Eligible Constituent having a percentage weight in the Selected Portfolio, based on the value of the Selected Portfolio and each included Eligible Constituent on that Index Business Day, equal to its percentage weight in the Selected Portfolio as determined on the Selection Day (also referred to as the “target percentage weight”). On each Index Business Day in the Rebalancing Period prior to that last Index Business Day, the Index will track a blend between the old Selected Portfolio and the new Selected Portfolio, and the unit weights of the Eligible Constituents included in either the new Selected Portfolio or the old Selected Portfolio will be reset so that each such Eligible Constituent will represent, on that Index Business Day, a percentage of that blend that is itself a blend between the target percentage weights of the new Selected Portfolio and the then current percentage weights of the old Selected Portfolio.

The “percentage weight” of an Eligible Constituent and its “unit weight” in the Selected Portfolio are related but distinct concepts. The unit weight of any Eligible Constituent in the Selected Portfolio is the hypothetical number of “units” of that Eligible Constituent included in the Selected Portfolio. The percentage weight of an Eligible Constituent at any time is the percentage of the overall value of the Selected Portfolio represented by that number of units of that Eligible Constituent (taking into account the value of that Eligible Constituent and the Selected Portfolio at the time). On the last Index Business Day of each Rebalancing Period, the Index sets the number of units of each Eligible Constituent in the Selected Portfolio (*i.e.*, its “unit weight”) so that the number of units of each Eligible Constituent multiplied by its value on the last Index Business Day of the Rebalancing Period represents its percentage weight in the Selected Portfolio as determined on the Selection Day. After the last Index Business Day

of each Rebalancing Period, the unit weights will not change until the next Rebalancing Period (or as the result of an extraordinary rebalancing, as described below), but the current percentage weights of the included Eligible Constituents will fluctuate with changes in their values.

Extraordinary Rebalancing

In addition to the regular monthly rebalancing, the Selected Portfolio may also be rebalanced as a result of an Extraordinary Rebalancing Event. An “**Extraordinary Rebalancing Event**” will occur if, on any Index Business Day that is not in a regular monthly Rebalancing Period and is not between a Selection Day and the immediately following monthly Rebalancing Period, the Monthly Selected Portfolio Return falls below –8%. The “**Monthly Selected Portfolio Return**” will be observed on each Index Business Day and will be the percentage return of the Selected Portfolio over the 21-Index Business Day period ending on the current Index Business Day, as measured by the percentage change from the value of the Selected Portfolio on the 20th Index Business Day immediately preceding the current Index Business Day to the value of the Selected Portfolio on the current Index Business Day. The Selected Portfolio on the 20th Index Business Day prior to the current Index Business Day may be a different portfolio than the Selected Portfolio on the current Index Business Day as a result of an intervening monthly rebalancing. As a result, the triggering of an Extraordinary Rebalancing Event may not necessarily be solely attributable to a decline in the value of the current Selected Portfolio, but may also take into account performance of the prior month’s Selected Portfolio.

If an Extraordinary Rebalancing Event occurs, then the Eligible Market Constituents included in the Selected Portfolio will be replaced with the Cash Constituent over an Extraordinary Rebalancing Period beginning on the immediately following Index Business Day (the “**Extraordinary Rebalancing Start Day**”). The “**Extraordinary Rebalancing Period**” is the period commencing on an Extraordinary Rebalancing Start Day and ending on the fourth Index Business Day after the Extraordinary Rebalancing Start Day or, if earlier, the immediately following Selection Day. As with a monthly rebalancing, an Extraordinary Rebalancing Period consists of five Index Business Days, and the Eligible Market Constituents will be replaced with the Cash Constituent over that period at a rate of 20% each day. After a rebalancing pursuant to an Extraordinary Rebalancing Event, the Selected Portfolio will remain 100% allocated to the Cash Constituent until the next monthly rebalancing. However, if an Extraordinary Rebalancing Period consists of fewer than five Index Business Days because a Selection Day occurs prior to the day that would otherwise be the fifth Index Business Day in the Extraordinary Rebalancing Period, the rebalancing will nevertheless take effect at a rate of 20% each day until, and including, the Selection Day, after which point the unit weights will remain unchanged until the beginning of the immediately following monthly Rebalancing Period. In this circumstance, the aggregate percentage weight of the Eligible Market Constituents would not fall to 0% and the Cash Constituent would not reach 100% in the Extraordinary Rebalancing Period.

Excess Return Deduction

The Index is an “excess return” index, which means that, in calculating the performance of the Index, the daily performance of the Selected Portfolio will be reduced by a notional funding rate equal to the federal funds effective rate, as in effect on the immediately preceding Index Business Day. The federal funds effective rate is the volume-weighted average of interest rates (expressed as an annual rate) at which depository institutions lend balances at the Federal Reserve to other depository institutions overnight, as published on Bloomberg page “FEDL01 <Index>” (or any successor substitute page).

The federal funds effective rate at any time is reflective of the Federal Reserve’s then current monetary policy. Although the Federal Reserve has maintained the federal funds effective rate at relatively low levels in recent years, the Federal Reserve may change its monetary policy at any time. If the Federal Reserve raises interest rates (specifically, its federal funds target rate), or if interest rates otherwise rise, the federal funds effective rate will increase and the excess return performance of the Selected Portfolio (and, therefore, the performance of the Index) will be adversely affected.

The excess return deduction will place a drag on the performance of the Index, offsetting any appreciation of the Selected Portfolio, exacerbating any depreciation of the Selected Portfolio and causing the level of the Index to decline steadily if the value of the Selected Portfolio remains relatively constant. The excess return deduction may cause the performance of the Index to decline even if the Selected Portfolio appreciates.

Volatility Target

The Index's exposure to the excess return performance of the Selected Portfolio (also referred to as its VT Exposure) may vary on each Index Business Day in an attempt to maintain a target volatility for the Index equal to the volatility target of 5% (the "**Volatility Target**"). For this purpose, volatility is not measured in the way that historical volatility is measured for purposes of selecting the Selected Portfolio for each month. Rather, on any Index Business Day, volatility for this purpose is measured as the standard deviation of the daily excess return performance of the Selected Portfolio over the period of 20 Index Business Days ending two Index Business Days prior to the current Index Business Day ("**20-Day Realized Volatility**"). In other words, 20-Day Realized Volatility is a measure of the degree of variability in the daily excess return performance of the Selected Portfolio over the relevant 20 Index Business Day period.

The 20-Day Realized Volatility measure will be based on the daily excess return performance of the portfolio that was the Selected Portfolio on each day in the relevant 20 Index Business Day period. Because 20 Index Business Days is nearly a month, and because the Selected Portfolio is re-selected on a monthly basis, any given period of 20 Index Business Days is likely to include some number of days prior to the most recent monthly rebalancing and, therefore, some days whose excess return performance will reflect the performance of the prior month's Selected Portfolio. As a result, the Index's volatility targeting feature will be based not only on the realized volatility of the current Selected Portfolio, but also, to a greater or lesser extent depending on how recent the most recent monthly rebalancing was, the volatility of the prior month's Selected Portfolio. Therefore, at the start of a month, the Index's volatility targeting feature will be driven by the prior month's Selected Portfolio and, toward the end of that month, the Index's volatility targeting feature will be increasingly driven by the current month's Selected Portfolio.

The Index's VT Exposure on any Index Business Day will equal the Target Volatility of 5% *divided by* the 20-Day Realized Volatility measured as of that Index Business Day, subject to the volatility buffer described below. This means that the Index will have less than 100% exposure to the excess return performance of the Selected Portfolio when the 20-Day Realized Volatility is greater than 5%, and greater than 100% exposure (subject to a maximum of 120%) when 20-Day Realized Volatility is less than 5%. At any time when the Index has a VT Exposure that is less than 100%, the difference will be hypothetically allocated to uninvested cash, on which no interest or other return will accrue.

For example, if the 20-Day Realized Volatility determined with respect to any Index Business Day is 10%, the Index will have 50% exposure to the excess return performance of the Selected Portfolio (5% *divided by* 10%) over the next Index Business Day. This would mean that if the excess return performance of the Selected Portfolio appreciates by 2% over the next Index Business Day, the Index would only appreciate by 1%, and if the excess return performance of the Selected Portfolio depreciates by 2% over the next Index Business Day, the Index would only depreciate by 1% (in each case, less the index fee and notional costs described below). Alternatively, if the 20-Day Realized Volatility determined with respect to any Index Business Day is less than 5%, the Index will have greater than 100% exposure to the excess return performance of the Selected Portfolio. For example, if the 20-Day Realized Volatility determined with respect to any Index Business Day is 4%, the Index will have 120% exposure to the excess return performance of the Selected Portfolio (5% *divided by* 4%, subject to the maximum of 120%) over the next Index Business Day. This would mean that if the excess return performance of the Selected Portfolio appreciates by 2% over the next Index Business Day, the Index would appreciate by 2.4%, and if the excess return performance of the Selected Portfolio depreciates by 2% over the next Index Business Day, the Index would depreciate by 2.4% (in each case, less the index fee and notional costs described below).

The Index will adjust its VT Exposure on any given Index Business Day only if the change in the exposure from the preceding Index Business Day would be greater than a "**volatility buffer**" of 5%. For example, if the Index has a 50% VT Exposure on any given Index Business Day, the Index will not adjust its VT Exposure on any subsequent Index Business Day unless the VT Exposure would exceed 55% or be less than 45%.

Index Fee and Notional Costs

An index fee and certain notional costs are deducted in the calculation of the Index. The index fee is deducted from the daily performance of the Index at a rate of 0.50% per annum. In addition, the following two types of notional costs are deducted from the performance of the Index:

1. **Transaction Costs.** Notional transaction costs are deducted each time there is an increase in the unit weight of any Eligible Market Constituent in the Selected Portfolio. An increase in the unit weight of an Eligible Market Constituent in the Selected Portfolio may occur on any day in a monthly Rebalancing Period. Notional transaction costs are also deducted each time there is a change in the VT Exposure as a result of the Index’s volatility targeting feature. The notional transaction cost at the time of an increase in the unit weight of an Eligible Market Constituent will be given effect by deducting the relevant percentage indicated in Table II below from the increase in the percentage weight of the Eligible Market Constituent from its then current percentage weight, resulting in a lower unit weight for that Eligible Market Participant. The notional transaction cost at the time of any change in the VT Exposure will be given effect by multiplying the current percentage weight of each Eligible Market Constituent then included in the Index by one-half of the relevant percentage indicated in Table II below, finding the sum of all of those calculations for the Eligible Market Constituents then included in the Index and then multiplying the result by the absolute value of the change in the VT Exposure.
2. **Exposure Costs.** Notional exposure costs are deducted on a daily basis from the level of each Eligible Market Constituent included in the Index. The notional exposure costs are deducted at the per annum rate provided in Table II below.

Table II

Market Constituent	Notional Transaction Cost	Notional Exposure Cost per Annum
S&P 500 [®] Total Return Index	0.03%	0.20%
MSCI Daily Total Return Net EAFE USD Index [®]	0.30%	0.20%
MSCI Daily Total Return Net Emerging Markets USD Index	0.70%	0.70%
S&P U.S. 10-Year TIPS Index	0.10%	0.80%
S&P/BGCantor 7-10 Year U.S. Treasury Bond Total Return Index	0.05%	0.20%
S&P/BGCantor 10-20 Year U.S. Treasury Bond Total Return Index	0.05%	0.20%
S&P GSCI [™] Light Energy Total Return Index	0.10%	0.20%
S&P GSCI [™] Gold Total Return Index	0.20%	0.30%

Index Level Calculation

The level of the Index (the “**Index Level**”) is calculated by the Index Calculation Agent on each Index Business Day, subject to the occurrence of a Disrupted Day as described under “—Disruption to Valuation and Other Adjustments—Consequences of Disrupted Days” below. The Index Level as of each Index Business Day is published on Bloomberg page “CHISMA5N <Index>,” generally on the following Index Business Day. The Index Level as of any Index Business Day is the closing level of the Index for that Index Business Day. The Index launched on March 2, 2015 and was set to a base Index Level of 1,000 on the “**Index Base Date**” of July 1, 1998. “**Index Business Day**” means each day that is a day on which commercial banks are open for general business in New York and London.

The Index Level will be determined based on the Constituent Closing Level of each Eligible Constituent in the Index. The “**Constituent Closing Level**” for each Eligible Constituent will be calculated based on (i) for any Eligible Market Constituent on any Index Business Day, the official closing level of such Constituent on that Index

Business Day (or, in the case of a Commodity Index the level of which is only published once a day, the level of such Commodity Index for such Index Business Day), as displayed on (a) the applicable Bloomberg page identified in the description of the relevant Eligible Market Constituent below in Part 4, (b) any successor electronic page or source that has been designated by either (I) the sponsor of the original electronic page or (II) the relevant information vendor or provider of the original electronic page or (c) any alternative electronic page or source of financial data that may be designated by the Index Calculation Agent, *provided* that such page or source is widely recognized by participants in the relevant market and (ii) for the Cash Constituent on any Index Business Day, the level calculated by the Index Calculation Agent on that day in the manner described under “Cash Constituent” in Part 4 below. In calculating the Constituent Closing Level of any Eligible Market Constituent on any Index Business Day, the notional exposure cost indicated above will be deducted.

Index Calculation Agent

The Index Sponsor currently also acts as the “**Index Calculation Agent**” and calculates, maintains and publishes the Index. The Index Sponsor may, in its sole discretion and without notice, appoint an alternative Index Calculation Agent at any time (which may be an affiliate of the Index Sponsor). The Index Calculation Agent’s determinations in respect of the Index will be final.

Disruption to Valuation and Other Adjustments

The Index Level will be published on every Index Business Day. On any Index Business Day, the markets for the assets underlying the Eligible Market Constituents may be disrupted or other events may occur that affect the Eligible Market Constituents or their published levels. This section describes certain events and circumstances and the consequences of those events and circumstances that may affect an Eligible Market Constituent and/or the calculation of the Index.

Each Eligible Market Constituent falls within one of the following categories: “**Share Index**,” “**Commodity Index**” or “**Bond Index**.” Each Share Index may be further categorized as either a “**Single Exchange Index**” or a “**Multiple Exchange Index**.” Table III below indicates, for each Eligible Market Constituent, the category for that Eligible Market Constituent; for each Share Index, whether such Share Index is a Single Exchange Index or a Multiple Exchange Index; and for each Single Exchange Index, the “**Exchange**” for such Single Exchange Index. The application of the provisions of this section to an Eligible Market Constituent will depend on which of these designations apply to that Eligible Market Constituent.

Table III

Eligible Market Constituents	Category	Exchange
S&P 500 [®] Total Return Index	Share Index / Single Exchange Index	New York Stock Exchange and The NASDAQ Stock Market
MSCI Daily Total Return Net EAFE USD Index [®]	Share Index / Multiple Exchange Index	As specified below
MSCI Daily Total Return Net Emerging Markets USD Index	Share Index / Multiple Exchange Index	As specified below
S&P U.S. 10-Year TIPS Index	Bond Index	N/A
S&P/BGCantor 7-10 Year U.S. Treasury Bond Total Return Index	Bond Index	N/A
S&P/BGCantor 10-20 Year U.S. Treasury Bond Total Return Index	Bond Index	N/A
S&P GSCI [™] Light Energy Total Return Index	Commodity Index	As specified below

S&P GSCI™ Gold Total Return Index	Commodity Index	As specified below
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Consequences of Disrupted Days or Non-Scheduled Trading Days

Daily Index Calculation. If any Index Business Day is a Disrupted Day (as defined below in respect of a Share Index, a Commodity Index or a Bond Index, as applicable) or is not a Scheduled Trading Day for one or more Eligible Market Constituents then included in the Index (each Eligible Market Constituent then included in the Index, an “**Index Constituent**”, and each Index Constituent affected by a Disrupted Day or non-Scheduled Trading Day, an “**Affected Constituent**”), the Index Calculation Agent will calculate the Index Level for such Index Business Day by reference to (i) for each Index Constituent which is not an Affected Constituent, the Constituent Closing Level of the relevant Index Constituent on such Index Business Day and (ii) in respect of each Affected Constituent, the Constituent Closing Level of such Affected Constituent on the first preceding Scheduled Trading Day in respect of such Affected Constituent which is not a Disrupted Day for such Affected Constituent. In the alternative, if any Index Business Day is a Disrupted Day for any Index Constituent, the Index Calculation Agent may, in its sole discretion, suspend the calculation, publication and dissemination of the Index and the Index Level until the first succeeding Index Business Day which is not a Disrupted Day for any Index Constituent.

Rebalancing Date. If any scheduled Rebalancing Date is a Disrupted Day for one or more Eligible Market Constituents then included (or scheduled to be included) in the Index (each, a “**Rebalancing Constituent**”) or is not a Scheduled Trading Day for one or more Rebalancing Constituents, then the rebalancing will be effected for each Rebalancing Constituent that is not affected by a Disrupted Day or non-Scheduled Trading Day on the originally scheduled Rebalancing Date but will not be effected on the originally scheduled Rebalancing Date for any Rebalancing Constituent that is so affected (each, an “**Affected Rebalancing Constituent**”), and instead the Rebalancing Date for each Affected Rebalancing Constituent (and each subsequent Rebalancing Date for such Affected Rebalancing Constituent in the same Rebalancing Period) will be postponed to the next succeeding Scheduled Trading Day for such Affected Rebalancing Constituent that is not a Disrupted Day for such Affected Rebalancing Constituent; *provided* that such Rebalancing Date will not be postponed past the fifth Scheduled Trading Day for such Affected Rebalancing Constituent following the scheduled Rebalancing Date and, if such fifth Scheduled Trading Day is a Disrupted Day for such Affected Rebalancing Constituent, the Index Calculation Agent will determine the unit weight of such Affected Rebalancing Constituent in respect of the rebalancing using its good faith judgment. Notwithstanding the foregoing, if a scheduled Rebalancing Date in an Extraordinary Rebalancing Period is postponed for any Affected Rebalancing Constituent past a Selection Day, that scheduled Rebalancing Date will no longer be a Rebalancing Date for that Affected Rebalancing Constituent.

A “**Rebalancing Date**” means any Index Business Day within a Rebalancing Period or Extraordinary Rebalancing Period.

Definition of Disrupted Day and Related Definitions

Share Index Disrupted Day. The definitions in this section may vary depending on whether the Share Index is a Single Exchange Index or a Multiple Exchange Index (see chart above) as further described below.

Single Exchange Index. For any Index Constituent that is a Share Index and a Single Exchange Index, a “**Disrupted Day**” means any Scheduled Trading Day for such Share Index on which a Market Disruption Event occurs. A “**Market Disruption Event**” means, in respect of a Share Index which is a Single Exchange Index, the occurrence of any of the events set out below:

- (a) the relevant Share Index Sponsor fails to publish the level of such Share Index;
- (b) any relevant Exchange or any relevant Related Exchange fails to open for trading during its regular trading session;
- (c) the occurrence or existence at any time during the one-hour period which ends at the relevant Valuation Time of any material suspension of or limitation imposed (whether by reason of movements in price exceeding permitted limits or otherwise) on the trading on (i) any relevant Exchange of Component Securities which in aggregate constitute 20% or more of the level of such Share Index or

- (ii) any relevant Related Exchange of futures contracts or options contracts relating to such Share Index;
- (d) the occurrence or existence at any time during the one-hour period which ends at the relevant Valuation Time of any other event (other than an event described in sub-paragraph (e) or sub-paragraph (f) of this definition) that materially disrupts or impairs the ability of market participants in general (i) (on any relevant Exchange) to effect transactions in or to obtain market values for Component Securities which in aggregate constitute 20% or more of the level of such Share Index or (ii) (on any relevant Related Exchange) to effect transactions in or to obtain market values for any futures contracts or options contracts relating to such Share Index;
- (e) the closure (which has a material effect on the Index) on any Exchange Business Day of any relevant Exchange in respect of Component Securities which in aggregate constitute 20% or more of the level of such Share Index prior to its Scheduled Closing Time (unless such earlier closing time is announced by such Exchange at least one hour prior to the earlier of (i) the actual closing time for the regular trading session on such Exchange on such Exchange Business Day and (ii) the deadline for the submission of orders to be entered into such Exchange system for execution at the Scheduled Closing Time on such Exchange Business Day); or
- (f) the closure (which has a material effect on the Index) on any Exchange Business Day of any relevant Related Exchange in respect of futures contracts or options contracts relating to such Share Index prior to its Scheduled Closing Time (unless such earlier closing time is announced by such Related Exchange at least one hour prior to the earlier of (i) the actual closing time for the regular trading session on such Related Exchange on such Exchange Business Day and (ii) the deadline for the submission of orders to be entered into such Related Exchange system for execution at the Scheduled Closing Time on such Exchange Business Day).

Multiple Exchange Index. For any Index Constituent that is a Share Index and a Multiple Exchange Index, a “**Disrupted Day**” means any Scheduled Trading Day for such Share Index on which a Market Disruption Event occurs. A “**Market Disruption Event**” means, in respect of a Share Index which is a Multiple Exchange Index, the occurrence of any of the events set out below:

- (a) the relevant Share Index Sponsor fails to publish the level of such Share Index;
- (b) any relevant Related Exchange fails to open for trading during its regular trading session;
- (c) the occurrence or existence at any time during the one-hour period which ends at the relevant Valuation Time of any material suspension of or limitation imposed (whether by reason of movements in price exceeding permitted limits or otherwise) on the trading on (i) any relevant Exchange of any Component Security of such Share Index and the aggregate of all Component Securities so affected plus the X Percentage accounts for 20% or more of the level of such Share Index or (ii) any relevant Related Exchange of futures contracts or options contracts relating to such Share Index;
- (d) the occurrence or existence at any time during the one-hour period which ends at the relevant Valuation Time of any other event (other than an event described in sub-paragraph (e) or sub-paragraph (f) of this definition) that materially disrupts or impairs the ability of market participants in general (i) (on any relevant Exchange) to effect transactions in or to obtain market values for any Component Security of such Share Index and the aggregate of all Component Securities so affected plus the X Percentage accounts for 20% or more of the level of such Share Index or (ii) (on any relevant Related Exchange) to effect transactions in or to obtain market values for any futures contracts or options contracts relating to such Share Index;
- (e) the closure (which has a material effect on the Index) on any Exchange Business Day of any relevant Exchange in respect of any Component Security of such Share Index prior to its Scheduled Closing Time (unless such earlier closing time is announced by such Exchange at least one hour prior to the earlier of (i) the actual closing time for the regular trading session on such Exchange on such Exchange Business Day and (ii) the deadline for the submission of orders to be entered into such Exchange system for execution at the Scheduled Closing Time on such Exchange Business Day) and the

aggregate of all Component Securities so affected plus the X Percentage accounts for 20% or more of the level of such Share Index; or

- (f) the closure (which has a material effect on the Index) on any Exchange Business Day of any relevant Related Exchange in respect of futures contracts or options contracts relating to such Share Index prior to its Scheduled Closing Time (unless such earlier closing time is announced by such Related Exchange at least one hour prior to the earlier of (i) the actual closing time for the regular trading session on such Related Exchange on such Exchange Business Day and (ii) the deadline for the submission of orders to be entered into such Related Exchange system for execution at the Scheduled Closing Time on such Exchange Business Day).

For the purpose of determining whether or not a Market Disruption Event is occurring in respect of a Share Index at any time, if an event described in the definitions of “Market Disruption Event” above occurs in respect of a Component Security included in such Share Index at that time, then the relevant percentage contribution of such Component Security to the level of such Share Index will be based on a comparison of (i) the portion of the level of such Share Index attributable to such Component Security and (ii) the overall level of such Share Index, either (A) in the case of a Single Exchange Index, immediately before the occurrence of such event or (B) in the case of a Multiple Exchange Index, using the applicable weightings as published by, or derived from data published by, the relevant Share Index Sponsor.

“**Component Security**” means, in respect of a Share Index, each share included in such Share Index.

“**Exchange**” means (i) in respect of a Single Exchange Index, the “Exchange” for such index as specified in Table III above or any successor to any such exchange, trading system or quotation system (or any substitute exchange, trading system or quotation system to which trading in the relevant Component Securities has temporarily relocated, *provided* there is comparable liquidity relative to such Component Securities on such temporary substitute exchange, trading system or quotation system as on the original exchange, trading system or quotation system) and (ii) in respect of a Multiple Exchange Index and each relevant Component Security, the exchange, trading system or quotation system on which each Component Security is principally traded.

“**Exchange Business Day**” means (i) in respect of a Single Exchange Index, any Scheduled Trading Day for such Single Exchange Index on which each relevant Exchange and each relevant Related Exchange for such Single Exchange Index are open for trading during their respective regular trading sessions, notwithstanding any such Exchange or any such Related Exchange closing prior to its Scheduled Closing Time and (ii) in respect of a Multiple Exchange Index, any Scheduled Trading Day for such Multiple Exchange Index on which the relevant Share Index Sponsor publishes the level of such Multiple Exchange Index and on which each relevant Related Exchange for such Multiple Exchange Index is open for trading during its regular trading session, notwithstanding any relevant Exchange or Related Exchange closing prior to its Scheduled Closing Time.

“**Related Exchange**” means, in respect of a Share Index, each exchange, trading system or quotation system where trading has a material effect on the overall market for futures contracts or options contracts relating to such Share Index.

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

“**Scheduled Trading Day**” means (i) in respect of a Single Exchange Index, any day on which each relevant Exchange and each relevant Related Exchange for such Single Exchange Index is scheduled to be open for trading for their respective regular trading sessions and (ii) in respect of a Multiple Exchange Index, any day on which (A) the Share Index Sponsor of such Multiple Exchange Index is scheduled to publish the level of such Multiple Exchange Index, (B) each relevant Related Exchange for such Multiple Exchange Index is scheduled to be open for trading for its regular trading session and (C) the X Percentage is no more than 20% of the relevant Component Securities.

“**Share Index Sponsor**” means, in respect of a Share Index, the corporation or other entity that (i) is responsible for setting and reviewing the rules and procedures and methods of calculations and adjustments, if any, related to such Share Index and (ii) announces (directly or through an agent) the level of such Share Index on a regular basis.

“**Valuation Time**” means (i) in respect of a Single Exchange Index and a Scheduled Trading Day for such Single Exchange Index, the Scheduled Closing Time on the relevant Exchange on such Scheduled Trading Day and (ii) in respect of a Multiple Exchange Index and a Scheduled Trading Day for such Multiple Exchange Index, (A) for the purposes of determining whether a Disrupted Day has occurred: (x) in respect of any Component Security, the Scheduled Closing Time on the Exchange in respect of such Component Security and (y) in respect of any futures contracts or options contracts on such Multiple Exchange Index, the close of trading on the relevant Related Exchange and (B) in all other circumstances, the time when the official closing level of such Multiple Exchange Index is calculated and published by the relevant Share Index Sponsor.

“**X Percentage**” means, in respect of a Multiple Exchange Index and any day, the percentage of relevant Component Securities which are scheduled to be unavailable for trading on any relevant Exchange on such day by virtue of that day not being a day on which such relevant Exchange is scheduled to be open for trading during its regular trading session. For the purposes of determining the X Percentage in respect of a Multiple Exchange Index, the relevant percentage of a Component Security unavailable for trading will be based on a comparison of (i) the portion of the level of such Multiple Exchange Index attributable to such Component Security and (ii) the overall level of such Multiple Exchange Index, in each case using the official opening weightings as published by the relevant Share Index Sponsor as part of the market “opening data”.

Commodity Index Disrupted Day. For any Index Constituent that is a Commodity Index, a “**Disrupted Day**” means any Scheduled Trading Day for such Commodity Index on which a Market Disruption Event occurs. A “**Market Disruption Event**” means, in respect of a Commodity Index, the occurrence of any of the events set out below:

- (a) the relevant Commodity Index Sponsor fails to publish the level of such Commodity Index;
- (b) any relevant Exchange or any relevant Related Exchange fails to open for trading during its regular trading session;
- (c) the occurrence or existence at any time during the one-hour period which ends at the relevant Valuation Time of any material suspension of or limitation imposed (whether by reason of movements in price exceeding permitted limits or otherwise) on the trading on (i) any relevant Exchange of Components which in aggregate constitute 20% or more of the level of such Commodity Index or (ii) any relevant Related Exchange of futures contracts or options contracts relating to such Commodity Index;
- (d) the occurrence or existence at any time during the one-hour period which ends at the relevant Valuation Time of any other event (other than an event described in sub-paragraph (e) or sub-paragraph (f) of this definition) that materially disrupts or impairs the ability of market participants in general (i) (on any relevant Exchange) to effect transactions in or to obtain market values for Components which in aggregate constitute 20% or more of the level of such Commodity Index or (ii) (on any relevant Related Exchange) to effect transactions in or to obtain market values for any futures contracts or options contracts relating to such Commodity Index;
- (e) the closure (which has a material effect on the Index) on any Exchange Business Day of any relevant Exchange in respect of Components which in aggregate constitute 20% or more of the level of such Commodity Index prior to its Scheduled Closing Time (unless such earlier closing time is announced by such Exchange at least one hour prior to the earlier of (i) the actual closing time for the regular trading session on such Exchange on such Exchange Business Day and (ii) the deadline for the submission of orders to be entered into such Exchange system for execution at the Scheduled Closing Time on such Exchange Business Day); or
- (f) the closure (which has a material effect on the Index) on any Exchange Business Day of any relevant Related Exchange in respect of futures contracts or options contracts relating to such Commodity Index prior to its Scheduled Closing Time (unless such earlier closing time is announced by such Related Exchange at least one hour prior to the earlier of (i) the actual closing time for the regular

trading session on such Related Exchange on such Exchange Business Day and (ii) the deadline for the submission of orders to be entered into such Related Exchange system for execution at the Scheduled Closing Time on such Exchange Business Day).

For the purpose of determining whether or not a Market Disruption Event is occurring in respect of a Commodity Index at any time, if an event described in the definition of “Market Disruption Event” above occurs in respect of a Component included in such Commodity Index at that time, then the relevant percentage contribution of such Component to the level of such Commodity Index will be based on a comparison of (i) the portion of the level of such Commodity Index attributable to such Component and (ii) the overall level of such Commodity Index immediately before the occurrence of such event.

“**Commodity Index Sponsor**” means, in respect of a Commodity Index, the corporation or other entity that (i) is responsible for setting and reviewing the rules and procedures and methods of calculations and adjustments, if any, related to such Commodity Index and (ii) announces (directly or through an agent) the level of such Commodity Index on a regular basis.

“**Component**” means, in respect of a Commodity Index, each component included in such Commodity Index.

“**Exchange**” means, in respect of a Commodity Index and each relevant Component, the primary exchange, trading system or quotation system in respect of such Component or any successor to such exchange, trading system or quotation system (or any substitute exchange, trading system or quotation system to which trading in such Component has temporarily relocated, *provided* there is comparable liquidity relative to such Component on such temporary exchange, trading system or quotation system as on the original exchange, trading system or quotation system).

“**Exchange Business Day**” means, in respect of a Commodity Index, any Scheduled Trading Day for such Commodity Index on which the relevant Commodity Index Sponsor publishes the level of such Commodity Index.

“**Related Exchange**” means, in respect of a Commodity Index, each exchange, trading system or quotation system where trading has a material effect on the overall market for futures contracts or options contracts relating to such Commodity Index.

“**Scheduled Closing Time**” means, in respect of a Commodity Index, a Scheduled Trading Day and an Exchange or a Related Exchange (as relevant) for such Commodity Index, the scheduled weekday closing time on such Exchange or Related Exchange on such Scheduled Trading Day, without regard to after-hours trading or any other trading outside the hours of the regular trading session on such Exchange or Related Exchange.

“**Scheduled Trading Day**” means, in respect of a Commodity Index, any day on which the Commodity Index Sponsor of such Commodity Index is scheduled to publish the level of such Commodity Index.

“**Valuation Time**” means, in respect of a Commodity Index, a Constituent Closing Level and a Scheduled Trading Day for such Commodity Index, either (i) the Scheduled Closing Time on the relevant Exchange on such Scheduled Trading Day or (ii) where the level of such Commodity Index is only published once a day (A) for the purposes of determining whether a Disrupted Day has occurred: (x) in respect of any Component, the time at which such Component is valued for the purposes of determining the level of such Commodity Index for the relevant day and (y) in respect of any futures contracts or options contracts relating to such Commodity Index, the close of trading on the relevant Related Exchange and (B) in all other circumstances, the time when the official closing level of such Commodity Index for such day is calculated and published by the relevant Commodity Index Sponsor.

Bond Index Disrupted Day. For any Index Constituent that is a Bond Index, a “**Disrupted Day**” means any Scheduled Trading Day for such Bond Index on which a Market Disruption Event occurs. A “**Market Disruption Event**” means, in respect of a Bond Index, the occurrence of any of the events set out below:

- (a) the relevant Bond Index Sponsor fails to publish the level of such Bond Index;
- (b) the occurrence or existence at any time on any Scheduled Trading Day for such Bond Index of any event or market condition, which materially disrupts or impairs the ability of market participants in general to acquire, dispose of or otherwise effect transactions in, or to obtain market values for, Component Securities which in aggregate constitute 20% or more of the level of such Bond Index;

- (c) the occurrence or existence at any time on any Scheduled Trading Day for such Bond Index of any event, or market conditions, which materially reduces the liquidity in Component Securities which in aggregate constitute 20% or more of the level of such Bond Index; or
- (d) a general moratorium is declared in respect of bond trading or general banking activities in any of the jurisdictions in which the Component Securities of such Bond Index are primarily traded.

For the purposes of determining whether or not a Market Disruption Event is occurring in respect of a Bond Index at any time, if an event described in the definition of “Market Disruption Event” above occurs in respect of a Component Security included in such Bond Index at that time, then the relevant percentage contribution of such Component Security to the level of such Bond Index will be based on a comparison of (i) the portion of the level of such Bond Index attributable to such Component Security and (ii) the overall level of such Bond Index, using the applicable weightings as published by, or derived from data published by, the relevant Bond Index Sponsor.

“**Bond Index Sponsor**” means, in respect of a Bond Index, the corporation or other entity that (i) is responsible for setting and reviewing the rules and procedures and methods of calculations and adjustments, if any, related to such Bond Index and (ii) announces (directly or through an agent) the level of such Bond Index on a regular basis.

“**Component Security**” means, in respect of a Bond Index, each fixed income instrument included in such Bond Index.

“**Scheduled Trading Day**” means, in respect of a Bond Index, any day on which the Bond Index Sponsor of such Bond Index is scheduled to publish the level of such Bond Index.

Adjustments and Modifications

Regulatory Events. If either (a) the Index Sponsor or any of its affiliates is required (or there is a reasonable likelihood that, within the next 30 Index Business Days, it will be required) by any applicable law or regulation or policy to dispose of any Hedge Position, or it is not permitted (or there is a reasonable likelihood that, within the next 30 Index Business Days, it will not be permitted) to hold, acquire, increase, decrease or dispose of any Hedge Position; and/or (b) due to any applicable law or regulation or policy, the Index Sponsor or the Index Calculation Agent is not permitted (or there is a reasonable likelihood that, within the next 30 Index Business Days, it will not be permitted) to continue to sponsor or calculate, as applicable, an index comprising an asset which is an Eligible Constituent of the Index, then a regulatory event (a “**Regulatory Event**”) will be deemed to have occurred. “**Hedge Position**” means any one or more of: (i) positions or contracts in, or relating to, securities, options, futures, other derivative contracts or foreign exchange, or (ii) other instruments, contracts, transactions or arrangements (howsoever described) that would be appropriate to hedge, individually or on a portfolio basis, any investment product linked to the Index. If a Regulatory Event occurs, then each affected Eligible Constituent will be removed from the Index on the date (an “**Additional Rebalancing Date**”) designated by the Index Calculation Agent or the Index Sponsor. On each Additional Rebalancing Date, the Selected Portfolio will be rebalanced as if such Additional Rebalancing Date were a Rebalancing Date and, for this purpose, the related Selection Day will be the third Index Business Day prior to the relevant Additional Rebalancing Date.

Constituent Successor Index and Successor Sponsor. If an Eligible Market Constituent is (i) not calculated and announced by the relevant Constituent Sponsor but is calculated and announced by a successor sponsor acceptable to the Index Calculation Agent or (ii) replaced by a successor index using, in the determination of the Index Calculation Agent, the same or a substantially similar formula for and method of calculation as used in the calculation of the relevant Eligible Market Constituent, then in each case that index (the “**Constituent Successor Index**”) will be deemed to be the relevant Eligible Market Constituent with effect from the date determined by the Index Calculation Agent who may make such adjustment(s) to the Index Rules as it determines appropriate to account for such change.

“**Constituent Sponsor**” means, with respect to any Eligible Market Constituent, the relevant Share Index Sponsor, Commodity Index Sponsor or Bond Index Sponsor, as applicable.

Constituent Index Modification and Cancellation; Constituent Licensing Event. If a Constituent Sponsor announces that it will make a material change in the formula for or method of calculating an Eligible Market Constituent or in any other way materially modifies that Eligible Market Constituent (other than a modification

prescribed in that formula or method to maintain that Eligible Market Constituent in the event of changes in its constituents and capitalization and other routine events) or permanently cancels that Eligible Market Constituent and no Constituent Successor Index exists, or if, in respect of any Eligible Market Constituent, a license granted (if required) to the Index Sponsor and/or the Index Calculation Agent and/or any of their respective affiliates, to use such Eligible Market Constituent in connection with the Index is terminated, or any such entity's right to use such Eligible Market Constituent in connection with calculating the Index is otherwise disputed, impaired or ceases for any reason, then:

- (a) the Index Calculation Agent may suspend the calculation, publication and dissemination of the Index and the Index Level until the first succeeding Index Business Day on which such event does not occur or continue to occur;
- (b) the Index Calculation Agent may select a replacement Eligible Market Constituent that has substantially similar characteristics to the Eligible Market Constituent that is being replaced, having regard to the manner in which such Eligible Market Constituent is used in the calculation of the Index, in which case the Index Calculation Agent will (i) determine the effective date of such replacement and (ii) make such adjustment(s) to the Index Rules as it determines appropriate to account for the effect on the Index of such replacement; or
- (c) the Index Sponsor may discontinue and cancel the Index.

Replacement. If the Index Calculation Agent chooses to select a replacement Eligible Market Constituent in accordance with this section “—Disruption to Valuation and Other Adjustments,” the following criteria will apply to the replacement of each Eligible Market Constituent as indicated:

Table IV

Eligible Market Constituents	Replacement Criteria
S&P 500 [®] Total Return Index	Exposure to large-cap U.S. equities
MSCI Daily Total Return Net EAFE USD Index [®]	Exposure to equities from developed markets (excluding North America)
MSCI Daily Total Return Net Emerging Markets USD Index	Exposure to emerging market equities
S&P U.S. 10-Year TIPS Index	Exposure to US TIPS
S&P/BGCantor 7-10 Year U.S. Treasury Bond Total Return Index	Exposure to medium-term U.S. government debt
S&P/BGCantor 10-20 Year U.S. Treasury Bond Total Return Index	Exposure to long-term U.S. government debt
S&P GSCI [™] Light Energy Total Return Index	Broad-based exposure to commodities excluding livestock
S&P GSCI [™] Gold Total Return Index	Exposure to gold

Suspension and Cancellation

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

Corrections, Calculations and Determinations

In the event that the level of any Index Constituent for any time on any day which is announced by or on behalf of the Constituent Sponsor and which is used for any calculation or determination in respect of the Index is subsequently corrected, and such correction (the “**Corrected Level**”) is published by or on behalf of the Constituent Sponsor within (i) in the case of a Share Index, two Index Business Days, (ii) in the case of a Commodity Index, 30 calendar days or (iii) in the case of a Bond Index, two Index Business Days, then such Corrected Level shall be deemed to be the level for such Index Constituent for the relevant time on the relevant day and the Index Calculation Agent may, but shall not be obliged to, revise the Index Level for such day.

The Index Calculation Agent will make all calculations, determinations, rebalancings and adjustments in respect of the Index. Neither the Index Sponsor nor Index Calculation Agent (if separate from the Index Sponsor) shall have any responsibility for good faith errors or omissions in calculations, determinations, rebalancings and adjustments as provided herein or in the Index Rules. The calculations, determinations, rebalancings and adjustments of the Index Calculation Agent shall be made by it as described herein and in the Index Rules, in its sole discretion, but in good faith and in a commercially reasonable manner (having regard in each case to the criteria stipulated herein and therein). All calculations, determinations, rebalancings and adjustments shall, in the absence of manifest error, be final, conclusive and binding.

Although the Index Rules are intended to be comprehensive, it is possible that ambiguities, errors and omissions may arise in certain circumstances. The Index Sponsor will resolve, acting in good faith and in a commercially reasonable manner, any such ambiguity, error or omission, and may amend the Index Rules to reflect the resolution of such ambiguity, error or omission in a manner which is consistent with the overall methodology of the Index on March 2, 2015.

Notwithstanding that certain calculations, determinations, rebalancings and adjustments described herein may be expressed to be “on” a certain date or “at” a certain time, the Index Calculation Agent may make such calculations, determinations, rebalancings and adjustments in respect of that date or time “as of” such date or time on a date or time after that date or time, as determined by it in its discretion.

In performing any calculation, determination, rebalancing, adjustment or other action in connection with the Index Rules, each of the Index Sponsor and the Index Calculation Agent (if separate from the Index Sponsor) will act as principal and not as agent of any other person. Neither the Index Sponsor nor the Index Calculation Agent (if separate from the Index Sponsor) owes any duty of care or any fiduciary duty to any person. Each calculation, determination, rebalancing, adjustment and other action performed pursuant to the Index Rules by the Index Sponsor or the Index Calculation Agent (if separate from the Index Sponsor) is performed in reliance on this provision and is subject to this provision.

If through performing any such calculation, determination, rebalancing, adjustment or other action the Index Sponsor or the Index Calculation Agent (if separate from the Index Sponsor) is rendered an agent or fiduciary of another person under applicable law, then (at the option of the Index Calculation Agent or the Index Sponsor, as relevant) the rights and obligations of the Index Sponsor or the Index Calculation Agent (if separate from the Index Sponsor) to perform such calculation, determination, rebalancing, adjustment or other action may be suspended (or, if already performed, the application of such calculation, determination, rebalancing, adjustment or other action may be suspended) until such time when such calculation, determination, rebalancing, adjustment or other action can be performed either by the Index Sponsor or the Index Calculation Agent (if separate from the Index Sponsor) as principal and not as an agent or fiduciary or by an appropriate third party who is both willing and able to perform such calculation, determination, rebalancing, adjustment or other action.

PART 2

RISK FACTORS RELATING TO THE CITI MARKET PILOT 5 EXCESS RETURN INDEX

The following discussion of risks relating to the Citi Market Pilot 5 Excess Return Index (the “**Index**”) should be read together with the “Description of the Citi Market Pilot 5 Excess Return Index” in Part 1 above, which defines and further describes a number of the terms and concepts referred to below.

The Index may not be successful and may underperform alternative investment strategies.

There can be no assurance that the Index will achieve positive returns. The Index tracks the performance of a hypothetical, rules-based investment methodology that, once each month, selects a hypothetical investment portfolio (the Selected Portfolio) to track for the next month. The performance of the Index over that next month will depend on the performance of the Selected Portfolio over that time period, *minus* an excess return deduction, an index fee and notional costs, and subject to a volatility targeting feature that may adjust the Index’s exposure to the excess return performance of the Selected Portfolio on a daily basis in an attempt to maintain a 20-Day Realized Volatility of 5%. If the Selected Portfolio declines in value, the Index level will also decline. Even if the Selected Portfolio increases in value, the Index level will nevertheless decline if the excess return deduction, index fee and notional costs are greater than the increase in value of the Selected Portfolio. The performance of the Index may be less favorable than alternative investment strategies that could have been implemented, including an investment in a passive index fund.

The hypothetical investment methodology tracked by the Index may not produce favorable returns.

Once each month, the Index selects as the Selected Portfolio to track for the next month the Eligible Market Portfolio that, out of all possible Eligible Market Portfolios, had the greatest historical performance without exceeding the Index’s target volatility of 5% (except as otherwise described below). The performance of the Index over the next month will then be based on the performance of that Selected Portfolio, *minus* an excess return deduction, an index fee and notional costs, and subject to a volatility targeting feature that may adjust the Index’s exposure to the excess return performance of the Selected Portfolio on a daily basis in an attempt to maintain a 20-Day Realized Volatility of 5%. This hypothetical investment methodology may not produce favorable returns for a number of reasons, including the following:

- ***Historical performance may be a poor indicator of future performance.*** A fundamental assumption of the Index is that the historical performance of the Eligible Market Portfolios, as measured by the Index, may be an accurate predictor of their future performance. Accordingly, each month, the Index seeks to select as the Selected Portfolio to track for the next month the Eligible Market Portfolio that had the greatest exponentially weighted moving average of daily returns over the relevant Look-Back Period, while having an exponentially weighted moving average volatility over the Look-Back Period not in excess of 5%. The Look-Back Period for each monthly Selection Day is the historical period of 252 Index Business Days (approximately one year) ending on that Selection Day.

However, the fact that the Selected Portfolio performed favorably over the relevant Look-Back Period does not mean that it will necessarily continue to perform favorably over the next month. Future market conditions may differ from past market conditions, and the conditions that may have caused the favorable performance over the Look-Back Period may no longer exist. Moreover, past appreciation may not necessarily be an indicator of future appreciation even if future market conditions do not differ materially from past market conditions. The efficient market hypothesis, a well-known theory in academic financial literature, states that the market is efficient and that current asset prices reflect all available relevant information. If true, the efficient market hypothesis implies that any perceived historical trend in the performance of any Eligible Market Portfolio should not be an accurate predictor of its future performance. If the past performance of the Selected Portfolio proves not to be an accurate indicator of its actual performance over the next month, then the Selected Portfolio followed by the Index for any given month may, in hindsight, turn out to have been far from the optimal hypothetical investment portfolio for that month, and the Index may perform poorly.

By continually seeking to track the last year's optimal portfolio, the Index may perpetually "buy high". By the time the Index hypothetically invests in a Selected Portfolio each month, the Selected Portfolio may already have experienced significant appreciation, and the Index may therefore perpetually make hypothetical investments in portfolios when they are expensive, which may lead to poor returns.

- ***Historical volatility may be a poor indicator of future volatility and risk.*** The Index seeks to take on a defined and limited degree of expected risk by selecting as the Selected Portfolio an Eligible Market Portfolio with an expected risk that does not exceed a pre-defined level. The Index measures the expected risk of an Eligible Market Portfolio based on its historical volatility. However, there can be no assurance that the historical volatility of the Selected Portfolio will be indicative of its future volatility. As circumstances change, a Selected Portfolio that had a relatively low volatility over the Look-Back Period may have significant volatility over the next month. The volatility of a Selected Portfolio may increase as a result of an increase in the volatilities of its Eligible Market Constituents or, even if the volatilities of the Eligible Market Constituents remain the same, as a result of the Eligible Market Constituents becoming more highly correlated with each other than they were in the Look-Back Period. Other potential measures of volatility might be more predictive of future volatility than historical volatility. For example, "implied volatility" derived from the prices of listed options on the Eligible Market Constituents would reflect current market expectations about future volatility and might prove to be a more accurate indicator of future volatility than historical volatility. As a result, the measure of expected risk used by the Index may be less accurate than other measures that could have been used.

Moreover, it is important to understand that, although the Index uses historical volatility as a measure of expected risk, historical volatility is **not** an indication of how likely it is that any Eligible Market Portfolio will decline over the next month. The fact that the Selected Portfolio may have had a historical volatility of 5% over the Look-Back Period does not mean that there is a 5% chance that the Selected Portfolio will decline over the next month. Volatility is simply a statistical measure of the degree of variability in daily returns over a given historical period. It is not possible to predict the likelihood of a future decline in the value of the Selected Portfolio. Even a Selected Portfolio with a low historical volatility may experience significant declines in the future.

- ***The particular ways in which the Index measures historical performance and volatility may not accurately capture any trend in the performance and volatility of the Eligible Market Portfolios.*** The Index uses a Look-Back Period of 252 Index Business Days, which is approximately one year, to measure the historical performance and volatility of the Eligible Market Portfolios. That time period may be too long, and performance earlier in the Look-Back Period may mask more recent trends in performance and volatility. Although the Index uses an exponentially weighted moving average of daily returns to determine the historical performance and volatility of the Eligible Market Portfolios, which gives more weight to more recent performance in an attempt to capture more recent trends, there can be no assurance that this will be successful.

Furthermore, it is important to understand what the exponentially weighted moving average of daily returns does, and does not, measure. The exponentially weighted moving average of daily returns of an Eligible Market Portfolio is simply the average of daily returns of the Eligible Market Portfolio over the relevant Look-Back Period, where more recent daily returns have exponentially greater weight than daily returns earlier in the Look-Back Period. This measure is not a measure of total performance over the relevant Look-Back Period or any other period. The exponentially weighted moving average of daily returns could show positive historical performance even if the relevant Eligible Market Portfolio has declined overall from the beginning to the end of the Look-Back Period, or over any more recent period, and vice versa. Therefore, the exponentially weighted moving average of daily returns could indicate that an Eligible Market Portfolio is in a positive trend even if other measures would indicate a negative trend. If the Index fails to correctly identify the trend in the performance of the Eligible Market Portfolios, then the Selected Portfolio followed by the Index for any given month may, in hindsight, turn out to have been far from the optimal hypothetical investment portfolio for that month, and the Index may perform poorly.

In addition, the exponentially weighted moving average volatility used by the Index differs from other measures of historical volatility. Other ways of measuring the historical volatility of the Eligible Market Portfolios (for example, using the standard deviation of daily returns or using a different time period) might

have yielded a historical volatility that is more predictive of future volatility than the measure used by the Index.

- ***The Index may be subject to “whipsaws” in “choppy” markets.*** Past performance is particularly likely to be a poor indicator of future performance in “choppy” markets, which are characterized by short-term volatility and the absence of consistent long-term performance trends. In such markets, strategies that use past performance as an indicator of future performance, such as that followed by the Index, are subject to “whipsaws,” which occur when the market reverses and does the opposite of what is indicated by past performance. In these market conditions, the Index will select a Selected Portfolio assuming a trend in one direction, only to have the trend reverse and move in the other direction. The Index may experience significant declines in such market conditions.
- ***The excess return deduction, index fee and notional costs will adversely affect Index performance.*** The Index is an “excess return” index, which means that, in calculating the performance of the Index, the daily performance of the Selected Portfolio tracked by the Index will be reduced by a notional funding rate equal to the federal funds effective rate. The federal funds effective rate is the volume-weighted average of interest rates (expressed as an annual rate) at which depository institutions lend balances at the Federal Reserve to other depository institutions overnight, and is reflective of the Federal Reserve’s then current monetary policy. Although the Federal Reserve has maintained the federal funds effective rate at relatively low levels in recent years, the Federal Reserve may change its monetary policy at any time. In the period since January 1, 2005, the federal funds effective rate has been as high as 5.41% per annum. The federal funds effective rate may return to or exceed that level in the future. If the Federal Reserve raises interest rates (specifically, its federal funds target rate), or if interest rates otherwise rise, the federal funds effective rate will increase and the excess return performance of the Selected Portfolio (and, therefore, the performance of the Index) will be adversely affected.

In addition, an index fee of 0.50% per annum and two types of notional costs are deducted in the calculation of the Index. Notional transaction costs are deducted each time there is an increase in the unit weight of any Eligible Market Constituent in the Selected Portfolio, which may occur on any day in a monthly Rebalancing Period. Notional transaction costs are also deducted each time there is a change in the Index’s exposure (referred to as its VT Exposure) to the excess return performance of the Selected Portfolio as a result of the Index’s volatility targeting feature. The monthly rebalancing, and the potential for a change in the Index’s VT Exposure on a daily basis, may result in the more frequent incurrence of notional transaction costs (and therefore greater notional transaction costs) than if the Index’s hypothetical investment methodology involved less frequent rebalancings or changes in VT Exposure. In addition, notional exposure costs are deducted on a daily basis from the level of each Eligible Market Constituent included in the Selected Portfolio.

The excess return deduction, index fee and notional costs will place a drag on the performance of the Index, offsetting any appreciation of the Selected Portfolio, exacerbating any depreciation of the Selected Portfolio and causing the level of the Index to decline steadily if the value of the Selected Portfolio remains relatively constant. The Index will not appreciate unless the performance of the Selected Portfolio is sufficiently great to offset the negative effects of the excess return deduction, index fee and notional costs, and then only to the extent that the favorable performance of the Selected Portfolio is greater than the deducted amounts. As a result of these deductions, the level of the Index may decline even if the Selected Portfolio appreciates.

- ***In certain circumstances, the Index will select as the Selected Portfolio for a given month the Eligible Market Portfolio with the lowest historical volatility, without regard to historical performance.*** For any given month, if there is no Eligible Market Portfolio with a historical volatility that is less than or equal to 5%, the Selected Portfolio for that month will not be the Eligible Market Portfolio that maximizes historical performance for its level of risk, but rather will be the Eligible Market Portfolio with the lowest historical volatility, regardless of historical performance (and with a pro rata allocation to the Cash Constituent to reduce its historical volatility to 5%). In this circumstance, the Selected Portfolio would not be determined in a way that seeks to maximize expected returns given the volatility target, but instead would be determined in a manner designed to minimize historical volatility. The Selected Portfolio so chosen may have had poor historical performance and may continue to have poor performance in the future.

- ***In certain circumstances, the Selected Portfolio will consist 100% of the Cash Constituent, and in these circumstances the Index is nearly certain to decline.*** If the Eligible Market Portfolio that is otherwise identified as the Selected Portfolio for any given month has a historical performance that is less than the 90-day U.S. Treasury bill rate on the relevant monthly Selection Day, the Selected Portfolio will instead consist of a 100% allocation to the Cash Constituent. In addition, if an Extraordinary Rebalancing Event occurs as a result of a decline of more than 8% in the value of the Selected Portfolio over any 21 Index Business Day period, the Eligible Market Constituents in the Selected Portfolio will be replaced with a 100% allocation to the Cash Constituent. Because the Selected Portfolio during the earlier part of any 21 Index Business Day period may have been different from the current Selected Portfolio, an Extraordinary Rebalancing Event may occur even when the current Selected Portfolio has not experienced so significant a decline over that period.

The Cash Constituent reflects a positive accrual at the 90-day U.S. Treasury bill rate. However, the excess return deduction will be at the federal funds effective rate. The federal funds effective rate is a “risky” rate, in that it represents the rate at which depository institutions lend balances to each other. By contrast, the 90-day U.S. Treasury bill rate is a “risk-free” rate, because it is a rate on an obligation of the United States government. Therefore, the federal funds effective rate is nearly certain to be, and historically has been, greater than the 90-day U.S. Treasury bill rate. As a result, the excess return deduction is nearly certain to be greater than the performance of the Cash Constituent, resulting in net negative Index performance. In addition, the index fee will be deducted, further reducing the Index performance. Therefore, at any time when the Index has 100% exposure to the Cash Constituent, the Index is nearly certain to decline.

One consequence of this is that the reallocation to the Cash Constituent as a result of an Extraordinary Rebalancing Event is nearly certain to lead to continuing declines in the level of the Index. The Index will continue to decline following an Extraordinary Rebalancing Event even in circumstances in which the original Selected Portfolio would have rebounded and recovered from earlier losses, so that the Index would have performed better had the reallocation into the Cash Constituent not occurred.

- ***The Index’s target volatility of 5% may result in Selected Portfolios with significant allocations to U.S. Treasuries, which may underperform alternative portfolios more heavily weighted toward equities and/or commodities.*** Each month, the Index will select as the Selected Portfolio an Eligible Market Portfolio with a historical volatility that does not exceed 5% (unless there is no such Eligible Market Portfolio, in which case the Index will select the Eligible Market Portfolio with the lowest historical volatility). You should understand that, by recent historical standards, a 5% volatility would be relatively low for a portfolio of equities or commodities, which means that a significant allocation to the U.S. Treasury asset class, which is typically less volatile than equities or commodities, may frequently be needed in order for a hypothetical investment portfolio to achieve a historical volatility that does not exceed 5%. Therefore, the 5% target volatility may tend to cause the Selected Portfolio to have a greater allocation to the U.S. Treasury asset class than it would if there were a higher target volatility. Moreover, although there is an 80% asset cap on equities and a 40% asset cap on commodities, a Selected Portfolio may be 100% allocated to U.S. Treasuries. Although U.S. Treasuries are typically less volatile than equities and commodities, they may also have lower return potential. As a result, in bull markets for equities and/or commodities, a Selected Portfolio with a significant allocation to U.S. Treasuries may significantly underperform an alternative portfolio with a greater allocation to equities and/or commodities.

In addition, if the Selected Portfolio has a relatively high allocation to U.S. Treasuries, it will be particularly sensitive to factors that adversely affect the value of U.S. Treasury bonds, such as an increase in interest rates or inflation or declining perceptions of U.S. government credit quality. It is important to understand that a relatively low target volatility does not mean that the Index is less likely to decline than it would be if it had a higher target volatility. In fact, a low-volatility portfolio may decline in value even while a high-volatility portfolio appreciates. For example, in a bull market in equities that is accompanied by rising interest rates, a portfolio heavily weighted toward U.S. Treasuries might decline in value as a result of the rising interest rates, while a portfolio heavily weighted toward equities would appreciate.

- ***The Selected Portfolio may not be a diversified portfolio, and the Eligible Market Constituents in the Selected Portfolio may become correlated in decline, especially in times of financial stress.*** Although the Eligible Market Constituents cover a number of different asset classes and market sectors, there is no

requirement that the Selected Portfolio be a diversified portfolio. The Selected Portfolio may have as much as a 100% allocation to the U.S. Treasury asset class and as much as an 80% allocation to the equities asset class at any time, and may consist of as few as only two Eligible Market Constituents. At any time when the Selected Portfolio is concentrated in any one asset class, it will be subject to the risks affecting that asset class on a concentrated basis. Moreover, even when the Selected Portfolio is allocated among a number of different asset classes, these asset classes may prove to be correlated with each other in decline, which means that they may all decline at the same time. In that case, you would not receive any benefits from diversification. Especially in times of financial stress, previously uncorrelated asset classes may suddenly become correlated in decline, which may result in significant declines in the level of the Index.

- ***The Selected Portfolio may be composed of Eligible Market Constituents in a number of different asset classes and market sectors, and they may offset each other.*** Over any given period of time, some of the Eligible Market Constituents in the Selected Portfolio may appreciate and others may depreciate. The performance of the depreciating Eligible Market Constituents will offset the performance of any appreciating Eligible Market Constituents. In this circumstance, the performance of the Selected Portfolio overall will be lower than it would have been had the Selected Portfolio only consisted of the appreciating Eligible Market Constituents. The target volatility of 5% is likely to favor Selected Portfolios with a relatively low degree of historical correlation among its Eligible Market Constituents, because lower correlation among Eligible Market Constituents results in lower volatility overall for an Eligible Market Portfolio. If that historical relationship for the Eligible Market Constituents holds in the future, that may increase the likelihood that some Eligible Market Constituents in the Selected Portfolio will have less favorable performance that will significantly dampen more favorable performance by other Eligible Market Constituents in the Selected Portfolio.
- ***The Index's volatility targeting feature may adversely affect Index performance.*** In addition to selecting a Selected Portfolio with a historical volatility that does not exceed 5%, the Index seeks to maintain a 5% volatility by adjusting its exposure to the excess return performance of the Selected Portfolio on a daily basis. At any time when the 20-Day Realized Volatility of the excess return performance of the Selected Portfolio is greater than 5%, the Index will reduce its exposure to that performance (i.e., its VT Exposure) below 100%. The difference between the VT Exposure and 100% will be effectively uninvested and will not accrue any interest or other return. At any time when the VT Exposure is less than 100%, the Index will not fully participate in any appreciation in the excess return performance of the Selected Portfolio. Alternatively, at any time when 20-Day Realized Volatility is less than 5%, the Index will increase the VT Exposure to an amount greater than 100%, subject to a maximum VT Exposure of 120%. At any time when the VT Exposure is greater than 100%, the Index will participate on a leveraged basis in any decline in the excess return performance of the Selected Portfolio. Moreover, the Selected Portfolio during the earlier part of the relevant 20 Index Business Day period may be different than the current Selected Portfolio, and if the earlier Selected Portfolio was significantly more volatile than the current Selected Portfolio, the Index may calculate a high 20-Day Realized Volatility, resulting in low VT Exposure, even though the current Selected Portfolio may have much lower volatility.
- ***The Index may fail to maintain a 5% volatility.*** Although the Index aims to maintain a 20-Day Realized Volatility of 5%, there is no guarantee that it will successfully do so. There is a time lag associated with the Index's VT Exposure adjustments. Because realized volatility is measured over the period of 20 Index Business Days ending on the second Index Business Day prior to the current day, it may be some period of time before a recent increase in the volatility of the excess return performance of the Selected Portfolio is sufficiently reflected in the calculation of 20-Day Realized Volatility to cause a compensating adjustment in the VT Exposure. During the intervening period, if the increased volatility is associated with a significant decline in the value of the Selected Portfolio, the Index may in turn experience a significant decline without the reduction in exposure to the Selected Portfolio that the volatility targeting feature is intended to trigger. Moreover, the Selected Portfolio during the earlier part of the relevant 20 Index Business Day period may be different than the current Selected Portfolio, and if the earlier Selected Portfolio was significantly less volatile than the current Selected Portfolio, the Index may be slow to adjust to significant volatility in the current Selected Portfolio.
- ***The Selected Portfolio may be composed of risky assets.*** The Selected Portfolio may include Eligible Market Constituents in the equity, commodity and U.S. Treasury asset classes. Set forth below are some of

the risks associated with the asset classes and market sectors represented by the Eligible Market Constituents.

- *Risks associated with equities.* The Eligible Market Constituents in the equity asset class may include large-capitalization U.S. stocks, as well as stocks of companies in foreign developed and emerging markets. Equity indices may make up as much as 80% of the Selected Portfolio. Equities are risky assets and may be subject to significant declines.

The Selected Portfolio may have as much as an 80% allocation solely to international equities, and as much as a 40% allocation to emerging market equities. International equities, and especially emerging market equities, may be subject to greater volatility and heightened risks as compared to U.S. equities and other asset classes. In addition to the risk of declines in stock prices, international equities are subject to risks associated with currency exchange rate fluctuations. In general, if the U.S. dollar appreciates against the currencies in which international equities trade, the levels of the Eligible Market Constituents consisting of international equities would be expected to decline for that reason alone.

- *Risks associated with commodities.* The Selected Portfolio may have up to a 40% allocation to commodity futures. Commodity futures prices tend to be highly volatile and difficult to predict and may be significantly influenced by actions of governments or speculators and unexpected macroeconomic events. As a result of that volatility and unpredictability, the past performance of the Eligible Market Constituents in the commodities asset class may be a particularly unreliable indicator of their future performance. The Eligible Market Constituents that track commodity futures prices are also subject to a phenomenon known as “negative roll yield”, which refers to the tendency of commodity futures prices to decline solely as a result of the passage of time in certain market conditions. Accordingly, even if spot prices for the underlying commodities remain stable, an Eligible Market Constituent that tracks the performance of futures contracts referencing the underlying commodities may tend to decline over time, and in this circumstance the spot prices of the underlying commodities would need to increase significantly in order for an Eligible Market Constituent tracking commodity futures to avoid a decline and appreciate at all. Like equities, commodity futures are risky assets and may be subject to significant declines.

The Eligible Market Constituent that tracks the price of gold futures is subject to risks associated with a single asset, gold. The Selected Portfolio may have up to a 20% allocation to this Eligible Market Constituent alone. The price of gold may be highly volatile and subject to large and rapid declines. The price of gold has at times been inversely correlated with the strength or weakness of the U.S. dollar relative to other currencies. If the U.S. dollar generally strengthens relative to other currencies and all other conditions remain constant, the price of gold may be expected to decline. However, because many factors other than the value of the U.S. dollar affect the price of gold, the price of gold may decline even at a time when the value of the U.S. dollar is declining.

- *Risks associated with U.S. Treasuries.* As discussed above, although U.S. Treasuries tend to be less volatile than equities and commodities, they are also subject to risks and may decline in value. If general interest rates rise, if inflation increases or if the perceived credit quality of the U.S. government deteriorates, U.S. Treasuries are likely to decline in value, perhaps significantly.
- ***There is a time lag between the selection of a Selected Portfolio and its inclusion in the Index.*** The Index identifies the allocation of Eligible Constituents in the Selected Portfolio and rebalances the Index to match that allocation on different days. The Selected Portfolio for a given month is selected two Index Business Days prior to the first Index Business Day of that month and then included in the Index gradually over a Rebalancing Period of five Index Business Days beginning on the first Index Business Day of that month. Sudden market movements may occur in the gap between a monthly Selection Day and the completion of the rebalancing and, while it might be desirable to select a different Selected Portfolio as a result of those market movements, this will not be done because it would involve a departure from the Index methodology.
- ***The performance of the Index will be highly sensitive to the specific parameters by which it is calculated.*** The Index is calculated pursuant to a rules-based methodology that contains a number of specific

parameters. These parameters will be significant determinants of the performance of the Index. For example, the Index measures the historical returns, volatility and correlation of the Eligible Market Constituents over a Look-Back Period of 252 Index Business Days, and using the particular exponential weighting factor set forth in the Index Rules. The Index also has a volatility target of 5% and applies specific weighting caps to each Eligible Market Constituent and asset class. If the Index used a different Look-Back Period or a different exponential weighting factor (or no exponential weighting at all), or if the Index used a different volatility target or different weighting caps (or no weighting caps at all), the Index would select different Selected Portfolios. Furthermore, the Index seeks to maintain a realized volatility of 5% by observing realized volatility over a prior period of 20 Index Business Days, and the Index rebalances the Selected Portfolio monthly over a period of five Index Business Days. There is nothing inherent in any of these parameters that necessarily makes them the right specific parameters to use for the Index. If the Index had used different parameters, the Index might have achieved significantly better returns.

The Index may not effectively implement “modern portfolio theory”.

The Index selects a hypothetical investment portfolio to track for each month using certain concepts drawn from the “modern portfolio theory” approach to asset allocation. However, it is important to understand that the Index contains a number of features that are not found in modern portfolio theory or that are inconsistent with modern portfolio theory, and that the Index may not effectively implement modern portfolio theory. For example:

- Modern portfolio theory does not prescribe the manner in which expected return, risk or correlation should be measured, nor does it specify whether 5% is an appropriate level of expected volatility to target. Therefore, although the historical measures of returns, volatility and correlation used by the Index and the 5% volatility target are key features of the Index, they cannot be said to be drawn from modern portfolio theory. Other investment methodologies using the same modern portfolio theory concepts, but that determine expected returns, risk and correlation in different ways or that accept a greater or lesser level of expected risk, may perform significantly better than the Index.
- There is no single way to implement the concepts of modern portfolio theory, and the approach reflected in the Index may not be as successful as other approaches to implementing modern portfolio theory. For example, modern portfolio theory does not necessarily suggest the Index’s approach of maximizing expected returns without exceeding a pre-defined level of expected risk. One alternative approach would be to maximize the *ratio* of expected returns to expected risk within a defined range of expected risk. For example, if there are two portfolios, one with a 10% expected return and a 5% expected risk (Portfolio A) and one with a 9.8% expected return and a 2.5% expected risk (Portfolio B), the Index would select Portfolio A, because Portfolio A has a higher expected return than Portfolio B and its volatility did not exceed 5%. However, Portfolio B might be viewed as a more optimal portfolio, because although it had a slightly lower expected return than Portfolio A, it had a significantly lower volatility, and therefore a significantly higher ratio of expected return to expected risk. Therefore, the Selected Portfolio that the Index selects may not be the optimal portfolio under alternative approaches to implementing modern portfolio theory.
- Under modern portfolio theory, if the assumption is made that investors can lend or borrow at a risk-free rate, there is a single optimal investment portfolio of risky assets that all rational investors would select, regardless of risk tolerance (assuming identical views about expected return, volatility and correlation). All investors would hold the same risky portfolio and would differ only in the amount they would allocate between that risky portfolio and the risk-free asset, or in the amount that they would borrow at the risk-free rate in order to invest in the risky portfolio. An approach designed to implement this feature of modern portfolio theory would identify the optimal portfolio as the one that lies at the point of tangency between the efficient frontier and a line that meets the expected return axis at the risk-free rate, without a target volatility requirement and without seeking to maximize expected returns below a target volatility level. This approach would seek to achieve the target volatility only after the optimal portfolio is identified and would do so by adding either a lending or a borrowing component at the risk-free rate. The approach reflected in the Index, which imposes a target volatility requirement in the selection of the Selected Portfolio and does not reflect either lending or borrowing at the risk-free rate, is entirely different from this approach and will select an entirely different Selected Portfolio. Therefore, the Index does not reflect modern portfolio theory where the assumption is made that investors can lend or borrow at a risk-free rate.

Although it may not be possible for most investors to borrow at a risk-free rate, there may be practical approaches that use concepts drawn from this approach to modern portfolio theory, and these approaches may be more successful, and more faithful to modern portfolio theory, than the approach reflected in the Index.

- The Index does not construct hypothetical investment portfolios from all assets that would be available to an investor, but only from the limited universe of Eligible Constituents. Although the Eligible Constituents cover a number of different asset classes, they include only a limited number of market sectors within those asset classes. For example, the equities asset class includes large-capitalization U.S. stocks but not mid- or small-capitalization U.S. stocks; the commodities asset class includes very limited exposure to energy commodities like oil or natural gas; and the only fixed income instruments that are included are selected U.S. Treasury bonds of a certain maturity. Moreover, the Eligible Constituents exclude a number of major asset classes altogether, such as currencies and real estate. The Index might have achieved a better return if the universe of Eligible Constituents were more representative of the universe of assets available to an investor.
- The Index applies weighting constraints to the percentage weights that may be assigned to Eligible Market Constituents, which may result in the selection of a Selected Portfolio that is different from the hypothetical investment portfolio that would be selected in the absence of those constraints.
- If no Eligible Market Portfolio has a historical volatility that is less than or equal to 5%, the Selected Portfolio for any given month will not be selected pursuant to concepts drawn from modern portfolio theory, but instead will be the Minimum Volatility Portfolio. In addition, if the Selected Portfolio otherwise chosen has a historical performance below the 90-day U.S. Treasury bill rate, or if an Extraordinary Rebalancing Event occurs, the Selected Portfolio will be allocated 100% into the Cash Constituent.
- The Index's excess return deduction and the index fee will exert a drag on Index performance. Even if the Selected Portfolio proves to be the optimal portfolio under modern portfolio theory, the Index will always underperform the Selected Portfolio, perhaps significantly.
- Modern portfolio theory does not suggest monthly rebalancing or daily VT Exposure adjustments to maintain a constant volatility, both of which may have an adverse effect on Index performance as a result of the incurrence of notional transaction costs at the time of each rebalancing or adjustment. In addition, the Index's daily adjustment of VT Exposure may cause the Index to have more or less than 100% exposure to the excess return performance of the Selected Portfolio at any given time.

For these reasons, the Index may not be effectively implement modern portfolio theory and may underperform alternative strategies that could have implemented based on modern portfolio theory.

The Index will be calculated pursuant to a set of fixed rules and will not be actively managed. If the Index performs poorly, the Index Sponsor will not change the rules in an attempt to improve performance.

The Index tracks the performance of the hypothetical, rules-based investment methodology described under "Description of the Citi Market Pilot 5 Excess Return Index" in Part 1 above. The Index will not be actively managed. If the hypothetical, rules-based investment methodology tracked by the Index performs poorly, the Index Sponsor will not change the rules in an attempt to improve performance. Accordingly, an investment in a financial instrument linked to the Index is not like an investment in a mutual fund. Unlike a mutual fund, which could be actively managed by the fund manager in an attempt to maximize returns in changing market conditions, the Index rules will remain unchanged, even if those rules might prove to be ill-suited to future market conditions.

The Index has limited actual performance information.

The Index launched on March 2, 2015. Accordingly, the Index has limited actual performance data. Because the Index is of recent origin with limited performance history, an investment linked to the Index may involve a greater risk than an investment linked to one or more indices with an established record of performance. A longer history of actual performance may have provided more reliable information on which to assess the validity of the Index's

hypothetical investment methodology. However, any historical performance of the Index is not an indication of how the Index will perform in the future.

Hypothetical back-tested Index performance information is subject to significant limitations.

All information regarding the performance of the Index prior to March 2, 2015 is hypothetical and back-tested, as the Index did not exist prior to that time. It is important to understand that hypothetical back-tested Index performance information is subject to significant limitations, in addition to the fact that past performance is never a guarantee of future performance. In particular:

- The Index Sponsor developed the rules of the Index with the benefit of hindsight—that is, with the benefit of being able to evaluate how the Index rules would have caused the Index to perform had it existed during the hypothetical back-tested period. The fact that the Index generally appreciated over the hypothetical back-tested period may not therefore be an accurate or reliable indication of any fundamental aspect of the Index methodology.
- The hypothetical back-tested performance of the Index might look different if it covered a different historical period. The market conditions that existed during the historical period covered by the hypothetical back-tested Index performance information is not necessarily representative of the market conditions that will exist in the future.
- Prior to December 31, 2001, due to the unavailability of certain Eligible Market Constituents prior to that time, the back-tested performance of the Index has been calculated using proxies for certain of the Eligible Market Constituents, as discussed in more detail under “Important Information Regarding Hypothetical Back-Tested Index Performance Data” in Part 3 below. These proxies differed from the corresponding Eligible Market Constituents in certain respects, and as a result the back-tested Index performance information prior to December 31, 2001 may not reflect how the Index would have performed had the relevant Eligible Market Constituents been available during that time period.

It is impossible to predict whether the Index will rise or fall. The actual future performance of the Index may bear no relation to the historical or hypothetical back-tested levels of the Index.

Investors in any financial instrument linked to the Index will not have any ownership or other interest in the Eligible Constituents underlying the Index.

The Selected Portfolio is described as a hypothetical investment portfolio because there is no actual portfolio of assets to which any investor is entitled or in which any investor has any ownership or other interest. The Index is merely a mathematical calculation that is performed by reference to hypothetical positions in the Eligible Constituents included in the Selected Portfolio and the other Index Rules.

The Index Sponsor or its affiliates may enter into hedging transactions with the issuer of any investment product linked to the Index, which may cause the Index Sponsor to have a conflict of interest with investors in any such investment product.

From time to time, one or more institutions may issue investment products linked to the Index. In that event, the Index Sponsor or its affiliates may enter into an agreement with the issuer of that investment product to hedge the issuer’s obligations under that investment product, and the Index Sponsor or its affiliates may realize a profit in consideration for assuming the risks inherent in doing so. The costs to the issuer of entering into this hedging transaction, including the expected profits of the Index Sponsor or its affiliates, may adversely affect the economic terms of any investment product linked to the Index and may reduce its value. Furthermore, in connection with such hedging activities, the Index Sponsor or its affiliates may buy or sell the assets underlying the Eligible Market Constituents or derivative instruments linked to such assets or the Constituents. These hedging activities could affect the prices of the underlying assets and the levels of the Eligible Market Constituents in a way that adversely affects the performance of the Index.

Although the Index is rules-based, there are certain circumstances in which the Index Sponsor, in its role as Index Calculation Agent, may be required to exercise judgment in calculating the Index, including the following:

- If a Market Disruption Event occurs on a Rebalancing Date and the Rebalancing Date is postponed to the last day to which it may be postponed, and if the Market Disruption Event is still not resolved by that day, the Index Calculation Agent will be required to exercise discretion in calculating the level of each affected Eligible Market Constituent on that day.
- If an Eligible Market Constituent is removed from the Index as a result of the occurrence of a specified event, the Index Calculation Agent will be required to exercise discretion in determining what action to take in response to that removal, which may include selecting a replacement Eligible Market Constituent and determining any adjustments to the Index Rules that may be appropriate to account for the effect on the Index of that replacement.
- The Index Sponsor will determine whether a Regulatory Event has occurred. In determining whether a Regulatory Event has occurred, the Index Sponsor will take into account the effect of any relevant law, regulation or policy on positions, contracts or instruments held by the Index Sponsor or its affiliates in order to hedge any financial instrument linked to the Index. The Index Sponsor and/or its affiliates may hold the same positions, contracts or instruments in contexts unrelated to the Index, and the Index Sponsor will be permitted to determine whether any such effect relates to positions, contracts or instruments related to the Index or to such other positions, contracts or instruments.

In exercising these judgments, the Index Calculation Agent may have interests that are adverse to yours. The Index Calculation Agent is not your fiduciary and is not obligated to take your interests into account in calculating the Index. Any actions taken by the Index Calculation Agent in calculating the level of the Index could adversely affect the performance of the Index.

The Index Sponsor's business activities may cause it to have interests that are adverse to those of any investor in an investment product linked to the Index.

The Index Sponsor and its affiliates are part of a global financial institution that, in the ordinary course of its business, may take actions that conflict with or adversely affect the interests of investors in any investment product linked to the Index.

The Index Sponsor or its affiliates may publish research, express opinions or make recommendations from time to time relating to the financial markets or any Eligible Market Constituent or any asset underlying any Eligible Market Constituent. Any research, opinions or recommendations provided by the Index Sponsor or its affiliates may influence the price of any underlying asset and the level of any Eligible Market Constituent, and they may be inconsistent with an investment linked to the Index. The Index Sponsor or its affiliates may have published or may publish research or other opinions that call into question the investment view implicit in the Index. Any research, opinions or recommendations expressed by the Index Sponsor or its affiliates may not be consistent with each other and may be modified from time to time without notice. Investors in an investment product linked to the Index should make their own independent investigation of the Eligible Market Constituents and the merits of investing in an investment product linked to the Index.

The Index Sponsor or its affiliates may also trade the assets underlying the Eligible Market Constituents or derivative instruments linked to the Eligible Market Constituents or any such underlying assets as a regular part of their trading businesses. As with the hedging activity described above, this trading activity may affect the prices of the underlying assets and the levels of the Eligible Market Constituents in a way that adversely affects the performance of the Index.

Furthermore, the Index Sponsor or its affiliates may currently or from time to time engage in business with the issuer of any shares underlying an Eligible Market Constituent. These activities may include extending loans to, making equity investments in or providing advisory services to any such issuer, including merger and acquisition advisory services. In the course of this business, the Index Sponsor or its affiliates may acquire non-public information about any such issuer and will not disclose any such information to any investor in any investment

product linked to the Index. If the Index Sponsor or any of its affiliates is or becomes a creditor of any such issuer or otherwise enters into any transaction with any such issuer in the course of its business, the Index Sponsor or such affiliate may exercise remedies against that issuer without regard to the impact on the performance of the Index.

One or more Eligible Market Constituents could be removed from the Index if a Regulatory Event occurs, in which case the universe of Eligible Market Constituents could become smaller.

If a Regulatory Event occurs, each affected Eligible Market Constituent will be removed from the Index. A Regulatory Event could occur, among other reasons, because the Index Sponsor or any of our other affiliates is required (or there is a reasonable likelihood that, within the next 30 Index Business Days, it will be required) by any applicable law or regulation or policy to dispose of, or it would not be permitted to acquire, any position, contract or instrument that would be appropriate to hedge any financial instrument linked to the Index. If one or more Eligible Market Constituents is removed from the Index, the Index will no longer have potential exposure to the market sector represented by that Eligible Market Constituent, and if all of the Eligible Market Constituents in an asset class are removed, then the Index will no longer have potential exposure to that asset class. That could result in Selected Portfolios that are not as diversified as they would otherwise be and that could have less favorable performance than would have been the case had the relevant Eligible Market Constituent(s) not been removed.

For example, the Dodd–Frank Wall Street Reform and Consumer Protection Act, which was enacted on July 21, 2010, requires the U.S. Commodity Futures Trading Commission (“CFTC”) to establish limits on the size of the positions any person may hold in futures contracts on a commodity, options on such futures contracts and swaps that are economically equivalent to such contracts. In particular, the CFTC has proposed rules to establish position limits that will apply to 28 agricultural, metals and energy futures contracts and futures, options and swaps that are economically equivalent to those futures contracts. The limits will apply to a person’s combined position in futures, options and swaps on the relevant commodity. If these rules are adopted, they could cause the Index Sponsor to determine that a Regulatory Event has occurred, and the Index Sponsor could determine to remove one or both of the Eligible Market Constituents in the commodity asset class from the Index. At the present time, it is impossible to predict when final rules will be adopted or what their provisions will be, or the effect of such final rules on the Index.

Adjustments to any of the Eligible Market Constituents could adversely affect the level of the Index.

The sponsors of the Eligible Market Constituents may add, delete or substitute the components that underlie the Eligible Market Constituents or make other methodological changes to the Eligible Market Constituents that could result in an adverse effect on the performance of the Eligible Market Constituents. The sponsors of the Eligible Market Constituents are not involved with the Index in any way. In addition, the sponsors of the Eligible Market Constituents may discontinue or suspend calculation or publication of the Eligible Market Constituents at any time. Any of these actions could adversely affect the performance of the Index.

PART 3

IMPORTANT INFORMATION REGARDING HYPOTHETICAL BACK-TESTED INDEX PERFORMANCE DATA

The Index Sponsor has calculated certain hypothetical back-tested performance information for the Index. All Index performance information prior to March 2, 2015 is hypothetical and back-tested, as the Index did not exist prior to that date. Hypothetical back-tested Index performance information is subject to significant limitations. The Index Sponsor developed the Index Rules with the benefit of hindsight—that is, with the benefit of being able to evaluate how the Index Rules would have caused the Index to perform had it existed during the hypothetical back-tested period. The fact that the Index generally appreciated over the hypothetical back-tested period may not therefore be an accurate or reliable indication of any fundamental aspect of the Index methodology. Furthermore, the hypothetical back-tested performance of the Index might look different if it covered a different historical period. The market conditions that existed during the hypothetical back-tested period may not be representative of market conditions that will exist in the future.

The hypothetical back-tested Index levels have been calculated by the Index Sponsor based on the published historical levels of the Eligible Market Constituents, the 90-day U.S. Treasury bill rate and the federal funds effective rate, applying the Index methodology substantially as described in Part 1 above, except as follows:

- Two of the Eligible Market Constituents (the MSCI Daily Total Return Net EAFE USD Index[®] and the MSCI Daily Total Return Net Emerging Markets USD Index, which we refer to collectively as the “**MSCI Indices**”) have been published daily only since December 29, 2000. For purposes of calculating hypothetical back-tested Index levels prior to December 29, 2000, the performance of the price return version (i.e., the version without notional reinvestment of dividends) of each of the MSCI Indices has been used, calculated with daily reinvestment of the dividend yield on the stocks underlying the applicable index as published by Bloomberg L.P. For this purpose, the gross dividend yield has been used, without any deduction for taxes. By contrast, each MSCI Index reflects the reinvestment of dividends after the deduction of taxes. Accordingly, to the extent the back-tested performance of the Index during the period prior to December 29, 2000 reflects performance of these proxies for the MSCI Indices, that performance would be overstated as compared to the performance that would have resulted from the MSCI Indices to the extent of the taxes that would otherwise have been withheld on the dividend yield.
- Another Eligible Market Constituent (the S&P U.S. 10-Year TIPS Index) has been published daily only since December 31, 2001. For purposes of calculating hypothetical back-tested Index levels prior to December 31, 2001, the back-tested performance of the Dow Jones Credit Suisse 10-Year TIPS Index has been used in lieu of the S&P U.S. 10-Year TIPS Index. The Dow Jones Credit Suisse 10-Year TIPS Index was not published during the period prior to December 31, 2001. However, the publisher of the Dow Jones Credit Suisse 10-Year TIPS Index has calculated hypothetical back-tested levels of that index prior to December 31, 2001, and these back-tested levels are used in the calculation of the back-tested performance of the Index during that period. Although the Dow Jones Credit Suisse 10-Year TIPS Index and the S&P U.S. 10-Year TIPS Index are both intended to track the value of an investment in the on-the-run (i.e., the most recently issued) 10-Year inflation-protected TIPS bond issued by the U.S. government, they are not identical indices, and the back-tested performance of the Dow Jones Credit Suisse 10-Year TIPS Index used in calculating the back-tested levels of the Index may differ from the performance of the S&P U.S. 10-Year TIPS Index had it existed during the relevant period. Among other reasons, the two indices obtain pricing for the underlying 10-year TIPS bonds from different sources.

It is impossible to predict whether the Index will rise or fall. By providing any hypothetical back-tested Index performance information, the Index Sponsor does not represent that the Index is likely to achieve gains or losses similar to those shown. In fact, there are frequently sharp differences between hypothetical performance results and the actual results subsequently achieved by any particular investment. One of the limitations of hypothetical performance information is that it did not involve financial risk and cannot account for all factors that would affect actual performance. The actual future performance of the Index may bear no relation to the hypothetical back-tested performance of the Index.

PART 4

DESCRIPTIONS OF THE ELIGIBLE CONSTITUENTS

S&P 500[®] TOTAL RETURN INDEX

The following information regarding the S&P 500[®] Total Return Index, including, without limitation, its make-up, method of calculation and changes in its components, is based on publicly available information. The Index Sponsor has not independently verified such information. Such information reflects the policies of, and is subject to change by, S&P Dow Jones Indices LLC (“**S&P Dow Jones**”), a joint venture company owned by The McGraw-Hill Companies, Inc., CME Group Inc. and Dow Jones & Company, Inc. The S&P 500[®] Total Return Index was developed by Standard & Poor’s Financial Services LLC (“**S&P**”) and is calculated, maintained and published by S&P Dow Jones. S&P Dow Jones has no obligation to continue to publish, and may discontinue the publication of, the S&P 500[®] Total Return Index.

The S&P 500[®] Total Return Index is reported by Bloomberg L.P. under the ticker symbol “SPTR.”

The S&P 500[®] Total Return Index represents the total return earned in a portfolio that tracks the S&P 500[®] Index and reinvests dividend income in the overall index, not in the specific stock paying the dividend. The remainder of the disclosure in this section relates to the S&P 500[®] Index.

The S&P 500[®] Index is intended to provide a performance benchmark for the large capitalization segment of the U.S. equity markets. The calculation of the level of the S&P 500[®] Index (discussed below in further detail) is based on the relative value of the aggregate Market Value (as defined below) of the common stocks of 500 companies (the “**S&P Component Stocks**”) as of a particular time as compared to the aggregate average Market Value of the common stocks of 500 similar companies during the base period of the years 1941 through 1943. Historically, the “**Market Value**” of any S&P Component Stock was calculated as the product of the market price per share and the number of the then-outstanding shares of such S&P Component Stock. As discussed below, on March 21, 2005, S&P began to use a new methodology to calculate the Market Value of the S&P Component Stocks and on September 16, 2005, S&P completed its transition to the new calculation methodology. The 500 companies are not the 500 largest companies listed on the New York Stock Exchange (the “**NYSE**”) and not all 500 companies are listed on such exchange. S&P Dow Jones chooses companies for inclusion in the S&P 500[®] Index with the objective of achieving a distribution by broad industry groupings that approximates the distribution of these groupings in the common stock population of the U.S. equity market. S&P Dow Jones may from time to time, in its sole discretion, add companies to, or delete companies from, the S&P 500[®] Index to achieve the objectives stated above. Relevant criteria employed by S&P Dow Jones include the viability of the particular company, the extent to which that company represents the industry group to which it is assigned, the extent to which the company’s common stock is widely-held and the Market Value and trading activity of the common stock of that company.

On March 21, 2005, S&P began to calculate the S&P 500[®] Index based on a half float-adjusted formula, and on September 16, 2005, the S&P 500[®] Index became fully float-adjusted. S&P’s criteria for selecting stocks for the S&P 500[®] Index was not changed by the shift to float adjustment. However, the adjustment affects each company’s weight in the S&P 500[®] Index (*i.e.*, its Market Value).

Under float adjustment, the share counts used in calculating the S&P 500[®] Index reflect only those shares that are available to investors, not all of a company’s outstanding shares. S&P Dow Jones defines three groups of shareholders whose holdings are subject to float adjustment:

- holdings by other publicly traded corporations, venture capital firms, private equity firms, strategic partners, or leveraged buyout groups;
- holdings by government entities, including all levels of government in the United States or foreign countries; and
- holdings by current or former officers and directors of the company, founders of the company or family trusts of officers, directors or founders, as well as holdings of trusts, foundations, pension funds, employee stock ownership plans, or other investment vehicles associated with and controlled by the company.

However, treasury stock, stock options, equity participation units, warrants, preferred stock, convertible stock and rights are not part of the float. In cases where holdings in a group exceed 10% of the outstanding shares of a company, the holdings of that group will be excluded from the float-adjusted count of shares to be used in the S&P 500[®] Index calculation. Mutual funds, investment advisory firms, pension funds or foundations not associated with the company and investment funds in insurance companies, shares that trust beneficiaries may buy or sell without difficulty or significant additional expense beyond typical brokerage fees, and, if a company has multiple classes of stock outstanding, shares in an unlisted or non-traded class if such shares are convertible by shareholders without undue delay and cost, are also part of the float. Shares held in a trust to allow investors in countries outside the country of domicile (e.g., ADRs, CDIs and Canadian exchangeable shares) are normally part of the float.

For each stock, an investable weight factor (“**IWF**”) is calculated by dividing the available float shares, defined as the total shares outstanding less shares held in one or more of the three groups listed above where the group holdings exceed 10% of the outstanding shares, by the total shares outstanding. (On March 21, 2005, the S&P 500[®] Index moved halfway to float adjustment, meaning that if a stock has an IWF of 0.80, the IWF used to calculate the S&P 500[®] Index between March 21, 2005 and September 16, 2005 was 0.90. On September 16, 2005, S&P began to calculate the S&P 500[®] Index on a fully float-adjusted basis, meaning that if a stock has an IWF of 0.80, the IWF used to calculate the S&P 500[®] Index on and after September 16, 2005 is 0.80.) The float-adjusted Index is calculated by dividing the sum of the IWF multiplied by both the price and the total shares outstanding for each stock by the Index Divisor. For companies with multiple classes of stock, S&P Dow Jones calculates the weighted average IWF for each stock using the proportion of the total company market capitalization of each share class as weights.

The S&P 500[®] Index is calculated using a base-weighted aggregate methodology: the level of the S&P 500[®] Index reflects the total Market Value of all 500 S&P Component Stocks relative to the S&P 500[®] Index’s base period of 1941–43 (the “**Base Period**”).

An indexed number is used to represent the results of this calculation in order to make the value easier to work with and track over time.

The actual total Market Value of the S&P Component Stocks during the Base Period has been set equal to an indexed value of 10. This is often indicated by the notation 1941–43=10. In practice, the daily calculation of the S&P 500[®] Index is computed by dividing the total Market Value of the S&P Component Stocks by a number called the Index Divisor. By itself, the Index Divisor is an arbitrary number. However, in the context of the calculation of the S&P 500[®] Index, it is the only link to the original Base Period level of the S&P 500[®] Index. The Index Divisor keeps the S&P 500[®] Index comparable over time and is the manipulation point for all adjustments to the S&P 500[®] Index (“**Index Maintenance**”).

Index Maintenance includes monitoring and completing the adjustments for company additions and deletions, share changes, stock splits, stock dividends and stock price adjustments due to company restructurings or spin-offs.

To prevent the level of the S&P 500[®] Index from changing due to corporate actions, all corporate actions which affect the total Market Value of the S&P 500[®] Index require an Index Divisor adjustment. By adjusting the Index Divisor for the change in total Market Value, the level of the S&P 500[®] Index remains constant. This helps maintain the level of the S&P 500[®] Index as an accurate barometer of stock market performance and ensures that the movement of the S&P 500[®] Index does not reflect the corporate actions of individual companies in the S&P 500[®] Index. All Index Divisor adjustments are made after the close of trading and after the calculation of the closing level of the S&P 500[®] Index. Some corporate actions, such as stock splits and stock dividends, require simple changes in the common shares outstanding and the stock prices of the companies in the S&P 500[®] Index and do not require Index Divisor adjustments.

The table below summarizes the types of Index Maintenance adjustments and indicates whether or not an Index Divisor adjustment is required.

Type of Corporate Action	Comment	Divisor Adjustment Required
Company Added/Deleted	Net change in market value determines the divisor adjustment	Yes
Change in Shares Outstanding	Any combination of secondary issuance, share repurchase or buy back – share counts revised to reflect change.	Yes
Stock Split	Share count revised to reflect new count. Divisor adjustment is not required since the share count and price changes are offsetting.	No
Spin-off	If the spun-off company is not being added to the index, the divisor adjustment reflects the decline in index market value (<i>i.e.</i> , the value of the spun-off unit).	Yes
Spin-off	Spun-off company added to the index, no company removed from the index.	No
Spin-off	Spun-off company added to the index, another company removed to keep number of names fixed. Divisor adjustment reflects deletion.	Yes
Change in Investable Weight Factor (IWF)	Increasing (decreasing) the IWF increases (decreases) the total market value of the index. The divisor change reflects the change in market value caused by the change to an IWF.	Yes
Special Dividends	When a company pays a special dividend the share price is assumed to drop by the amount of the dividend; the divisor adjustment reflects this drop in index market value.	Yes
Rights Offering	Each shareholder receives the right to buy a proportional number of additional shares at a set (often discounted) price. The calculation assumes that the offering is fully subscribed. Divisor adjustment reflects increase in market cap measured as the shares issued multiplied by the price paid.	Yes

Stock splits and stock dividends do not affect the Index Divisor, because following a split or dividend, both the stock price and number of shares outstanding are adjusted by S&P Dow Jones so that there is no change in the Market Value of the S&P Component Stock. All stock split and dividend adjustments are made after the close of trading on the day before the ex-date.

Each of the corporate events exemplified in the table requiring an adjustment to the Index Divisor has the effect of altering the Market Value of the S&P Component Stock and consequently of altering the aggregate Market Value of the S&P Component Stocks (the “**Post-Event Aggregate Market Value**”). In order that the level of the S&P 500[®] Index (the “**Pre-Event Index Value**”) not be affected by the altered Market Value (whether increase or decrease) of the affected Component Stock, a new Index Divisor (“**New Divisor**”) is derived as follows:

$$\frac{\text{Post-Event Aggregate Market Value}}{\text{New Divisor}} = \text{Pre-Event Index Value}$$

$$\text{New Divisor} = \frac{\text{Post-Event Aggregate Market Value}}{\text{Pre-Event Index Value}}$$

A large part of the Index Maintenance process involves tracking the changes in the number of shares outstanding of each of the S&P 500[®] Index companies. Four times a year, on a Friday close to the end of each calendar quarter, the share totals of companies in the S&P 500[®] Index are updated as required by any changes in the number of shares outstanding. After the totals are updated, the Index Divisor is adjusted to compensate for the net change in the total

Market Value of the S&P 500[®] Index. In addition, any changes over 5% in the current common shares outstanding for the S&P 500[®] Index companies are carefully reviewed on a weekly basis, and when appropriate, an immediate adjustment is made to the Index Divisor.

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MSCI INDICES

The following information regarding the MSCI Daily Total Return Net EAFE[®] USD Index and the MSCI Daily Total Return Net Emerging Markets USD Index (each, an “**MSCI Index**” and together, the “**MSCI Indices**”), including, without limitation, their make-up, method of calculation and changes in their components, is based on publicly available information. The Index Sponsor has not independently verified such information. Such information reflects the policies of, and is subject to change by, MSCI Inc. (“**MSCI**”). The MSCI Indices are calculated, maintained and published by MSCI. MSCI has no obligation to continue to publish, and may discontinue publication of, any of the MSCI Indices.

The MSCI Daily Total Return Net EAFE[®] USD Index is reported by Bloomberg L.P. under the ticker symbol “NDDUEAFE.” The MSCI Daily Total Return Net Emerging Markets USD Index is reported by Bloomberg L.P. under the ticker symbol “NDUEEGF.”

The MSCI Daily Total Return Net EAFE[®] USD Index represents the total return earned in a portfolio that tracks the MSCI EAFE[®] Index and reinvests dividend income in the overall index, not in the specific stock paying the dividend. The MSCI Daily Total Return Net Emerging Markets USD Index represents the total return earned in a portfolio that tracks the MSCI Emerging Markets Index and reinvests dividend income in the overall index, not in the specific stock paying the dividend. Dividends are reinvested on a net basis after deduction of withholding taxes at a tax rate applicable to non-resident institutional investors who do not benefit from double taxation treaties. The level of each MSCI Index reflects the U.S. dollar value of the underlying stocks, which are traded in non-U.S. currencies. The remainder of the disclosure in this section relates to the MSCI EAFE[®] Index and the MSCI Emerging Markets Index.

The MSCI EAFE[®] Index (Europe, Australasia, Far East) is a free float-adjusted market capitalization index intended to capture large- and mid-cap equity market performance across developed markets countries, excluding the U.S. and Canada. The MSCI EAFE[®] Index is calculated in U.S. dollars on a real time basis and disseminated every 60 seconds during market trading hours. As of June 25, 2014, the MSCI EAFE[®] Index included the following developed markets countries: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland and the United Kingdom.

The MSCI Emerging Markets Index is a free float-adjusted market capitalization index that is designed to capture large- and mid-cap equity market performance across global emerging markets countries. The MSCI Emerging Markets Index is calculated daily in U.S. dollars on a real time basis and disseminated every 60 seconds during market trading hours. As of June 25, 2014, the MSCI Emerging Markets Index consisted of the following emerging market countries: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey and the United Arab Emirates.

Constructing the MSCI Global Investable Market Indices

The MSCI Indices are part of the MSCI Global Investable Market Indices. MSCI undertakes an index construction process that involves: (i) defining the Equity Universe; (ii) determining the Market Investable Equity Universe for each market; (iii) determining market capitalization size segments for each market; (iv) applying Index Continuity Rules for the MSCI Standard Index; (v) creating style segments within each size segment within each market; and (vi) classifying securities under the Global Industry Classification Standard (“**GICS**[®]”).

The “relevant market” with respect to a single country index is equivalent to the single country, except in DM-classified countries in Europe (as described below), where all such countries are first aggregated into a single market for index construction purposes. Subsequently, individual DM Europe country indices within the MSCI Europe Index are derived from the constituents of the MSCI Europe Index under the MSCI Global Investable Market Indices Methodology.

The “relevant market” with respect to a composite index includes each of the single countries which comprise the composite index.

The “**Global Investable Equity Universe**” is the aggregation of all Market Investable Equity Universes. The “**DM Investable Equity Universe**” is the aggregation of all the Market Investable Equity Universes for Developed Markets.

Defining the Equity Universe

(i) **Identifying Eligible Equity Securities:** The Equity Universe initially looks at securities listed in any of the countries in the MSCI Global Index Series, which will be classified as Developed Markets (“**DM**”), Emerging Markets (“**EM**”) or Frontier Markets (“**FM**”). All listed equity securities, or listed securities that exhibit characteristics of equity securities, except mutual funds, exchange traded funds, equity derivatives, limited partnerships, and most investment trusts, are eligible for inclusion in the Equity Universe. Real Estate Investment Trusts (“**REITs**”) in some countries and certain income trusts in Canada are also eligible for inclusion.

(ii) **Country Classification of Eligible Securities:** Each company and its securities (*i.e.*, share classes) are classified in one and only one country, which allows for a distinctive sorting of each company by its respective country.

Determining the Market Investable Equity Universes

A Market Investable Equity Universe for a market is derived by applying investability screens to individual companies and securities in the Equity Universe that are classified in that market. A market is equivalent to a single country, except in DM Europe, where all DM countries in Europe are aggregated into a single market for index construction purposes. Subsequently, individual DM Europe country indices within the MSCI Europe Index are derived from the constituents of the MSCI Europe Index under the Global Investable Market Indices methodology.

The investability screens used to determine the Investable Equity Universe in each market are as follows:

- (i) **Equity Universe Minimum Size Requirement:** This investability screen is applied at the company level. In order to be included in a Market Investable Equity Universe, a company must have the required minimum full market capitalization. A company will meet this requirement if its cumulative free float-adjusted market capitalization is within the top 99% of the Equity Universe sorted in descending order by full market capitalization.
- (ii) **Equity Universe Minimum Float-Adjusted Market Capitalization Requirement:** This investability screen is applied at the individual security level. To be eligible for inclusion in a Market Investable Equity Universe, a security must have a free float-adjusted market capitalization equal to or higher than 50% of the Equity Universe Minimum Size Requirement.
- (iii) **DM and EM Minimum Liquidity Requirement:** This investability screen is applied at the individual security level. To be eligible for inclusion in a Market Investable Equity Universe, a security must have adequate liquidity as measured by the Annualized Traded Value Ratio (“**ATVR**”) and the Frequency of Trading. The **ATVR** screens out extreme daily trading volumes, taking into account the free float-adjusted market capitalization size of securities. The aim of the 12-month and 3-month **ATVR** together with 3-month Frequency of Trading is to select securities with a sound long and short-term liquidity. A minimum liquidity level of 20% of 3-month **ATVR** and 90% of 3-month Frequency of Trading over the last 4 consecutive quarters, as well as 20% of 12-month **ATVR** are required for the inclusion of a security in a Market Investable Equity Universe of a Developed Market. A minimum liquidity level of 15% of 3-month **ATVR** and 80% of 3-month Frequency of Trading over the last 4 consecutive quarters, as well as 15% of 12-month **ATVR** are required for the inclusion of a security in a Market Investable Equity Universe of an Emerging Market.

In instances when a security does not meet the above criteria, the security will be represented by a relevant liquid eligible Depository Receipt if it is trading in the same geographical region. Depository Receipts are deemed liquid if they meet all the above mentioned criteria for 12-month **ATVR**, 3-month **ATVR** and 3-month Frequency of Trading.

- (iv) **Global Minimum Foreign Inclusion Factor Requirement:** This investability screen is applied at the individual security level. To be eligible for inclusion in a Market Investable Equity Universe, a security’s

Foreign Inclusion Factor (“**FIF**”) must reach a certain threshold. The FIF of a security is defined as the proportion of shares outstanding that is available for purchase in the public equity markets by international investors. This proportion accounts for the available free float of and/or the foreign ownership limits applicable to a specific security (or company). In general, a security must have an FIF equal to or larger than 0.15 to be eligible for inclusion in a Market Investable Equity Universe.

- (v) **The Minimum Length of Trading Requirement:** This investability screen is applied at the individual security level. For an initial public offering (“**IPO**”) to be eligible for inclusion in a Market Investable Equity Universe, the new issue must have started trading at least four months before the implementation of the initial construction of the index or at least three months before the implementation of a semi-annual index review. This requirement is applicable to small new issues in all markets. Large IPOs are not subject to the Minimum Length of Trading Requirement and may be included in a Market Investable Equity Universe and the Standard Index outside of a Quarterly or semi-annual index review.

Defining Market Capitalization Size Segments for Each Market

Once a Market Investable Equity Universe is defined, it is segmented into the following size-based indices:

- Investable Market Index (Large + Mid + Small)
- Standard Index (Large + Mid)
- Large Cap Index
- Mid Cap Index
- Small Cap Index

Creating the Size Segment Indices in each market involves the following steps: (i) defining the Market Coverage Target Range for each size segment; (ii) determining the Global Minimum Size Range for each size segment; (iii) determining the Market Size-Segment Cutoffs and associated Segment Number of Companies; (iv) assigning companies to the size segments; and (v) applying final size-segment investability requirements and index continuity rules.

Index Continuity Rules for the Standard Indices

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 DM Standard Index and a minimum number of three constituents will be maintained for an EM Standard Index.

If after the application of the index construction methodology, a Standard Index contains fewer than five securities in a Developed Market or three securities in an Emerging Market, then the largest securities by free float-adjusted market capitalization are added to the Standard Index in order to reach five constituents in that Developed Market or three in that Emerging Market. At subsequent index reviews, if the free float-adjusted market capitalization of a non-index constituent is at least 1.50 times the free float-adjusted market capitalization of the smallest existing constituent after rebalancing, the larger free float-adjusted market capitalization security replaces the smaller one.

Creating Style Indices within Each Size Segment

All securities in the investable equity universe are classified into Value or Growth segments using the MSCI Global Value and Growth methodology.

Classifying Securities under the Global Industry Classification Standard

All securities in the Global Investable Equity Universe are assigned to the industry that best describes their business activities. To this end, MSCI has designed, in conjunction with Standard & Poor’s, the GICS®. The GICS® entails four levels of classification: (1) sector; (2) industry groups; (3) industries; (4) sub-industries. Under the GICS®,

each company is assigned uniquely to one sub-industry according to its principal business activity. Therefore, a company can belong to only one industry grouping at each of the four levels of the GICS®.

Maintenance of the MSCI Global Investable Market Indices

The MSCI Global Investable Market Indices are maintained with the objective of reflecting the evolution of the underlying equity markets and segments on a timely basis, while seeking to achieve index continuity, continuous investability of constituents and replicability of the indices, and index stability and low index turnover.

In particular, index maintenance involves:

(i) semi-annual index reviews (“**SAIRs**”) in May and November of the Size Segment and Global Value and Growth Indices, which include:

- updating the indices on the basis of a fully refreshed Equity Universe;
- taking buffer rules into consideration for migration of securities across size and style segments; and
- updating FIFs and Number of Shares (“**NOS**”).

The objective of the SAIRs is to systematically reassess the various dimensions of the Equity Universe for all markets on a fixed semi-annual timetable. A SAIR involves a comprehensive review of the Size Segment and Global Value and Growth Indices.

(ii) quarterly index reviews (“**QIRs**”) in February and August of the Size Segment Indices aimed at:

- including significant new eligible securities (such as IPOs that were not eligible for earlier inclusion) in the index;
- allowing for significant moves of companies within the Size Segment Indices, using wider buffers than in the SAIR; and
- reflecting the impact of significant market events on FIFs and updating NOS.

QIRs are designed to ensure that the indices continue to be an accurate reflection of the evolving equity marketplace. 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 SAIR. QIRs may result in additions or deletions due to migration to another Size Segment Index, and changes in FIFs and in NOS. Only additions of significant new investable companies are considered, and only for the Standard Index. The buffer zones used to manage the migration of companies from one segment to another are wider than those used in the SAIR. The style classification is reviewed only for companies that are reassigned to a different size segment.

(iii) Ongoing event-related changes. 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 generally are reflected in the indices at the time of the event. Significantly large IPOs are included in the indices after the close of the company’s tenth day of trading.

Announcement Policy

The results of the SAIRs 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. The results of the QIRs are announced at least two weeks in advance of their effective implementation dates as of the close of the last business day of February and August. All changes resulting from corporate events are announced prior to their implementation.

The changes are typically announced at least ten business days prior to the changes becoming effective in the indices as an “expected” announcement, or as an “undetermined” announcement, when the effective dates are not known yet

or when aspects of the event are uncertain. MSCI sends “confirmed” announcements at least two business days prior to events becoming effective in the indices, *provided* that all necessary public information concerning the event is available. The full list of all new and pending changes is delivered to clients on a daily basis, between 5:30 p.m. and 6 p.m., US Eastern Time through the Advance Corporate Events (ACE) File.

In exceptional cases, events are announced during market hours for same or next day implementation. Announcements made by MSCI during market hours are usually linked to late company disclosure of corporate events or unexpected changes to previously announced corporate events.

In the case of secondary offerings representing more than 5% of a security’s number of shares for existing constituents, these changes will be announced prior to the end of the subscription period when possible and a subsequent announcement confirming the details of the event (including the date of implementation) will be made as soon as the results are available.

Both primary equity offerings and secondary offerings for U.S. securities, representing at least 5% of the security’s number of shares, will be confirmed through an announcement during market hours for next day or shortly after implementation, as the completion of the events cannot be confirmed prior to the notification of the pricing.

Early deletions of constituents due to bankruptcy or other significant cases are announced as soon as practicable prior to their implementation.

Index Calculation

Price Index Level

The MSCI EAFE[®] Index and the MSCI Emerging Markets Index are calculated using the Laspeyres’ concept of a weighted arithmetic average together with the concept of chain-linking. As a general principle, today’s index level is obtained by applying the change in the market performance to the previous period index level.

$$PriceIndexLevelUSD_t = PriceIndexLevelUSD_{t-1} \times \frac{IndexAdjustedMarketCapUSD_t}{IndexInitialMarketCapUSD_t}$$

$$PriceIndexLevelLocal_t = PriceIndexLevelLocal_{t-1} \times \frac{IndexAdjustedMarketCapForLocal_t}{IndexInitialMarketCapUSD_t}$$

Where:

- $PriceIndexLevelUSD_{t-1}$ is the Price Index level in USD at time t-1.
- $IndexAdjustedMarketCapUSD_t$ is the Adjusted Market Capitalization of the index in USD at time t.
- $IndexInitialMarketCapUSD_t$ is the Initial Market Capitalization of the index in USD at time t.
- $PriceIndexLevelLocal_{t-1}$ is the Price Index level in local currency at time t-1.
- $IndexAdjustedMarketCapForLocal_t$ is the Adjusted Market Capitalization of the index in USD converted using FX rate as of t-1 and used for local currency index at time t.

Note: $IndexInitialMarketCapUSD$ was previously called $IndexUnadjustedMarketCapPreviousUSD$

Security Price Index Level

$$SecurityPriceIndexLevel_t = SecurityPriceIndexLevel_{t-1} \times \frac{SecurityAdjustedMarketCapForLocal_t}{SecurityInitialMarketCapUSD_t}$$

$SecurityAdjustedMarketCapForLocal_t =$

$$\frac{EndOfDayNumberOfShares_{t-1} \times PricePerShare_t \times InclusionFactor_t \times PAF_t}{FXrate_{t-1}} \times \frac{ICI_t}{ICI_{t-1}}$$

$$SecurityInitialMarketCapUSD_t = \frac{EndOfDayNumberOfShares_{t-1} \times PricePerShare_{t-1} \times InclusionFactor_t}{FXrate_{t-1}}$$

Where:

- *SecurityPriceIndexLevel_{t-1}* is Security Price Index level at time t-1.
- *SecurityAdjustedMarketCapForLocal_t* is the Adjusted Market Capitalization of security s in USD converted using FX rate as of t-1.
- *SecurityInitialMarketCapUSD_t* is the Initial Market Capitalization of security s in USD at time t.
- *EndOfDayNumberOfShares_{t-1}* is the number of shares of security s at the end of day t-1.
- *PricePerShare_t* is the price per share of security s at time t.
- *PricePerShare_{t-1}* is the price per share of security s at time t-1.
- *InclusionFactor_t* is the inclusion factor of security s at time t. The inclusion factor can be one or the combination of the following factors: Foreign Inclusion Factor, Domestic Inclusion Factor Growth Inclusion Factor, Value Inclusion Factor, Index Inclusion Factor.
- *PAF_t* is the Price Adjustment Factor of security s at time t.
- *FXrate_{t-1}* is the FX rate of the price currency of security s vs USD at time t-1. It is the value of 1 USD in foreign currency.
- *ICI_t* is the Internal Currency Index of price currency at time t. The ICI is different than 1 when a country changes the internal value of its currency (e.g., from Turkish Lira to New Turkish Lira – ICI = 1,000,000).
- *ICI_{t-1}* is the Internal Currency Index of price currency at time t-1.

Index Market Capitalization

$$IndexAdjustedMarketCapUSD_t = \sum_{S \in I, t} \frac{EndOfDayNumberOfShares_{t-1} \times PricePerShare_t \times InclusionFactor_t \times PAF_t}{FXrate_t}$$

IndexAdjustedMarketCapForLocal_t =

$$\sum_{S \in I, t} \frac{EndOfDayNumberOfShares_{t-1} \times PricePerShare_t \times InclusionFactor_t \times PAF_t}{FXrate_{t-1}} \times \frac{ICI_t}{ICI_{t-1}}$$

IndexInitialMarketCapUSD_t =

$$\sum_{S \in I, t} \frac{EndOfDayNumberOfShares_{t-1} \times PricePerShare_t \times InclusionFactor_t}{FXrate_{t-1}}$$

Where:

- *EndOfDayNumberOfShares_{t-1}* is the number of shares of security s at the end of day t-1.

- $PricePerShare_t$ is the price per share of security s at time t .
- $PricePerShare_{t-1}$ is the price per share of security s at time $t-1$.
- $InclusionFactor_t$ is the inclusion factor of security s at time t . The inclusion factor can be one or the combination of the following factors: Foreign Inclusion Factor, Domestic Inclusion Factor Growth Inclusion Factor, Value Inclusion Factor, Index Inclusion Factor.
- PAF_t is the Price Adjustment Factor of security s at time t .
- $FXrate_t$ is the FX rate of the price currency of security s vs USD at time t . It is the value of 1 USD in foreign currency.
- $FXrate_{t-1}$ is the FX rate of the price currency of security s vs USD at time $t-1$. It is the value of 1 USD in foreign currency.
- ICI_t is the Internal Currency Index of price currency at time t . The ICI is different than 1 when a country changes the internal value of its currency (e.g., from Turkish Lira to New Turkish Lira – ICI = 1,000,000).
- ICI_{t-1} is the Internal Currency Index of price currency at time $t-1$.

Corporate Events

Mergers and Acquisitions

As a general principle, MSCI implements mergers and acquisitions as of the close of the last trading day of the acquired entity or merging entities (last offer day for tender offers), regardless of the status of the securities (index constituents or non-index constituents) involved in the event. MSCI uses market prices for implementation. This principle applies if all necessary information is available prior to the completion of the event and if the liquidity of the relevant constituent(s) is not expected to be significantly diminished on the day of implementation. Otherwise, MSCI will determine the most appropriate implementation method and announce it prior to the changes becoming effective in the indices.

Tender Offers

In tender offers, the acquired or merging security is generally deleted from an index at the end of the initial offer period, when the offer is likely to be successful and / or if the free float of the security is likely to be substantially reduced (this rule is applicable even if the offer is extended), or once the results of the offer have been officially communicated and the offer has been successful and the security's free float has been substantially reduced, if all required information is not available in advance or if the offer's outcome is uncertain. The main factors considered by MSCI when assessing the outcome of a tender offer (not in order of importance) are: the announcement of the offer as friendly or hostile, a comparison of the offer price to the acquired security's market price, the recommendation by the acquired company's board of directors, the major shareholders' stated intention whether to tender their shares, the required level of acceptance, the existence of pending regulatory approvals, market perception of the transaction, official preliminary results if any, and other additional conditions for the offer.

In certain cases, securities may be deleted earlier than the last offer day. For example, in the case of tender offers in the United Kingdom, a security is typically deleted two business days after the offer is declared unconditional in all respects.

If a security is deleted from an index, the security will not be reinstated immediately after its deletion even when the tender offer is subsequently declared unsuccessful and/or the free float of the security is not substantially reduced. It may be reconsidered for index inclusion at the following regularly scheduled index review.

Late Announcements of Completion of Mergers and Acquisitions

When the completion of an event is announced too late to be reflected as of the close of the last trading day of the acquired or merging entities, implementation occurs as of the close of the following day or as soon as practicable thereafter. In these cases, MSCI uses a calculated price for the acquired or merging entities. The calculated price is

determined using the terms of the transaction and the price of the acquiring or merged entity, or, if not appropriate, using the last trading day's market price of the acquired or merging entities.

Conversions of Share Classes

Conversions of a share class into another share class resulting in the deletion and/or addition of one or more classes of shares are implemented as of the close of the last trading day of the share class to be converted.

Spin-Offs

On the ex-date of a spin-off, a PAF is applied to the price of the security of the parent company. The PAF is calculated based on the terms of the transaction and the market price of the spun-off security. If the spun-off entity qualifies for inclusion, it is included as of the close of its first trading day. In cases of spin-offs of partially owned companies, the post-event free float of the spun-off entity is calculated using a weighted average of the existing shares and the spun-off shares, each at their corresponding free float. Any resulting changes to FIFs and/or DIFs are implemented as of the close of the ex-date.

In cases of spin-offs of partially-owned companies, the post-event free float of the spun-off entity is calculated using a weighted average of the existing shares and the spun-off shares, each at their corresponding free float. Any resulting changes to FIFs and/or DIFs are implemented as of the close of the ex-date.

When the spun-off security does not trade on the ex-date, a "detached" security is created to avoid a drop in the free float-adjusted market capitalization of the parent entity, regardless of whether the spun-off security is added or not. The detached security is included until the spun-off security begins trading, and is deleted thereafter. Generally, the value of the detached security is equal to the difference between the cum price and the ex price of the parent security.

Corporate Actions

Corporate actions such as splits, stock dividends and rights issues, which affect the price of a security, require a price adjustment. In general, the PAF is applied on the ex-date of the event to ensure that security prices are comparable between the ex-date and the cum date. To do so, MSCI adjusts for the value of the right and/or the value of the special assets that are distributed and the changes in number of shares and FIF, if any, are reflected as of the close of the ex-date. In general, corporate actions do not impact the free float of the securities because the distribution of new shares is carried out on a pro rata basis to all existing shareholders. Therefore, MSCI will generally not implement any pending number of shares and/or free float updates simultaneously with the event.

If a security does not trade for any reason on the ex-date of the corporate action, the event will be generally implemented on the day the security resumes trading.

Share Placements and Offerings

Changes in number of shares and FIF resulting from primary equity offerings representing at least 5% of the security's number of shares are generally implemented as of the close of the first trading day of the new shares, if all necessary information is available at that time. Otherwise, the event is implemented as soon as practicable after the relevant information is made available. A primary equity offering involves the issuance of new shares by a company. Changes in number of shares and FIF resulting from primary equity offerings representing less than 5% of the security's number of shares are deferred to the next regularly scheduled index review following the completion of the event. For public secondary offerings of existing constituents representing at least 5% of the security's number of shares, where possible, MSCI will announce these changes and reflect them shortly after the results of the subscription are known. Secondary public offerings that, given lack of sufficient notice, were not reflected immediately will be reflected at the next regularly scheduled index review. Secondary offerings involve the distribution of existing shares of current shareholders' in a listed company and are usually pre-announced by a company or by a company's shareholders and open for public subscription during a pre-determined period.

Debt-to-Equity Swaps

In general, large debt-to-equity swaps involve the conversion of debt into equity originally not convertible at the time of issue. In this case, changes in numbers of shares and subsequent FIF and/or DIF changes are implemented as

of the close of the first trading day of the newly issued shares, or shortly thereafter if all necessary information is available at the time of the swap. In general, shares issued in debt-to-equity swaps are assumed to be issued to strategic investors. As such, the post event free float is calculated on a pro forma basis assuming that all these shares are non-free float. Changes in numbers of shares and subsequent FIF and/or DIF changes due to conversions of convertible bonds or other convertible instruments, including periodical conversions of preferred stocks and small debt-to-equity swaps are implemented at a following regularly scheduled index review.

Suspensions and Bankruptcies

MSCI will remove from an index as soon as practicable companies that file for bankruptcy, companies that file for protection from their creditors. MSCI will delete from an index after 40 business days of suspension securities of companies facing financial difficulties (*e.g.*, liquidity issues, debt repayment issues, companies under legal investigation, etc.) with at least two business days advance notice. Subsequently, if and when these securities resume normal trading, they may be considered as a potential addition to an index at the next scheduled semi-annual index review. Securities of companies suspended due to pending corporate events (*e.g.*, merger, acquisition, etc.), will continue to be maintained in an index until they resume trading regardless of the duration of the suspension period. When the primary exchange price is not available, MSCI will delete securities at an over the counter or equivalent market price when such a price is available and deemed relevant. If no over the counter or equivalent price is available, the security will be deleted at the smallest price (unit or fraction of the currency) at which a security can trade on a given exchange. For securities that are suspended, MSCI will carry forward the market price prior to the suspension during the suspension period.

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S&P 10 YEAR U.S. TIPS INDEX

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The 10 Year TIPS Index is reported by Bloomberg L.P. under the ticker symbol “SPBDU1ST.” The 10 Year TIPS Index has a base date of December 31, 2001.

TIPS, or Treasury Inflation-Protected Securities, are securities issued by the U.S. Treasury that are designed to provide inflation protection to investors. TIPS are interest-paying instruments whose interest and principal payments are adjusted for inflation. The inflation adjustment, which is typically applied monthly to the principal of the bond, follows a designated inflation index, the non-seasonally adjusted Consumer Price Index for All Urban Consumers, or the CPI-U (the “CPI”), and TIPS’ principal payments are adjusted according to changes in the CPI. A fixed coupon rate is applied to the inflation-adjusted principal so that as inflation rises, both the principal value and the interest payments increase. Because of this inflation adjustment feature, inflation-protected bonds typically have lower yields than conventional fixed-rate bonds.

The 10 Year TIPS Index is designed to track the performance of only one security, the most recently issued 10-year U.S. TIPS note. When a new 10-year U.S. TIPS note is issued, the 10 Year TIPS Index will roll out of the current 10-year U.S. TIPS note it tracks and roll into the new issue on the next rebalancing date, as long as S&P Dow Jones can obtain price and coupon information on the new issue from S&P Securities Evaluations (“**SPSE**”), the data source for the 10 Year TIPS Index, prior to the monthly rebalancing date. The 10 Year TIPS Index is reviewed and rebalanced monthly on the last business day of each month.

The 10 Year TIPS Index is a total return index, and its return for each business day is calculated by aggregating the price return (reflecting the gains or losses due to changes in the end-of-day price) of the underlying 10-year U.S. TIPS note together with paid and accrued interest on the underlying 10-year U.S. TIPS note. The market price used to calculate the daily return on the 10 Year TIPS Index is an inflation-adjusted price determined by SPSE. The inflation adjusted price is determined by multiplying the market price, before any adjustment for inflation, by an index ratio equal to the latest reported CPI divided by the CPI on the issue date of the underlying 10-year U.S. TIPS note.

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S&P/BGCANTOR U.S. TREASURY BOND TOTAL RETURN INDICES

The following information regarding the S&P/BGCantor 7-10 Year U.S. Treasury Bond Total Return Index (the “**7-10 Year T-Bond Index**”) and the S&P/BGCantor 10-20 Year U.S. Treasury Bond Total Return Index (the “**10-20 Year T-Bond Index**”), including, without limitation, their make-up, method of calculation and changes in their components, is based on publicly available information. The Index Sponsor has not independently verified such information. Such information reflects the policies of, and is subject to change by, S&P Dow Jones Indices LLC (“**S&P Dow Jones**”), a joint venture company owned by The McGraw-Hill Companies, Inc., CME Group Inc. and Dow Jones & Company, Inc. The 7-10 Year T-Bond Index and the 10-20 Year T-Bond Index are calculated, maintained and published by S&P Dow Jones. S&P Dow Jones has no obligation to continue to publish, and may discontinue the publication of, the 7-10 Year T-Bond Index or the 10-20 Year T-Bond Index.

The 7-10 Year T-Bond Index is reported by Bloomberg L.P. under the ticker symbol “SPBDU10T”, and the 10-20 Year T-Bond Index is reported by Bloomberg L.P. under the ticker symbol “SPBDU20T.”

The 7-10 Year T-Bond Index and the 10-20 Year T-Bond Index are both sub-indices of the S&P/BGCantor U.S. Treasury Bond Index, which is a market value-weighted index that seeks to measure the performance of the U.S. Treasury note market. As sub-indices of the S&P/BGCantor U.S. Treasury Bond Index, the 7-10 Year T-Bond Index tracks the total-return performance of U.S. Treasury notes (excluding U.S. Treasury STRIPS and TIPS) with a remaining time to maturity of between 7 and 10 years, and the 10-20 Year T-Bond Index tracks the total-return performance of U.S. Treasury notes (excluding U.S. Treasury STRIPS and TIPS) with a remaining time to maturity of between 10 and 20 years, in each case measured as of the most recent monthly rebalancing date. The 7-10 Year T-Bond Index and the 10-20 Year T-Bond Index are reviewed and rebalanced monthly, on the last business day of each month.

Weights of U.S. Treasury notes included in the 7-10 Year T-Bond Index and the 10-20 Year T-Bond Index are based on outstanding par amounts. BGCantor MarketData, L.P. provides price and coupon information of each note included in the 7-10 Year T-Bond Index and the 10-20 Year T-Bond Index. At each monthly rebalancing, new issues of U.S. Treasury notes of the relevant maturity ranges are eligible for inclusion in the 7-10 Year T-Bond Index or the 10-20 Year T-Bond Index if S&P Dow Jones Indices can obtain price and coupon information from BGCantor MarketData, L.P. prior to the relevant monthly rebalancing date.

The 7-10 Year T-Bond Index and the 10-20 Year T-Bond Index are total-return indices, and their respective return for each business day is calculated by aggregating the price return (reflecting the gains or losses due to changes in the end-of-day price) and interest return (reflecting the difference between interest paid and accrued) of the relevant underlying U.S. Treasury notes included, respectively.

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S&P GSCI INDICES

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The S&P GSCI™ Light Energy Total Return Index is reported by Bloomberg L.P. under the ticker symbol “SPGSLETR.” The S&P GSCI™ Gold Total Return Index is reported by Bloomberg L.P. under the ticker symbol “SPGCGCTR.”

The S&P GSCI™ Light Energy Total Return Index is the “total return” version of the S&P GSCI™ Light Energy Index. In turn, the S&P GSCI™ Light Energy Index is a variant of the S&P GSCI™ Index (“**S&P GSCI™**”). The S&P GSCI™ is an index on a world production-weighted basket of principal non-financial commodities (*i.e.*, physical commodities) that satisfy specified criteria. The S&P GSCI™ is designed to be a measure of the performance over time of the markets for these commodities. The only commodities represented in the S&P GSCI™ are those physical commodities on which active and liquid contracts are traded on trading facilities in major industrialized countries. The commodities included in the S&P GSCI™ are weighted, on a production basis, to reflect the relative significance (in the view of S&P Dow Jones, as described below) of such commodities to the world economy. The fluctuations in the value of the S&P GSCI™ are intended generally to correlate with changes in the prices of such physical commodities in global markets. The S&P GSCI™ has been normalized such that its hypothetical level on January 2, 1970 was 100.

The S&P GSCI™ Light Energy Index is composed of the same commodity futures contracts as the S&P GSCI™ but with those weights for contracts in the energy sector having been divided by 4. Because the weights of energy-related S&P GSCI™ commodities are reduced in the S&P GSCI™ Light Energy Index relative to the S&P GSCI™, the relative weights of the remaining S&P GSCI™ commodities are necessarily increased. As a result, although the S&P GSCI™ Light Energy Index contains all of the commodities that are included in the S&P GSCI™, they are not world-production weighted in the same manner as the S&P GSCI™ and may not serve as a benchmark for changes in inflation or other economic factors. In particular, because of the significance of energy-related commodities to the world economy, a significant reduction in the weights of these commodities in the S&P GSCI™ Light Energy Index will substantially limit the effect of changes in energy prices on the S&P GSCI™ Light Energy Index. Increases in the prices of energy commodities, therefore, will not increase the level of the S&P GSCI™ Light Energy Index to the same extent as the S&P GSCI™.

The S&P GSCI™ Gold Total Return Index is the “total return” version of the S&P GSCI™ Gold Index. In turn, the S&P GSCI™ Gold Index is a single-commodity sub-index of the S&P GSCI™.

S&P Dow Jones publishes excess return and total return versions of each of the S&P GSCI Indices. The excess return versions of the S&P GSCI Indices is based on price levels of the futures contracts included in such S&P GSCI Index as well as the discount or premium obtained by ‘rolling’ hypothetical positions in such contracts forward as they approach delivery. The total return versions of the S&P GSCI Indices incorporate the returns of the excess return versions, except that the total return indices also reflect interest earned on hypothetical, fully collateralized contract positions on the included commodities.

Set forth below is a summary of the methodology used to calculate the S&P GSCI™. Since the S&P GSCI™ Light Energy Total Return Index is a variant of the S&P GSCI™ and the S&P GSCI™ Gold Total Return Index is a sub-index of the S&P GSCI™, the methodology for compiling the S&P GSCI™ also relates to the methodology of compiling the S&P GSCI™ Indices. The S&P GSCI™ Gold Total Return Index is calculated in the same manner as the S&P GSCI™, except that it is limited to Gold futures. The methodology for determining the composition and weighting of the S&P GSCI™ and for calculating its value is subject to modification in a manner consistent with the

purposes of the S&P GSCI™, as described below. S&P Dow Jones makes the official calculations of the S&P GSCI Indices.

The Index Committee and the Index Advisory Panel

S&P Dow Jones has established an index committee (the “**Index Committee**”) to oversee the daily management and operations of the S&P GSCI™, and is responsible for all analytical methods and calculation of the S&P GSCI Indices. The Index Committee consists of full-time professional members of S&P Dow Jones’ staff. At each meeting, the Index Committee reviews any issues that may affect index constituents, statistics comparing the composition of the indices to the market, commodities that are being considered as candidates for an addition to an index and any significant market events. In addition, the Index Committee may revise index policy covering rules for selecting commodities or other matters.

S&P Dow Jones considers information about changes to its indices and related matters to be potentially market-moving and material. Therefore, all Index Committee discussions are confidential.

S&P Dow Jones has established an index advisory panel (the “**Advisory Panel**”) to assist it in connection with the operation of the S&P GSCI™. The Advisory Panel meets on an annual basis and at other times at the request of the Index Committee. The principal purpose of the Advisory Panel is to advise S&P Dow Jones with respect to, among other things, the calculation of the S&P GSCI™, the effectiveness of the S&P GSCI™ as a measure of commodity futures market performance and the need for changes in the composition or in the methodology of the S&P GSCI™. The Advisory Panel acts solely in an advisory and consultative capacity; the Index Committee makes all decisions with respect to the composition, calculation and operation of the S&P GSCI™.

Composition of the S&P GSCI™

In order to be included in the S&P GSCI™, a contract must satisfy the following eligibility criteria:

- the contract must be in respect of a physical commodity and not a financial commodity;
- the contract must have a specified expiration or term or provide in some other manner for delivery or settlement at a specified time, or within a specified period, in the future;
- the contract must, at any given point in time, be available for trading at least five months prior to its expiration or such other date or time period specified for delivery or settlement;
- the contract must be traded on an exchange, facility or other platform (referred to as a “trading facility”) that allows market participants to execute spread transactions, through a single order entry, between the pairs of contract expirations included in the S&P GSCI™ that, at any given point in time, will be involved in the rolls to be effected in the next three roll periods (defined below);
- the contract must be denominated in U.S. dollars; and
- the contract must be traded on or through a trading facility that has its principal place of business or operations in a country that is a member of the Organization for Economic Cooperation and Development and that:
 - makes price quotations generally available to its members or participants (and to S&P Dow Jones) in a manner and with a frequency that is sufficient to provide reasonably reliable indications of the level of the relevant market at any given point in time;
 - makes reliable trading volume information available to S&P Dow Jones with at least the frequency required by S&P Dow Jones to make the monthly determinations;
 - accepts bids and offers from multiple participants or price providers; and
 - is accessible by a sufficiently broad range of participants.

The price of the relevant contract that is used as a reference or benchmark by market participants (referred to as the “daily contract reference price”) generally must have been available on a continuous basis for at least two years prior to the proposed date of inclusion in the S&P GSCI™. In appropriate circumstances, S&P Dow Jones may determine that a shorter time period is sufficient or that historical daily contract reference prices for such contract may be derived from daily contract reference prices for a similar or related contract. The daily contract reference price may be (but is not required to be) the settlement price or other similar price published by the relevant trading facility for purposes of margining transactions or for other purposes.

At and after the time a contract is included in the S&P GSCI™, the daily contract reference price for such contract must be published between 10:00 a.m. and 4:00 p.m., New York City time, on each business day relating to such contract by the trading facility on or through which it is traded and must generally be available to all members of, or participants in, such facility (and to S&P) on the same day from the trading facility or through a recognized third-party data vendor. Such publication must include, at all times, daily contract reference prices for at least one expiration or settlement date that is five months or more from the date the determination is made, as well as for all expiration or settlement dates during such five-month period.

For a contract to be eligible for inclusion in the S&P GSCI™, volume data with respect to such contract must be available for at least the three months immediately preceding the date on which the determination is made. The following eligibility criteria apply:

- In order to be added to the S&P GSCI™, a contract that is not included in the S&P GSCI™ at the time of determination and that is based on a commodity that is not represented in the S&P GSCI™ at such time must have an annualized total dollar value traded over the relevant period of at least U.S. \$15 billion. The total dollar value traded is the dollar value of the total quantity of the commodity underlying transactions in the relevant contract over the period for which the calculation is made, based on the average of the daily contract reference prices on the last day of each month during the period.
- In order to continue to be included in the S&P GSCI™, a contract that is already included in the S&P GSCI™ at the time of determination and that is the only contract on the relevant commodity included in the S&P GSCI™ must have an annualized total dollar value traded of at least U.S. \$5 billion over the relevant period and of at least U.S. \$10 billion during at least one of the three most recent annual periods used in making the determination.
- In order to be added to the S&P GSCI™, a contract that is not included in the S&P GSCI™ at the time of determination and that is based on a commodity on which there are one or more contracts already included in the S&P GSCI™ at such time must have an annualized total dollar value traded over the relevant period of at least U.S. \$30 billion.
- In order to continue to be included in the S&P GSCI™, a contract that is already included in the S&P GSCI™ at the time of determination and that is based on a commodity on which there are one or more contracts already included in the S&P GSCI™ at such time must have an annualized total dollar value traded, over the relevant period of at least U.S. \$10 billion over the relevant period and of at least U.S. \$20 billion during at least one of the three most recent annual periods used in making the determination.

In addition to the volume requirements described above, a contract must have a minimum reference percentage dollar weight:

- In order to continue to be included in the S&P GSCI™, a contract that is already included in the S&P GSCI™ at the time of determination must have a reference percentage dollar weight of at least 0.10%. The reference percentage dollar weight of a contract is determined by multiplying the CPW (defined below) of a contract by the average of its daily contract reference prices on the last day of each month during the relevant period. These amounts are summed for all contracts included in the S&P GSCI™ and each contract’s percentage of the total is then determined.

- In order to be added to the S&P GSCI™, a contract that is not included in the S&P GSCI™ at the time of determination must have a reference percentage dollar weight of at least 1.00% at the time of determination.

In the event that two or more contracts on the same commodity satisfy the eligibility criteria, such contracts are included in the S&P GSCI™ in the order of their respective total quantity traded during the relevant period (determined as the total quantity of the commodity underlying transactions in the relevant contract), with the contract having the highest total quantity traded being included first. No further contracts are included if such inclusion results in the portion of the S&P GSCI™ attributable to such commodity exceeding a particular level.

If under the procedure set forth in the preceding paragraph, additional contracts could be included with respect to several commodities at the same time, the procedure is first applied to the commodity that has the smallest portion of the S&P GSCI™ attributable to it at the time of determination. Subject to the other eligibility criteria, the contract with the highest total quantity traded on such commodity is included. Before any additional contracts on any commodity are included, the portion of the S&P GSCI™ attributable to all commodities is recalculated. The selection procedure described above is then repeated with respect to the contracts on the commodity that then has the smallest portion of the S&P GSCI™ attributable to it.

The contracts currently included in the S&P GSCI™ are all futures contracts traded on the New York Mercantile Exchange, Inc. (“**NYMEX**”), ICE Futures Europe (“**ICE-Europe**”), ICE Futures U.S. (“**ICE-US**”), the Chicago Mercantile Exchange (“**CME**”), the Chicago Board of Trade (“**CBOT**”), the Kansas City Board of Trade (“**KBT**”), the Commodities Exchange Inc. (“**CMX**”) and the London Metal Exchange (“**LME**”).

The quantity of each of the contracts included in the S&P GSCI™ is determined on the basis of a five-year average (referred to as the “world production average”) of the production quantity of the underlying commodity from sources determined by S&P Dow Jones to be reasonably accurate and reliable, such as the United Nations Industrial Commodity Statistics Yearbook. However, if a commodity is primarily a regional commodity, based on its production, use, pricing, transportation or other factors, S&P Dow Jones may calculate the weight of such commodity based on regional, rather than world, production data. At present, natural gas is the only commodity the weight of which is calculated on the basis of regional production data, with the relevant region being North America.

The five-year moving average is updated annually for each commodity included in the S&P GSCI™, based on the most recent five-year period (ending approximately two years prior to the date of calculation and moving backwards) for which complete data for all commodities is available. The contract production weights (the “**CPWs**”) used in calculating the S&P GSCI™ are derived from world or regional production averages, as applicable, of the relevant commodities, and are calculated based on the total quantity traded for the relevant contract and the world or regional production average, as applicable, of the underlying commodity. However, if the volume of trading in the relevant contract, as a multiple of the production levels of the commodity, is below specified thresholds, the CPW of the contract is reduced until the threshold is satisfied. This is designed to ensure that trading in each such contract is sufficiently liquid relative to the production of the commodity.

In addition, S&P Dow Jones performs this calculation on a monthly basis and, if the multiple of any contract is below the prescribed threshold, the composition of the S&P GSCI™ is reevaluated, based on the criteria and weighting procedure described above. This procedure is undertaken to allow the S&P GSCI™ to shift from contracts that have lost substantial liquidity into more liquid contracts, during the course of a given year. As a result, it is possible that the composition or weighting of the S&P GSCI™ will change on one or more of these monthly evaluation dates. In addition, regardless of whether any changes have occurred during the year, S&P Dow Jones reevaluates the composition of the S&P GSCI™ at the conclusion of each year, based on the above criteria. Other commodities that satisfy such criteria, if any, will be added to the S&P GSCI™. Commodities included in the S&P GSCI™ that no longer satisfy such criteria, if any, will be deleted.

S&P Dow Jones also determines whether modifications in the selection criteria or the methodology for determining the composition and weights of and for calculating the S&P GSCI™ are necessary or appropriate in order to assure that the S&P GSCI™ represents a measure of commodity market performance. S&P Dow Jones has the discretion to make any such modifications.

Contract Expirations

Because the S&P GSCI™ comprises actively traded contracts with scheduled expirations, it can only be calculated by reference to the prices of contracts for specified expiration, delivery or settlement periods, referred to as “contract expirations.” The contract expirations included in the S&P GSCI™ for each commodity during a given year are designated by S&P Dow Jones, *provided* that each such contract must be an “active contract.” An “active contract” for this purpose is a liquid, actively traded contract expiration, as defined or identified by the relevant trading facility or, if no such definition or identification is provided by the relevant trading facility, as defined by standard custom and practice in the industry.

If a trading facility deletes one or more contract expirations, the S&P GSCI™ will be calculated during the remainder of the year in which such deletion occurs based on the remaining contract expirations designated by S&P Dow Jones. If a trading facility ceases trading in all contract expirations relating to a particular contract, S&P Dow Jones may designate an eligible replacement contract on the commodity. To the extent practicable, the replacement will be in effect during the next monthly review of the composition of the S&P GSCI™. If that timing is not practicable, S&P will determine the date of the replacement and will consider a number of factors, including the differences between the existing contract and the replacement contract specifications and contract expirations.

Value of the S&P GSCI™

The value of the S&P GSCI™ on any given day is equal to the total dollar weight of the S&P GSCI™ divided by a normalizing constant that assures the continuity of the S&P GSCI™ over time. The total dollar weight of the S&P GSCI™ is the sum of the dollar weight of each of the underlying commodities.

The dollar weight of each such commodity on any given day is equal to:

- the “daily contract reference price” (discussed below),
- multiplied by the appropriate CPWs, and
- during a roll period, the appropriate “roll weights” (discussed below).

The daily contract reference price used in calculating the dollar weight of each commodity on any given day is the most recent daily contract reference price made available by the relevant trading facility, except that the daily contract reference price for the most recent prior day will be used if the exchange is closed or otherwise fails to publish a daily contract reference price on that day. In addition, if the trading facility fails to make a daily contract reference price available or publishes a daily contract reference price that, in the reasonable judgment of S&P, reflects manifest error, the relevant calculation will be delayed until the price is made available or corrected; *provided* that, if the price is not made available or corrected by 4:00 p.m., New York City time, S&P Dow Jones may, if it deems such action to be appropriate under the circumstances, determine the appropriate daily contract reference price for the applicable futures contract in its reasonable judgment for purposes of the relevant S&P GSCI™ calculation.

The “roll weight” of each commodity reflects the fact that the positions in contracts must be liquidated or rolled forward into more distant contract expirations as they approach expiration. If actual positions in the relevant markets were rolled forward, the roll would likely need to take place over a period of days. Since the S&P GSCI™ is designed to replicate the performance of actual investments in the underlying contracts, the rolling process incorporated in the S&P GSCI™ also takes place over a period of days at the beginning of each month (referred to as the “roll period”). On each day of the roll period, the “roll weights” of the first nearby contract expiration on a particular commodity and the more distant contract expiration into which it is rolled are adjusted, so that the hypothetical position in the contract on the commodity that is included in the S&P GSCI™ is gradually shifted from the first nearby contract expiration to the more distant contract expiration.

If on any day during a roll period any of the following conditions exists, the portion of the roll that would have taken place on that day is deferred until the next day on which such conditions do not exist:

- no daily contract reference price is available for a given contract expiration;

- any such price represents the maximum or minimum price for such contract month, based on exchange price limits (referred to as a “**Limit Price**”);
- the daily contract reference price published by the relevant trading facility reflects manifest error, or such price is not published by 4:00 p.m., New York City time. In that event, S&P Dow Jones may, but is not required to, determine a daily contract reference price and complete the relevant portion of the roll based on such price; *provided*, that, if the trading facility publishes a price before the opening of trading on the next day, S&P Dow Jones will revise the portion of the roll accordingly; or
- trading in the relevant contract terminates prior to its scheduled closing time.

If any of these conditions exist throughout the roll period, the roll with respect to the affected contract will be effected in its entirety on the next day on which such conditions no longer exist.

Contract Daily Return

The contract daily return on any given day is equal to the sum, for each of the commodities included in the S&P GSCI™, of the applicable daily contract reference price on the relevant contract multiplied by the appropriate CPW and the appropriate “roll weight,” divided by the total dollar weight of the S&P GSCI™ on the preceding day, minus one.

Calculation of the S&P GSCI Indices

Excess return S&P GSCI Indices

The value of any excess return version of a S&P GSCI Index on any day on which the S&P GSCI™ is calculated (an “**S&P GSCI™ Business Day**”) is equal to the product of:

- the value of the applicable S&P GSCI Index on the immediately preceding S&P GSCI™ Business Day; and
- one plus the contract daily return of the applicable S&P GSCI Index on the S&P GSCI™ Business Day on which the calculation is made.

Total Return S&P GSCI Indices

The value of any total return version of a S&P GSCI Index on any S&P GSCI™ Business Day reflects the value of an investment in the excess return version of that S&P GSCI Index together with a Treasury bill return and is equal to the product of:

- the value of the applicable S&P GSCI Index on the immediately preceding S&P GSCI™ Business Day;
- one plus the sum of the contract daily return and the Treasury Bill return on the S&P GSCI™ Business Day on which the calculation is made; and
- one plus the Treasury Bill return for each non-S&P GSCI™ Business Day since the immediately preceding S&P GSCI™ Business Day.

The Treasury Bill return is the return on a hypothetical investment in the applicable S&P GSCI Index at a rate equal to the interest rate on a specified U.S. Treasury Bill.

License Agreement

The S&P GSCI™ Light Energy Total Return Index and S&P GSCI™ Gold Total Return Index (for the purposes of this disclaimer only, the “indices”) is a product of S&P Dow Jones Indices LLC (“SPDJI”) and has been licensed for use by Citigroup Global Markets Limited (“CGML”). Standard & Poor’s® and S&P® are registered trademarks of Standard & Poor’s Financial Services LLC (“S&P”); Dow Jones® is a registered trademark of Dow Jones

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S&P DOW JONES INDICES DO NOT GUARANTEE THE ADEQUACY, ACCURACY, TIMELINESS AND/OR THE COMPLETENESS OF THE INDEX OR ANY DATA RELATED THERETO OR ANY COMMUNICATION, INCLUDING BUT NOT LIMITED TO, ORAL OR WRITTEN COMMUNICATION (INCLUDING ELECTRONIC COMMUNICATIONS) WITH RESPECT THERETO. S&P DOW JONES INDICES SHALL NOT BE SUBJECT TO ANY DAMAGES OR LIABILITY FOR ANY ERRORS, OMISSIONS, OR DELAYS THEREIN. S&P DOW JONES INDICES MAKE NO EXPRESS OR IMPLIED WARRANTIES, AND EXPRESSLY DISCLAIM ALL WARRANTIES, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE OR AS TO RESULTS TO BE OBTAINED BY CGML, OWNERS OF THE PRODUCTS LINKED TO THE CITI MARKET PILOT 5 EXCESS RETURN INDEX, OR ANY OTHER PERSON OR ENTITY FROM THE USE OF THE INDEX OR WITH RESPECT TO ANY DATA RELATED THERETO. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT WHATSOEVER SHALL S&P DOW JONES INDICES BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES INCLUDING BUT NOT LIMITED TO, LOSS OF PROFITS, TRADING LOSSES, LOST TIME OR GOODWILL, EVEN IF THEY HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, WHETHER IN CONTRACT, TORT, STRICT LIABILITY, OR OTHERWISE. THERE ARE NO THIRD PARTY BENEFICIARIES OF ANY AGREEMENTS OR ARRANGEMENTS BETWEEN S&P DOW JONES INDICES AND CGML, OTHER THAN THE LICENSORS OF S&P DOW JONES INDICES.

CASH CONSTITUENT

The Cash Constituent is calculated by the Index Calculation Agent and is a hypothetical amount that hypothetically accrues interest on a daily basis at the 90-day U.S. Treasury bill rate. The Constituent Closing Level of the Cash Constituent on any Index Business Day is equal to the Constituent Closing Level of the Cash Constituent on the immediately preceding Rate Reset Day plus accrued interest on that Constituent Closing Level to the current Index Business Day at the 90-Day U.S. Treasury bill rate, as determined on the immediately preceding Rate Reset Day. The last Index Business Day in each Rebalancing Period or Extraordinary Rebalancing Period is a **“Rate Reset Day”**.

On any Rate Reset Day, the **“90-day U.S. Treasury bill rate”** is the mid-market discount quotation for the most recently auctioned 13-week U.S. Treasury bill that is displayed on Bloomberg page “GB3 <Govt>” (or any successor or substitute page) at approximately 5:00 p.m. New York City time on that day (or, if not published on such day, as published on the first preceding Index Business Day on which such rate was published).

The 13-week U.S. Treasury bill is a short-term debt obligation backed by the U.S. government, maturing approximately three months from the date of issuance, and is sold at a discount to par value that is determined through an auction process. The 13-week U.S. Treasury bills are also traded in a secondary market. The 90-day U.S. Treasury bill rate used to calculate the Constituent Closing Level of the Cash Constituent with respect to any Index Business Day is not the auction discount rate of any 13-week U.S. Treasury bill at issuance, but rather a secondary market price determined as described in the preceding paragraph.

PART 5
INDEX RULES

Citi Market Pilot 5 Excess Return Index Index Methodology

Citi Investment Strategies

1 April 2015



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Part A: Introduction

Introduction

This document constitutes the “**Index Methodology**” in respect of the Index (as defined below) and is made available by Citigroup Global Markets Limited in its capacity as the Index Sponsor.

This Index Methodology dated 1 April 2015 and the Index General Conditions dated 1 April 2015 (as amended from time to time, the “**Index General Conditions**”) together comprise the Index Conditions applicable to the Index and must be read together. In the case of any inconsistency between this Index Methodology and the Index General Conditions, this Index Methodology shall prevail in respect of the Index.

Full information in respect of the Index is only available on the basis of the combination of this Index Methodology and the Index General Conditions.

Full information in respect of any Index Linked Product (as defined in Section D (Definitions) of the Index General Conditions) is only available on the basis of the combination of this Index Methodology and the Index General Conditions and the confirmation, prospectus or offering document (however described) in respect of such Index Linked Product.

This Index Methodology may be amended from time to time without notice, and will be available from the Index Sponsor. See Section E (*Miscellaneous*) of the Index General Conditions for a description of the circumstances in which a change to this Index Methodology may be required.

Terms used in this Index Methodology but not defined in this Index Methodology shall have the meanings given to them in the Index General Conditions.

Part B: Key Information

Key Information

Index:	Citi Market Pilot 5 Excess Return Index (the " Index ")
Summary of strategy:	<p>The Index tracks the performance of the hypothetical, rules-based investment methodology.</p> <p>Once each month, the Index applies a portfolio selection methodology to select a hypothetical investment portfolio to track for the next month. In general, if that hypothetical investment portfolio appreciates over the next month, the level of the Index will increase, and if that hypothetical investment portfolio depreciates over the next month, the level of the Index will decrease, subject to the excess return deduction, index fee, notional costs and other features of the Index described in more detail in the "Overview" section of the "Description of the Citi Market Pilot 5 Excess Return Index" attached to these Index Conditions.</p> <p>The Index selects the hypothetical investment portfolio to be tracked each month using certain concepts drawn from the "modern portfolio theory" approach to asset allocation. Generally, modern portfolio theory holds that an optimal (or "efficient") investment portfolio is one that maximizes expected return for any given level of risk, where "risk" is measured by the expected volatility of the portfolio. Further, modern portfolio theory suggests that the investment portfolio that achieves this result is likely to be a diversified portfolio of relatively uncorrelated assets. The Index seeks to implement these ideas in two ways.</p> <p>First, the Index will construct the hypothetical investment portfolio to be tracked each month from a universe of eligible assets that represent a number of different asset classes and market sectors.</p> <p>Second, the Index will seek to select as the hypothetical investment portfolio to be tracked each month, out of all possible hypothetical investment portfolios that could be constructed from this universe of eligible assets (and that meet certain prescribed conditions), the hypothetical investment portfolio that has the highest expected return without exceeding the Index's target volatility of 5%.</p> <p>If for any given month there is no hypothetical investment portfolio with a historical volatility that is less than or equal to 5%, the hypothetical investment portfolio that is selected as the portfolio to be tracked by the Index for that month (the "Selected Portfolio") would not be the hypothetical investment portfolio that maximizes historical performance for its level of risk, but rather would be the hypothetical investment portfolio with the lowest historical volatility, regardless of historical performance, resulting in the percentage weights of the constituents in that hypothetical investment portfolio reducing on a pro rata basis and being reallocated into a cash component to the extent necessary to reduce the expected volatility of the hypothetical investment portfolio to 5%.</p> <p>In addition, the Index contains an "extraordinary rebalancing" feature that will replace the constituents in that hypothetical investment portfolio with a cash constituent if the hypothetical investment portfolio has declined by more than 8% over any 21 Index Business Day period. In that event, the hypothetical investment portfolio will be reallocated out of the constituents in that hypothetical investment portfolio and into the cash constituent over an extraordinary rebalancing period and will then remain 100% allocated to the cash constituent until the beginning of the next regular monthly rebalancing period.</p> <p>The Index is an "excess return" index, which means that, in calculating the performance of the Index, the daily performance of the Selected Portfolio will be reduced by a notional funding rate equal to the federal funds effective rate, as in effect on the immediately preceding Index Business Day.</p>

The Index is also a “volatility target” index, which means that it adjusts its exposure to the excess return performance of the hypothetical investment portfolio on a daily basis in an attempt to maintain a target volatility for the Index of approximately 5%, subject to a maximum exposure of 120% and a minimum exposure of 0%.

An Index fee is deducted from the daily performance of the Index at a rate of 0.5% per annum. The Index also takes into consideration notional transaction costs which are deducted in the calculation of the Index each time there is: (i) an increase in the unit weight of any applicable asset comprised in the universe of eligible assets in the Selected Portfolio; (ii) replication of the Selected Constituents; and (iii) a change in the Index’s exposure to the excess return performance of the Selected Portfolio resulting from the Index’s volatility targeting feature .

Further details relating to the Index are contained in the “Description of the Citi Market Pilot 5 Excess Return Index” document attached to these Index Conditions.

Index Sponsor:	Citigroup Global Markets Limited
Index Calculation Agent:	Citigroup Global Markets Limited
Index Base Currency:	United States dollars (“USD”)
Index Launch Date:	2 March 2015
Index Start Date:	1 July 1998
Index Start Level:	USD 1000
Gross Index Start Level	USD 1000
Index Fee:	0.5% per annum

In addition, there are certain transaction and replication costs notionally incurred, and which are applied to the calculation of the Index Level, in respect of (i) rebalancing the Selected Constituents; (ii) replicating the Selected Constituents; and (iii) increasing or reducing exposure to the excess return performance of the Selected Portfolio resulting from the Index’s volatility targeting feature

Excess Return Start Date:	1 June 1998
Excess Return Start Level:	USD 1000
Core Index Start Date:	1 June 1998
Core Index Start Level:	USD 1000
Frequency of calculation of the Index Level:	Daily, as of each Index Business Day
Frequency of rebalancing:	Monthly, as of each Rebalancing Date (subject to the occurrence of an Extraordinary Rebalancing Event)
Index Electronic Page:	Bloomberg page CIISMA5N <Index>

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

Part C: Overview of the Index

Overview of the Index

1. GENERAL OVERVIEW

The overview of the Index is set out in the “Overview” section of the “Description of the Citi Market Pilot 5 Excess Return Index” attached to these Index Conditions. The Index Conditions as a whole govern the calculation of the Index and the Index Level (as defined in Part D (*Calculation of the Index Level*) below), and the determinations made in connection with the maintenance of the Index. In the case of any inconsistency between the “Description of the Citi Market Pilot 5 Excess Return Index” attached to these Index Conditions and the Index Conditions, the Index Conditions shall prevail.

The Index Level is calculated in the Index Base Currency by the Index Calculation Agent in respect of every Index Business Day (as defined in Part E (*Data*) below) and is generally published on the following Index Business Day. The Index has been calculated on a live basis since the Index Launch Date and has been back-tested for the period from and including the Index Start Date.

The Index is a notional rules-based proprietary index developed by the Index Sponsor that derives its performance from a hypothetical investment portfolio selected on a monthly basis, reduced by a notional funding rate equal to the federal funds effective rate and net of the Index Fee and certain transaction costs notionally incurred in respect of (i) rebalancing the Selected Constituents; (ii) replication of the Selected Constituents and (iii) increasing or reducing Exposure.

The Index is described as replicating notional positions in the Constituents because there is no actual portfolio of assets to which any person is entitled or in which any person has any ownership interest. The Index simply references certain investment positions the performance of which is used as a reference point for the purpose of calculating the Index Level.

The Citi Market Pilot 5 Excess Return Index uses a trend-following methodology to determine weights for the Eligible Constituents on a monthly basis, such that the Index will be exposed to different Eligible Constituents from time to time depending on the asset class performance trends identified by the Methodology. The Index is subject to a variety of market risks. The Methodology on which the Index is based may not be successful and may not outperform any alternative strategy that might be employed in respect of the Eligible Universe.

2. INDEX SPONSOR AND INDEX CALCULATION AGENT

The Index Sponsor is Citigroup Global Markets Limited. As at the date of this Index Methodology, Citigroup Global Markets Limited also acts as Index Calculation Agent, calculating and publishing the Index in accordance with these Index Conditions. The Index Sponsor may, in its sole discretion and without notice, appoint an alternative Index Calculation Agent at any time which may be the Index Sponsor or one of its Affiliates.

The determinations of the Index Sponsor and the Index Calculation Agent in respect of the Index shall be final in the absence of manifest error. Please refer to Section E (*Miscellaneous*) of the Index General Conditions for further information.

3. INDEX LEVEL CALCULATION

Subject to the occurrence or existence of a Disrupted Day (as defined in Section D (*Definitions*) of the Index General Conditions), the Index Level is calculated by the Index Calculation Agent as of the Index Valuation Time on each Index Business Day (as defined in Part E (*Data*) below). The Index Level as of each Index Business Day is published on the Index Electronic Page, generally on the following Index Business Day. This should be considered the official source for the Index Level and a level obtained from any other source (electronic or otherwise) must be considered unofficial. The Index Level is the closing level of the Index for that Index Business Day. The Index Calculation Agent may also, but is not obliged to, calculate the level of the Index in respect of any other valuation time on any Index Business Day or any other day with the consent of the Index Sponsor.

A description on how the Index is calculated, detailing selection methodology, monthly rebalancing, extraordinary rebalancing, excess return deduction and volatility target are set out in the “Description of the Citi Market Pilot 5 Excess Return Index” [attached to these Index Conditions. The detailed procedures for the calculation of the Index Level in respect of each Index Business Day are set out in Part D (*Calculation of the Index Level*) below.

4. NOTIONAL FEES AND COSTS

Notional fees and costs representing the transaction costs notionally incurred in respect of (i) rebalancing the Selected Constituents; (ii) replicating the Selected Constituents; (iii) increasing or reducing exposure to the excess return performance of the Selected Portfolio resulting from the Index’s volatility targeting feature; and (iv) an Index Fee, are applied on each Index Business Day in the calculation of the Index Level. Accordingly, these notional fees and costs, in addition to the Index Fee, will reduce the overall Index Level. See Part D (*Calculation of the Index Level*) for a detailed description of these notional fees and costs.

Part D: Calculation of the Index Level

Calculation of the Index Level

1. INTRODUCTION

The Index Sponsor is Citigroup Global Markets Limited. As at the date of this Index Methodology, the Index Sponsor also acts in the capacity of Index Calculation Agent to calculate and publish the Index in accordance with the Index Conditions. The Index Sponsor may, in its sole discretion and without notice, appoint an alternative Index Calculation Agent at any time, which may be the Index Sponsor or one of its Affiliates.

The Index Calculation Agent's calculations of the Index Level shall be final in the absence of manifest error. Please refer to Section E (*Miscellaneous*) of the Index General Conditions for further information.

The Index Level is calculated by the Index Calculation Agent as of the Index Valuation Time on each Index Business Day (each as defined in Part E (*Data*) below). The Index Level for each Index Business Day is published on the Index Electronic Page, generally on the following Index Business Day. This should be considered the official source for the Index Level and a level obtained from any other source (electronic or otherwise) must be considered unofficial. The Index Level is the closing level of the Index for the relevant Index Business Day. The Index Calculation Agent may also, but is not obliged to, calculate the level of the Index in respect of any other valuation time on any Index Business Day or any other day with the consent of the Index Sponsor.

Unless otherwise provided to the contrary, all of the calculations and determinations described in this Part D are the responsibility of the Index Calculation Agent. The calculations and determinations in this Part D are subject to the occurrence of, and adjustments made as a consequence of, Additional Adjustment Events as set out below in this Part D, Disrupted Days and Adjustment Events (as described in Section B (*Valuations and Adjustments*) and Section F (*Constituent Schedules*) of the Index General Conditions).

2. DAILY INDEX CALCULATION

2.1 Index Level

The “**Index Level**” as of the Index Start Date shall be the Index Start Level.

The “**Index Level**” as of each Index Business Day t (“ IL_t ”) following the Index Start Date shall be an amount determined by the Index Calculation Agent as of the Index Valuation Time on such Index Business Day t in accordance with the following formula.

$$IL_t = IL_{t-1} \times \left(1 + \left(\frac{GIL_t}{GIL_{t-1}} - 1 \right) - \text{IndexFee} \times \frac{dc(t, t-1)}{360} \right)$$

where:

IL_t = Index Level in respect of Index Business Day t

IL_{t-1} = Index Level on the immediately preceding Index Business Day $t-1$

GIL_t = Gross Index Level on Index Business Day t

GIL_{t-1} = Gross Index Level on the immediately preceding Index Business Day $t-1$

Index Fee = 0.5% per annum

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

2.2 Gross Index Level

The “**Gross Index Level**” as of the Index Start Date shall be the Gross Index Start Level.

The “**Gross Index Level**” in respect of each Index Business Day t following the Index Start Date is a function of the Exposure of the Gross Index Level to the Excess Return Index Level on such Index Business Day and the Excess Return Index Level on such Index Business Day. The “**Excess Return Index Level**” is calculated in respect of each Index Business Day in accordance with the formula set out in paragraph 3 (*Excess Return Index Level*) below, and the Exposure is calculated in respect of each Index Business Day in accordance with the formula set out in paragraph 2.4 (*Exposure*) below.

The Gross Index Level in respect of each Index Business day t (“**GIL_t**”) following the Index Start Date shall be an amount determined by the Index Calculation Agent as of the Index Valuation Time on such Index Business Day t in accordance with the following formula:

$$GIL_t = GIL_{t-1} \times \left(1 + exp_{t-1} \times \left(\frac{ERIL_t}{ERIL_{t-1}} - 1 \right) - VTCost_{t-1} \right)$$

where:

- GIL_t = Gross Index Level as of Index Business Day t
- GIL_{t-1} = Gross Index Level as of the Index Business Day immediately preceding Index Business Day t-1
- $ERIL_t$ = Excess Return Index Level on Index Business Day t
- $ERIL_{t-1}$ = Excess Return Index Level on the immediately preceding Index Business Day t-1
- exp_{t-1} = Exposure of the Gross Index Level to the Excess Return Index Level in respect of the Index Business Day immediately preceding Index Business day t. For the avoidance of doubt, exp_{t-1} on the Index Start Date shall be equal to 100%
- $VTCost_{t-1}$ = the notional transaction costs in respect of any change in the Exposure of the Gross Index Level to the Excess Return Index Level as of the Index Business Day immediately preceding Index Business Day t, as determined in accordance with paragraph 2.3 (*Volatility Target Cost*) below.

2.3 Volatility Target Cost

The Volatility Target cost (“**VTcost**”) on each Index Business Day t is the notional transaction costs associated with leveraging and deleveraging the Excess Return Index Level to adjust for the changes in the exposure, calculated as follows:

$$VTcost_t = abs(exp_t - exp_{t-1}) \times \sum_{i=1}^n CPW_{i,t} \times \frac{tc_i}{2}$$

where:

$VTcost_t$	=	the notional transaction costs in respect of the change in Exposure of the Gross Index Level in relation to Index Business Day t.
abs	=	the absolute value of the amounts within the set of brackets immediately following the “abs” symbol.
exp_t	=	Exposure of the Gross Index Level to the Excess Return Index Level in respect of Index Business day t
exp_{t-1}	=	Exposure of the Gross Index Level to the Excess Return Index Level on the Index Business Day t immediately preceding Index Business Day t. For the avoidance of doubt, exp_{t-1} on the Index Start Date shall be equal to 100%
tc_i	=	the Notional Transaction Costs of Eligible Constituent i each as set out in Part E (<i>Data</i>) below)
$CPW_{i,t}$	=	Current Percentage Weight of the Selected Constituent i on Index Business Day t

For the avoidance of doubt, the VTcost on the Index Start Date will be assumed to be zero.

2.4 Exposure

The “**Exposure**” of the Gross Index Level to the Excess Return Index Level is determined by reference to short-term realised volatility of the Excess Return Index Level over the 20 Index Business Day period ending on, and including, two Index Business Days prior to Index Business Day t. The Exposure of the Gross Index Level to the Excess Return Index Level will never be more than 120%.

The Exposure in respect of each Index Business Day t is determined in accordance with the following formula:

$$exp_t = \begin{cases} exp_{t-1}, & \text{if } abs\left(\min\left(exp_max, \max\left(exp_min, \frac{VT}{vol_{t-2}}\right)\right) - exp_{t-1}\right) < VT \text{ Buffer} \\ \min\left(exp_max, \max\left(exp_min, \frac{VT}{vol_{t-2}}\right)\right), & \text{otherwise} \end{cases}$$

where:

exp_t	=	Exposure of the Gross Index Level to the Excess Return Index Level in respect of Index Business Day t
exp_{t-1}	=	Exposure of the Gross Index Level to the Excess Return Index Level on the Index Business Day t immediately preceding Index Business Day t. For the avoidance of doubt, exp_{t-1} on the Index Start Date shall be equal to 100%
exp_max	=	Maximum Exposure (being 120%)
exp_min	=	Minimum Exposure (being 0%)
abs	=	the absolute value of the amounts within the set of brackets immediately following the “abs” symbol.

- max = the higher of the amounts separated by a comma within the set of brackets immediately following the "max" symbol.
- min = the lower of the amounts separated by a comma within the set of brackets immediately following the "min" symbol.
- VT = the Volatility Target (as specified in Part E (*Data*) below).
- Vol_{t-2} = the Realised Volatility of the Excess Return Index Level in respect of the second Index Business Day prior to Index Business Day t, as determined in accordance with paragraph 2.5 (*Realised Volatility*) below.
- VT Buffer = the Volatility Buffer (as specified in Part E (*Data*) below).

2.5 Realised Volatility

The “**Realised Volatility**” of the Excess Return Index Level as of any Index Business Day t for the purposes of calculating Exposure is determined according to the following formula:

$$Vol_t = \sqrt{\sum_{i=t-19}^t \left(\frac{1}{20} \times \left(\ln \left(\frac{ERIL_i}{ERIL_{i-1}} \right) \times \sqrt{\frac{365}{dc(i, i-1)}} \right)^2 \right)}$$

where:

- Vol_t = Realised Volatility in respect of the Index Business Day t
- $\sum_{(i=t-19)}^t$ = in respect of an Index Business Day, the sum of the series of values achieved by calculating the formula following such symbol for each Index Business Day i from and including the Index Business Day falling 19 Index Business Days prior to such Index Business Day to and including such Index Business Day.
- ERIL_i = Excess Return Index Level as of Index Business Day i
- ERIL_{i-1} = Excess Return Index Level as of Index Business Day i-1.
- dc(i, i-1) = The number of calendar days between Index Business Day i and the immediately preceding Index Business Day i-1
- Index Business Day i = in respect of each Index Business Day t, each Index Business Day in the 20 Index Business Day period ending on, and including, Index Business Day t.
- Index Business Day i-1 = the Index Business Day immediately preceding Index Business Day i.
- ln = the natural logarithmic function.

3. Excess Return Index Level

3.1 Excess Return Index Level

The “**Excess Return Index Level**” in respect of an Index Business Day t represents the excess return of the Core Index Level over a specified funding rate.

The Excess Return Index Level in respect of the Excess Return Start Date shall be equal to the Excess Return Start Level. The Excess Return Level in respect of each Index Business Day t following the Excess Return Start Date shall be an amount in USD determined by the Index Calculation Agent as of the Index Valuation Time on such Index Business Day t in accordance with the formula set out below:

$$ERIL_t = ERIL_{t-1} \times \left[1 + \left(\frac{CIL_t}{CIL_{t-1}} - 1 \right) - \left(\frac{OvernightConstituent_t}{OvernightConstituent_{t-1}} - 1 \right) \right]$$

where:

$ERIL_t$	=	Excess Return Index Level as of Index Business Day t
$ERIL_{t-1}$	=	Excess Return Index Level on the immediately preceding Index Business Day t-1
CIL_t	=	Core Index Level as of Index Business Day t
CIL_{t-1}	=	Core Index Level on the immediately preceding Index Business Day t-1
$OvernightConstituent_t$	=	Overnight Constituent as of Index Business Day t
$OvernightConstituent_{t-1}$	=	Overnight Constituent on the immediately preceding Index Business Day t-1

3.2 Overnight Constituent

The “**Overnight Constituent**” on the Core Index Start Date shall be 1000.

The “**Overnight Constituent**” on each Index Business Day t (following the Index Start Date) shall be an amount determined by the Index Calculation Agent in accordance with the formula set out below:

$$OvernightConstituent_t = OvernightConstituent_{t-1} \times \left[1 + OvernightRate_{t-1} \times \frac{dc(t, t-1)}{360} \right]$$

where:

$OvernightConstituent_t$	=	Overnight Constituent on Index Business Day t
$OvernightConstituent_{t-1}$	=	Overnight Constituent on the immediately preceding Index Business Day t-1

OvernightRate_{t-1} = the Federal Funds Effective Rate as displayed on Bloomberg page “FEDL01 <Index>” (or such other Electronic Page as the Index Calculation Agent may determine appropriate), on Index Business Day t-1, *provided that* if such reference rate is unavailable for any reason, the applicable rate shall be the most recently available rate for an Index Business Day preceding Index Business Day t-1

dc(t,t-1) = The number of calendar days between Index Business Day t and the immediately preceding Index Business Day t-1

4. Core Index Level

4.1 Core Index Level

The “**Core Index Level**” on the Core Index Start Date shall be Core Index Start Level.

The “**Core Index Level**” on each Index Business Day t (following the Core Index Start Date) shall be an amount determined by the Index Calculation Agent in accordance with the formula set out below:

$$CIL_t = \sum_{i=1}^M ICL_{i,t} \times UW_{i,r}$$

where:

CIL_t = Core Index Level on Index Business Day t

$ICL_{i,t}$ = Index Constituent Level of Selected Constituent i on Index Business Day t (as determined in accordance with paragraph 4.4 (*Constituent Closing Level*) below)

$UW_{i,r}$ = Unit Weight of Selected Constituent i on the immediately preceding Rebalancing Date r or the Core Index Start Date, as applicable

On Rebalancing Date r, the Core Index Level is calculated using the respective Unit Weights (as determined on Rebalancing Date r-1) of each Selected Constituent. From and including the first Index Business Day following Rebalancing Date r, up to and including Rebalancing Date r+1, the Core Index Level is calculated using the Index Constituent Levels t (as determined in accordance with paragraph 4.5 (*Constituent Closing Level*) below) and their respective Unit Weights r (as determined in accordance with paragraph 4.2 (*Unit Weight*) below) for Rebalancing Date r.

4.2 Unit Weight

The Index Calculation Agent shall first determine the Unit Weight of each of Selected Constituent i on the Index Start Date, on each Rebalancing Date and on each Extraordinary Rebalancing Date (as the case may be). Unit Weights determined on each Rebalancing Date shall remain in effect until after the Index Valuation Time on the following Rebalancing Date, subject to the occurrence of any Extraordinary Rebalancing Date.

For the avoidance of doubt, the calculation of the Index Level as of an Index Business Day which falls on a Rebalancing Date utilizes the Unit Weights determined on the previous Rebalancing Date; the Unit Weights determined on the current Rebalancing Date shall only be used in the calculation of the Index Level as of the following Index Business Day.

In relation to a Selected Constituent i on Rebalancing Date r, the Unit Weight of such Selected Constituent i shall be calculated in accordance with the following formula:

$$UW_{i,r} = \frac{CIL_r}{ICL_{i,r}} \times \begin{cases} PW_{i,r}, & \text{if } PW_{i,r} < CPW_{i,r} \\ CPW_{i,r} + (PW_{i,r} - CPW_{i,r}) \times \frac{1}{1 + tc_i}, & \text{otherwise} \end{cases}$$

where:

$UW_{i,r}$	=	Unit Weight of Selected Constituent i as of Rebalancing Date r
$PW_{i,r}$	=	Percentage Weight of Selected Constituent i on Rebalancing Date r. For the avoidance of doubt, where Selected Constituent i is not included in the Index on Rebalancing Date r, $PW_{i,r}$ shall be deemed to be zero.
CIL_r	=	Core Index Level as of Rebalancing Date r
$ICL_{i,r}$	=	Index Constituent Level of Selected Constituent i as of Rebalancing Date r
$CPW_{i,r}$	=	Current Percentage Weight of Selected Constituent r as of Rebalancing Date r
tc_i	=	the Notional Transaction Cost of Selected Constituent i each as set out in Part E (<i>Data</i>) below)

4.3 Percentage Weight

On each Rebalancing Date r, the Percentage Weight with regards to a Selected Constituent i is calculated according to the formula:

$$PW_{i,r} = \frac{1}{N - (k - 1)} \times TPW_{i,r} + \frac{N - k}{N - (k - 1)} \times CPW_{i,r}$$

where:

$PW_{i,r}$	=	the Percentage Weight of the Selected Constituent i on Rebalancing Date r
$CPW_{i,r}$	=	the Current Percentage Weight of Selected Constituent i on Rebalancing Date r
$TPW_{i,r}$	=	the Theoretical Percentage Weight of Selected Constituent i on Rebalancing Date r as determined in accordance with paragraph 5.1 (<i>Determination of Theoretical Percentage Weights</i>) below
N	=	the length of the Rebalancing Period, being 5 consecutive Index Business Days in total, except for the initial Rebalancing Period for which it was 1 Index Business Day.
k	=	the n th day of the Rebalancing Period
n	=	1, ..., N

4.4 Current Percentage Weight

On each Index Business Day t, the Current Percentage Weight with regards to an Selected Constituent i is calculated according to the formula:

$$CPW_{i,t} = \frac{UW_{i,r} \times ICL_{i,t}}{CIL_t}$$

- $CPW_{i,t}$ = the Current Percentage Weight of Selected Constituent i on Index Business Day t
- $UW_{i,r}$ = the Unit Weight of Selected Constituent i on the immediately preceding Rebalancing Date r
- $ICL_{i,t}$ = the Index Constituent Level of Selected Constituent i as of Index Business Day t
- CIL_t = the Core Index Level as of Index Business Day t

4.5 Constituent Closing Level

Index Constituent Level

As of each Index Business Day t , the Index Calculation Agent shall calculate the “**Index Constituent Level**” of each Eligible Market Constituent i in accordance with the following formula:

$$ICL_{i,t} = ICL_{i,r} \times \frac{CL_t}{CL_r} \times \left(1 - hf_i \times \frac{t_t - t_r}{360} \right)$$

where:

- $ICL_{i,t}$ = Index Constituent Level of Eligible Market Constituent i as of Index Business Day t
- $ICL_{i,r}$ = Index Constituent Level of Eligible Market Constituent i on the first Rebalancing Date of the immediately preceding Rebalancing Period r
- CL_t = Constituent Closing Level of Eligible Market Constituent i as of Index Business Day t (or if such day is not a Scheduled Trading Day for such Constituent, the immediately preceding Scheduled Trading Day)
- CL_r = Constituent Closing Level of Eligible Market Constituent i on the first Rebalancing Date of the immediately preceding Rebalancing Period r (or if such day is not a Scheduled Trading Day for such Constituent, the immediately preceding Scheduled Trading Day)
- hf_i = the Notional Replication Cost of Eligible Market Constituent i (as defined in Part E (*Data*) below)
- t_t = Index Business Day t
- t_r = the first Rebalancing Date of the immediately preceding Rebalancing Period r

Cash Constituent

In respect of the Cash Constituent which may be comprised in the Selected Portfolio, the Index Constituent Level on any Index Business Day t shall be determined in accordance with the following formula:

$$ICL_{C,t} = ICL_{C,r_s} \times \left(1 + rate_{r_s} \times \left(\frac{t_t - t_{r_s}}{360} \right) \right)$$

Where:

$ICL_{C,t}$	=	Index Constituent Level for Cash Constituent as of Index Business Day t
$ICL_{C,rs}$	=	Index Constituent Level for Cash Constituent on the Rate Reset Day rs
$rate_{rs}$	=	90 Day U.S. Treasury Bills rate on the Rate Reset Day rs , which is the mid-market discount quotation for the most recently auctioned 13-week U.S. Treasury Bill that is displayed on Bloomberg page “GB3 <Govt>” (or any successor or substitute page) at approximately 5:00 PM on the relevant Rate Reset Day rs (or, if not published on such day, as published on the first preceding Index Business Day on which such rate was published)
Rate Reset Date	=	the last Rebalancing Date of the Rebalancing Period immediately preceding Index Business Day t
t_t	=	Index Business Day t
t_{rs}	=	the Rate Reset Day rs

5 SELECTION OF CONSTITUENTS

The Theoretical Percentage Weight (“TPW”) of each Eligible Market Constituent i is determined by the Index Calculation Agent on each Selection Day and the optimization model (as further described under paragraph 5.1 (2) below) applied to Theoretical Percentage Weight seeks to find the combination of Theoretical Percentage Weights for each Eligible Market Constituent that results in such portfolio having the maximum return without exceeding the Volatility Target. The Eligible Market Constituents and, where applicable the Cash Constituent, which are selected in accordance with this paragraph 5, shall become the “**Selected Constituents**” comprised within the Selected Portfolio for the purposes of calculating the level of the Index.

5.1 Determination of Theoretical Percentage Weights

In order to determine the applicable Theoretical Percentage Weights, the Index Calculation Agent follows a three-step process. The first step calculates a trend-following vector of expected returns and an expected covariance matrix. In the second step, an optimization model is used to find an optimum percentage weight for each Eligible Market Constituent, subject to a pre-established level of portfolio volatility and a minimum expected return. The third step implements an additional return constraint, which may lead to the full notional portfolio being invested into the Cash Constituent if a defined hurdle rate of return is not achieved by the level of the expected return of the optimized portfolio, within the prescribed volatility target.

This determination process, including the relevant formulae used by the Index Calculation Agent to determine the “**Theoretical Percentage Weight**” of each Eligible Market Constituent, is set out in detail below:

(1) Constructing the Trend-following Vector of Expected Returns and Covariance Matrix

In this step, a historic exponential moving average return vector for each Eligible Market Constituent is calculated and a covariance matrix is established to represent all of the Eligible Market Constituents.

In order to compute the trend-following vector of exponential moving average returns and the trend-following covariance matrix, each Eligible Market Constituent is measured with respect to its approximately one year exponential moving average return. The exponential moving average

return for each Eligible Market Constituent is determined using the iterative equation set out below over the previous 252 Index Business Days ending on the relevant scheduled Selection Day.

The exponential moving average (“**EMA**”) is a type of moving average in which greater emphasis is given to the more recent history. Moving average itself is a concept in which an average value is obtained for a value observed at a specific frequency during a specific period (in this case the daily return of the Index Constituent Levels of an Eligible Market Constituent over the preceding 252 Index Business Days), and this average “moves” every day to record the average daily return of the Index Constituent Levels of an Eligible Market Constituent for the most recent 252 Index Business Days. In the calculations below, the “**Decay Factor**” is applied to the moving average, which results in the daily returns of the Index Constituent Levels from more recent Index Business Days affecting the EMA to a progressively greater extent than the daily returns of the Index Constituent Levels from earlier Index Business Days (i.e. recent data is given more weight than older data). The EMA for an Eligible Market Constituent will react more quickly to recent changes in daily returns of the Index Constituent Levels than a simple moving average.

a. The “**Vector of Expected Returns**” is calculated as follows:

On each Selection Day k, the Index Calculation Agent determines for each Eligible Market Constituent i an historic exponential moving average return (“**Exponential Moving Average Return**”) for each of the 252 Index Business Days ending on Selection Day k, in accordance with the following formula:

$$EMA_{i,s} = X_{i,s} \times a + EMA_{i,s-1} \times (1 - a)$$

i = 1, ...M

s = t-H+1, ...t; where t = Selection Day k

where:

$EMA_{i,t-H+1}$	=	The first Exponential Moving Average Return in the series for Eligible Market Constituent i (i.e., $EMA_{i,t-H+1}$) shall be equal to the 63 Index Business days arithmetic average of the daily returns immediately preceding Index Business Day t-H+1.
$EMA_{i,s-1}$	=	The Exponential Moving Average Return of Eligible Market Constituent i on the Index Business Day immediately preceding Index Business Day s
α	=	$1 - 0.05^{(1/K)}$
K	=	126 Index Business Days (the “ Decay Factor ”)
$X_{i,s}$	=	$\frac{\text{Index Constituent Level}_{i,t}}{\text{Index Constituent Level}_{i,t-1}} - 1$
Index Constituent Level $_{i,t}$	=	Index Constituent Level of Eligible Market Constituent i as of Index Business Day t, provided that if Index Business Day t is a Disrupted Day for the Selected Constituent i, then Index Constituent Level $_{i,t}$ shall be deemed to be equal to the Index Constituent Level of the Selected Constituent i on the preceding Scheduled Trading Day for the Selected Constituent i that was not a Disrupted Day for the Selected Constituent i

Index Constituent Level $i, t-1$	=	Index Constituent Level of Eligible Market Constituent i on the preceding Index Business Day $t-1$, provided that if Index Business Day $t-1$ is a Disrupted Day for the Selected Constituent i , then Index Constituent Level $i, t-1$ shall be deemed to be equal to the Index Constituent Level of the Selected Constituent i on the preceding Scheduled Trading Day for the Selected Constituent i that was not a Disrupted Day for the Selected Constituent i)
H	=	252
M	=	Number of Eligible Market Constituents

Having created a matrix of such data, the Vector of Expected Returns is then equal to the product of (i) the last value in the matrix (in the row corresponding with “t”) of the Exponential Moving Average Return for each of Eligible Market Constituent i ; and (ii) the annual factor 252.

- b. Calculate each element of the “**Expected Covariance Matrix**” $Cov(n, m)$, as follows:

On each Selection Day k , the Index Calculation Agent determines for each Eligible Market Constituent “ i ” an historic exponential moving average covariance (“**Exponential Moving Average Covariance**”) between the Eligible Market Constituent “ n ” and “ m ” for each of the 252 Index Business Days ending on Selection Day k , in accordance with the following formula:

$$EMA_Cov_s(n,m) = \alpha \times dx_s \times dy_s + EMA_Cov_{s-1}(n,m) \times (1 - \alpha)$$

$s = t-H+1, \dots, t$; where $t =$ Selection Day k and α has the same value as in the previous paragraph (a) immediately above.

Where:

$EMA_Cov_{s-1}(n,m)$	=	The Exponential Moving Average covariance between the Eligible Market Constituent “ n ” and “ m ” on the Index Business Day immediately preceding Index Business Day s
$EMA_Cov_{t-H+1}(n,m)$	=	The first Exponential Moving Average covariance in the series between the Index Constituent Level “ n ” and “ m ” shall be equal to the 63 calendar days Covariance(n,m) of the daily returns of the Index Constituent Level “ n ” and “ m ” immediately preceding Index Business Day $t-H+1$.
n, m	=	Each possible combination of two Index Constituent Level (i.e. $n = 1, \dots, M$; $m = 1, \dots, M$; including combinations where $n=m$)
dx_s	=	The difference between the daily return of Index Constituent Level “ n ” on day “ s ” and its respective Exponential Moving Average Return on day “ s ” : $X_{n,s} - EMA_{n,s}$
dy_s	=	The difference between the daily return of Index Constituent Level “ m ” on day “ s ” and its respective Exponential Moving Average Return on day “ s ” : $X_{m,s} - EMA_{m,s}$

$EMA_{m,s}$		The Exponential Moving Average Return of Eligible Market Constituent m on the Index Business Day s
$EMA_{n,s}$		The Exponential Moving Average Return of Eligible Market Constituent n on the Index Business Day s
$X_{m,s}$		$\frac{\text{Index Constituent Level}_{m,s}}{\text{Index Constituent Level}_{m,s-1}} - 1$
Index Constituent Level $_{m,s}$	=	Index Constituent Level of Eligible Market Constituent m as of Index Business Day s, provided that if Index Business Day s is a Disrupted Day for the Selected Constituent m, then Index Constituent Level $_{m,s}$ shall be deemed to be equal to the Index Constituent Level of the Selected Constituent m on the preceding Scheduled Trading Day for the Selected Constituent m that was not a Disrupted Day for the Selected Constituent m
Index Constituent Level $_{m,s-1}$	=	Index Constituent Level of Eligible Market Constituent m on the preceding Index Business Day s-1, provided that if Index Business Day s-1 is a Disrupted Day for the Selected Constituent m, then Index Constituent Level $_{m,s-1}$ shall be deemed to be equal to the Index Constituent Level of the Selected Constituent m on the preceding Scheduled Trading Day for the Selected Constituent m that was not a Disrupted Day for the Selected Constituent m
$X_{n,s}$		$\frac{\text{Index Constituent Level}_{n,s}}{\text{Index Constituent Level}_{n,s-1}} - 1$
Index Constituent Level $_{n,s}$	=	Index Constituent Level of Eligible Market Constituent n as of Index Business Day s, provided that if Index Business Day s is a Disrupted Day for the Selected Constituent n, then Index Constituent Level $_{n,s}$ shall be deemed to be equal to the Index Constituent Level of the Selected Constituent n on the preceding Scheduled Trading Day for the Selected Constituent m that was not a Disrupted Day for the Selected Constituent n
Index Constituent Level $_{n,s-1}$	=	Index Constituent Level of Eligible Market Constituent n on the preceding Index Business Day s-1, provided that if Index Business Day s-1 is a Disrupted Day for the Selected Constituent n, then Index Constituent Level $_{n,s-1}$ shall be deemed to be equal to the Index Constituent Level of the Selected Constituent n on the preceding Scheduled Trading Day for the Selected Constituent n that was not a Disrupted Day for the Selected Constituent n

The elements of the Expected Covariance Matrix are given by the products of (i) each of the Exponential Moving Average Covariance (n, m) and (ii) the annual factor 252.

(2) **Portfolio optimization routine to find the Theoretical Percentage Weights of the Constituents**

The optimization model is used to find the combination of Theoretical Percentage Weights for each Eligible Market Constituent that results in such portfolio having the maximum return (calculated using the Vector of Expected Returns) and having its volatility (calculated using the Expected Covariance Matrix) be as close as possible to, but equal to or less than, the Volatility Target.

Mathematically, an optimization model aims at solving the following non-linear optimization problem:

$$TPW_{OPT,i,r} = \operatorname{argmax} \left\{ \sum_{i=1}^M TPW_i \times EMA_{i,t_k} \right\}$$

where:

“**TPW_{OPT, i,r}**” means the optimal Theoretical Percentage Weights for each Eligible Market Constituent.

“**argmax**” is the set of of Theoretical Percentage Weights for each Eligible Market Constituent for which $\sum_{i=1}^M TPW_i \times EMA_{i,t_k}$ attains its largest value.

, subject to the following constraints (each a “**Constraint**” and together the “**Constraints**”):

(A) Theoretical Percentage Weights of Selected Constituents in Selected Portfolio must be an amount equal to 1:

$$\sum_{i=1}^M TPW_i = 1$$

(B) Theoretical Percentage Weights of each Selected Constituent is equal to or greater than zero and is equal to or less than the relevant “**cap**” in respect of such Selected Constituent as expressed according to the following formula:

$$0 \leq TPW_i \leq \text{cap}_i$$

where:

“**cap_i**” is the Maximum Percentage Weight in respect of each applicable Selected Constituent of (as set out in Part E (Data)).

(C) Theoretical Percentage Weights of the first three Eligible Market Constituents (S&P 500[®] Total Return Index, MSCI Daily Total Return Net EAFE USD Index[®], and MSCI Daily Total Return Net Emerging Markets USD Index) sum to less than or equal to 0.80:

$$\sum_{i=1}^3 TPW_i \leq 0.80$$

(D) broadly, the variance of the notional Selected Portfolio (determined using the variance of the Eligible Market Constituents, the covariance between Eligible Market Constituents (to measure interdependency) and their respective weightings within the Selected Portfolio (to measure impact of variance and covariance) should be equal to or less than the Volatility Target, as expressed according to the following formula:

$$\sum_{i=1}^M \left(TPW_i \times \left(\sum_{k=1}^M EMA_Cov_s(i, k) \times TPW_k \right) \right) \leq VT^2$$

where:

“EMA_Cov_s(i,k)” represent the elements (i,k) in the Expected Covariance Matrix; and

“VT” represents the Volatility Target on the relevant scheduled Selection Day.

In the event that no solution to the non-linear optimization problem is found that satisfies also this constraint (D), then the Index will seek to identify a Selected Portfolio that would have had the lowest historical volatility of all possible Eligible Market Portfolios, regardless of historical performance by calculating “Optimized Weights” according to the following formula:

$$\text{Optimized Weights} = TPW_{OPT} = TPW^{(b)}_{OPT} \times \frac{VT_t}{\sigma_{MIN}}$$

The weight of the Cash Constituent is determined as 1 minus the sum of the Optimized Weights.

Where σ_{MIN} is the minimum portfolio volatility which is computed as follows:

$$\sigma_{MIN} = \sqrt{\sum_{i=1}^M \left(TPW^{(b)}_{OPT,i} \times \left(\sum_{k=1}^M EMA_Cov_s(i, k) \times TPW^{(b)}_{OPT,k} \right) \right)}$$

and $TPW^{(b)}_{OPT,i}$ are the optimal weights of the portfolio corresponding to such minimum portfolio volatility, which are computed solving the following quadratic optimization problem :

$$TPW^{(b)}_{OPT} = \operatorname{argmin} \left\{ \sum_{i=1}^M \left(TPW_i \times \left(\sum_{k=1}^M EMA_Cov_s(i, k) \times TPW_k \right) \right) \right\}$$

subject to the same constraints (A), (B) and (C) above.

(3) Return constraint

The final Theoretical Percentage Weight for each Eligible Market Constituent within a Selected Portfolio is determined by testing whether the Expected Portfolio Return is greater than the Hurdle Rate.

The Expected Portfolio Return (“EPR”) is calculated using the Optimized Weights of the Eligible Market Constituents as follows:

$$EPR = \sum_{i=1}^M TPW_{OPT,i} \times EMA_{i,t}$$

The **Hurdle Rate** is equal to the 90 Day Treasury Bill Rate on the Selection Day. If EPR is greater than the Hurdle Rate, then the Theoretical Percentage Weights of the Eligible Market Constituents are set to be equal to the Optimized Weights, otherwise all Theoretical Percentage Weights of the Eligible Market Constituents shall be set to zero and the Theoretical Percentage Weight of the Cash Constituent shall be set to one hundred per cent.

6. ADDITIONAL REBALANCING EVENTS

6.1 Extraordinary Rebalancing Event

On each Index Business Day t which is not in a Rebalancing Period and is not between a scheduled Selection Day and Rebalancing Date, the Calculation Agent shall monitor the rolling 21 Index Business Days percentage return of the Core Index Level ending on the current Index Business Day. If the percentage return of the Core Index Level is below minus 8% (an “**Extraordinary Rebalancing Event**”) then a new rebalancing is triggered on the immediately following Index Business Day (an “**Extraordinary Rebalancing Start Day**”).

As of the Extraordinary Rebalancing Start Day the Theoretical Percentage Weights of the Eligible Market Constituents comprised in the Selected Portfolio shall be set to zero per cent (0%) and the Theoretical Percentage Weight of the Cash Constituent shall be set to one hundred per cent (100%), and the Eligible Market Constituents will be replaced with the Cash Constituent over an Extraordinary Rebalancing Period beginning on the Extraordinary Rebalancing Start Day. The “**Extraordinary Rebalancing Period**” is the period starting on, and including, the Extraordinary Rebalancing Start Day and ending on, and including, the fourth Index Business Day following an Extraordinary Rebalancing Start Day or, if earlier, the immediately following Selection Day.

If an Extraordinary Rebalancing Period consists of fewer than five Index Business Days because a Selection Day occurs prior to the day that would otherwise be the fifth Index Business Day in the Extraordinary Rebalancing Period, the rebalancing will nevertheless take effect at a rate of 20% each day until, and including, the Selection Day, after which the unit weights will remain unchanged until the beginning of the immediately following monthly Rebalancing Period.

If an Extraordinary Rebalancing Period ends on or before the Selection Day then the weights of the Eligible Market Constituents will remain zero until the next scheduled Rebalancing Date.

6.2 **Regulatory Events**

If either:

- (a) (i) the Index Sponsor or any of its Affiliates is required (or there is a reasonable likelihood that, within the next 30 Index Business Days, it will be required) by any applicable law or regulation or policy to dispose of any Hedge Position, or it is not permitted (or there is a reasonable likelihood that, within the next 30 Index Business Days, it will not be permitted) to hold, acquire, increase, decrease or dispose of any Hedge Position; and/or
- (b) due to any applicable law or regulation or policy, the Index Sponsor or the Index Calculation Agent is not permitted (or there is a reasonable likelihood that, within the next 30 Index Business Days, it will not be permitted) to continue to sponsor or calculate, as applicable, an index comprising an asset which is an Eligible Constituent of the Index,

(each, a “**Regulatory Event**”), then such Eligible Constituent (a “**Removed Constituent**”) will be removed from the Index on the date (an “**Additional Rebalancing Date**”) designated by the Index Calculation Agent or the Index Sponsor (in which case the Index Sponsor will notify the relevant date to the Index Calculation Agent).

On each Additional Rebalancing Date the Selected Constituents of the Index will be rebalanced in accordance with these Index Conditions as if such Additional Rebalancing Date were a Rebalancing Date. For this purpose, the related Selection Day will be the third Trading Day prior to the relevant Additional Rebalancing Date.

“**Hedge Position**” means any one or more of: (i) positions or contracts in, or relating to, securities, options, futures, other derivative contracts or foreign exchange, or (ii) other instruments, contracts, transactions or arrangements (howsoever described) that would be appropriate to hedge, individually or on a portfolio basis, any Index Linked Product.

7. REFERENCE INDEX ADJUSTMENT

7.1 **Successor Reference Index and Successor Reference Index Sponsor**

If a Reference Index is (i) not calculated and announced by the relevant Reference Index Sponsor but is calculated and announced by a successor sponsor acceptable to the Index Calculation Agent, or (ii) replaced

by a successor index using, in the determination of the Index Calculation Agent, the same or a substantially similar formula for and method of calculation as used in the calculation of that Reference Index, then in each case that index (the "**Successor Reference Index**") will be deemed to be the relevant Reference Index with effect from the date determined by the Index Calculation Agent who may make such adjustment(s) to the Index Conditions as it determines appropriate to account for such change.

7.2 Reference Index Modification and Reference Index Cancellation

If a Reference Index Sponsor announces that it will make a material change in the formula for or method of calculating a Reference Index or in any other way materially modifies that Reference Index (other than a modification prescribed in that formula or method to maintain that Reference Index in the event of changes in constituent stock and capitalization and other routine events) (a "**Reference Index Modification**") or permanently cancels that Reference Index and no Successor Reference Index exists (a "**Reference Index Cancellation**") and, together with a Reference Index Modification, each a "**Reference Index Adjustment Event**"), then:

- (i) the Index Calculation Agent may suspend the calculation, publication and dissemination of the Index and the Index Level until the first succeeding Index Business Day on which such event does not occur or continue to occur; and/or
- (ii) the Index Calculation Agent may select a replacement Reference Index that has substantially similar characteristics to the Reference Index that is being replaced, having regard to the manner in which such Reference Index is used in the calculation of the Index, in which case the Index Calculation Agent will (a) determine the effective date of such replacement, and (b) make such adjustment(s) to the Index Conditions as it determines appropriate to account for the effect on the Index of such replacement; and/or
- (iii) the Index Sponsor may discontinue and cancel the Index.

7.3 Cancellation of Reference Index license

If, in respect of a Reference Index, a license granted (if required) to the Index Sponsor and/or the Index Calculation Agent and/or any of their respective Affiliates, to use such Reference Index in connection with the Index is terminated, or any such entity's right to use such Reference Index in connection with calculating the Index is otherwise disputed, impaired or ceases for any reason, then:

- (i) the Index Calculation Agent may suspend the calculation, publication and dissemination of the Index and the Index Level until the first succeeding Index Business Day on which such event does not occur or continue to occur; and/or
- (ii) the Index Calculation Agent may select a replacement Reference Index that has substantially similar characteristics to the Reference Index that is being replaced, having regard to the manner in which such Reference Index is used in the calculation of the Index, in which case the Index Calculation Agent will (a) determine the effective date of such replacement, and (b) make such adjustment(s) to the Index Conditions as it determines appropriate to account for the effect on the Index of such replacement; and/or
- (iii) the Index Sponsor may discontinue and cancel the Index.

7.4 Corrections of published levels, prices, rates or values in respect of a Reference Index

If, in respect of a Reference Index, any level, price, rate or value (as applicable) in respect of such Reference Index or any related derivative or other related instrument, for any time on any day, which is announced by or on behalf of the person or entity responsible for such publication or announcement and which is used for any calculation or determination in respect of the Index, is subsequently corrected, and such correction (the "**Corrected Level**") is published by or on behalf of such person or entity within two Index Business Days after the original publication, then such Corrected Level shall be deemed to be the level, price, rate or value (as applicable) for such Reference Index, related derivative or other related instrument (as the case may be) for the relevant time on the relevant day and the Index Calculation Agent may, but shall not be obliged to, make appropriate adjustments to the Index and the Index Level for the relevant Index Business Day(s).

7.5 Reference Index Definitions

"**Reference Index**" means each Eligible Constituent set out in Part E (*Data*) below.

"**Reference Index Sponsor**" means, in respect of a Reference Index, the corporation or other entity which (a) is responsible for setting and reviewing the rules and procedures and the methods of calculation and adjustments, if any, related to such Reference Index and (b) announces (directly or through an agent) the level of such Reference Index.

Part E: Data

Data

(As at the Index Start Date)

The Index shall operate with reference to an Eligible Universe. This Part E sets out the particulars of each Eligible Constituent and certain elections and inputs relating to the calculation of the Index. The rules for adding Eligible Constituents to the Index as Selected Constituents and for removing Eligible Constituents from a Selected Portfolio are set out in Part D (*Calculation of the Index Level*).

1. Eligible Universe

Asset Class	Eligible Constituent	Electronic Page	Maximum Percentage Weight	
			Per Eligible Constituent	Per Asset Class
<i>Eligible Market Constituents</i>				
Global Equities	S&P 500 [®] Total Return Index	SPTR <Index>	50%	80%
	MSCI Daily Total Return Net EAFE USD Index [®]	NDDUEAFE <Index>	50%	
	MSCI Daily Total Return Net Emerging Markets USD Index	NDUEEGF <Index>	40%	
U.S. Treasuries	S&P U.S. 10-Year TIPS Index	SPBDU1ST <Index>	50%	100%
	S&P/BGCantor 7-10 Year U.S. Treasury Bond Total Return Index	SPBDU10T <Index>	25%	
	S&P/BGCantor 10-20 Year U.S. Treasury Bond Total Return Index	SPBDU20T <Index>	25%	
Commodities	S&P GSCI [™] Light Energy Total Return Index	SPGSLETR <Index>	20%	40%
	S&P GSCI [™] Gold Total Return Index	SPGGCTR <Index>	20%	
<i>Cash Constituent</i>				
Money Market	90 Day U.S. Treasury Bills	GB3 <Govt>	100%	100%

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2. Particulars in respect of each Eligible Constituent

i	Eligible Constituent	Type of Index	Exchange(s)	Related Exchange(s)	Replacement Criteria
1	S&P 500 [®] Total Return Index	Single Exchange Index	New York Stock Exchange and NASDAQ Stock Market, Inc.	All Exchanges	Exposure to large cap US equities
2	MSCI Daily Total Return Net EAFE USD Index [®]	Multiple Exchange Index	As specified in the definition of "Exchange" in the Share Index Constituent Schedule	Not Applicable	Exposure to equities from developed markets, excluding North America
3	MSCI Daily Total Return Net Emerging Markets USD Index	Multiple Exchange Index	As specified in the definition of "Exchange" in the Share Index Constituent Schedule	Not Applicable	Exposure to emerging market equities
4	S&P U.S. 10-Year TIPS Index	Not Applicable	Not Applicable	Not Applicable	Exposure to US TIPS
5	S&P/BGCantor 7-10 Year U.S. Treasury Bond Total Return Index	Not Applicable	Not Applicable	Not Applicable	Exposure to medium term US government
6	S&P/BGCantor 10-20 Year U.S. Treasury Bond Total Return Index	Not Applicable	Not Applicable	Not Applicable	Exposure to long term US government
7	S&P GSCI [™] Light Energy Total Return Index	Not Applicable	As specified in the definition of "Exchange" in the Commodity Index Constituent Schedule	Not Applicable	Exposure to all commodities excluding livestock
8	S&P GSCI [™] Gold Total Return Index	Not Applicable	As specified in the definition of "Exchange" in the Commodity Index Constituent Schedule	Not Applicable	Exposure to gold

9	90 Day U.S. Treasury Bills	Not Applicable	Not Applicable	Not Applicable	Not Applicable
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3. Additional data in respect of each Eligible Constituent

Eligible Constituent _i	Classification	Notional Transaction Cost	Notional Replication Cost per Annum
1	Share Index	0.03%	0.20%
2	Share Index	0.30%	0.20%
3	Share Index	0.70%	0.70%
4	Bond Index	0.10%	0.80%
5	Bond Index	0.05%	0.20%
6	Bond Index	0.05%	0.20%
7	Commodities Index	0.10%	0.20%
8	Commodities Index	0.20%	0.30%
9	Money Market	0.00%	0.00%

4. Adjustment Elections

	Scheduled Valuation Date		
	Rebalancing Date	Extraordinary Rebalancing Date	Selection Day
Adjustments (Scheduled Trading Days: "holidays"):	Move In Block	Move In Block	Look Back
Adjustments (Disrupted Days):	Value What You Can	Value What You Can	Look Back
Valuation Roll (Disrupted Days):	5	5	Not Applicable

5. Defined Terms

Extraordinary Rebalancing Date	Each Index Business Day in an Extraordinary Rebalancing Period, subject to adjustment in accordance with paragraph 4 (<i>Adjustment Elections</i>) above.
Extraordinary Rebalancing Period	Means, in respect of any Extraordinary Rebalancing Event, a period of five consecutive Index Business Days starting on, and including, an Extraordinary Rebalancing Start Day and ending on, and including, the sixth Index Business Day following such Extraordinary Rebalancing Event, in each case, subject to adjustment in accordance with paragraph 4 (<i>Adjustment Elections</i>) above.
Extraordinary Rebalancing Start Day	The Index Business Day immediately following the day on which an Extraordinary Rebalancing Event is deemed to have occurred.
Index Business Day:	Each day which is a day on which commercial banks and foreign exchange markets are open for general business (including dealings in foreign exchange and foreign exchange currency deposits) in London and New York.
Index Valuation Time:	In respect of an Index Business Day, as of 11.00 p.m. (London time) on such Index Business Day, or such later time that the Index Calculation Agent may determine with the consent of the Index Sponsor.
Rebalancing Date:	Each Index Business Day within a Rebalancing Period or Extraordinary Rebalancing Period, subject to adjustment in accordance with paragraph 4 (<i>Adjustment Elections</i>) above.
Rebalancing Period	Means: a) in respect of the scheduled Selection Day immediately

	<p>preceding the Index Start Date, the Index Start Date; or</p> <p>b) in respect of any scheduled Selection Day following the Index Start Date, a period of five consecutive Index Business Days starting on, and including, the second Index Business Day following that scheduled Selection Day and ending on, and including, the seventh Index Business Day following that Scheduled Selection Day,</p> <p>in each case, subject to adjustment in accordance with paragraph 4 (<i>Adjustment Elections</i>) above.</p>
Selected Constituent	The Eligible Constituents selected as of a Selection Day in accordance with paragraph 5 (<i>Selection of Constituents</i>) of Part D (Calculation of the Index Level) to be comprised within a Selected Portfolio for the purpose of determining the level of the Index.
Selection Day:	The day falling two scheduled Index Business Days prior to each Rebalancing Date.
Selected Portfolio	The hypothetical investment portfolio to be tracked by the Index for that month (subject to the occurrence of an Extraordinary Rebalancing Event) comprising Selected Constituents.
Scheduled Valuation Date:	Each Index Business Day.
Volatility Buffer	5%
Volatility Target	5%

Part F: Specific Risks

Specific Risks

This list of risk factors is not intended to be exhaustive. All persons should seek such advice as they consider necessary from their professional advisors, investment, legal, tax or otherwise, without reliance on the Index Sponsor, the Index Calculation Agent, any of their respective Affiliates or any of their respective directors, officers, employees, representatives, delegates and agents.

Please also refer to Section C (*General Risks*) of the Index General Conditions for a discussion of further risks arising in respect of the Index and the terms and conditions of such Index Linked Product. In the case of a prospectus or offering document which contains provisions under the heading “Risk Factors”, “Investment Considerations” or the equivalent, please refer to these provisions for a discussion of these consequences.

THE INDEX MAY NOT BE SUCCESSFUL AND MAY UNDERPERFORM ALTERNATIVE INVESTMENT STRATEGIES

There can be no assurance that the Index will achieve positive returns. The Index tracks the performance of a hypothetical, rules-based investment methodology that, once each month, selects a hypothetical investment portfolio (the Selected Portfolio) to track for the next month. The performance of the Index over that next month will depend on the performance of the Selected Portfolio over that time period, *minus* an excess return deduction, an index fee and notional costs, and subject to a volatility targeting feature that may adjust the Index’s exposure to the excess return performance of the Selected Portfolio on a daily basis in an attempt to maintain a 20-Day Realized Volatility of 5%. If the Selected Portfolio declines in value, the Index level will also decline. Even if the Selected Portfolio increases in value, the Index level will nevertheless decline if the excess return deduction, index fee and notional costs are greater than the increase in value of the Selected Portfolio. The performance of the Index may be less favorable than alternative investment strategies that could have been implemented, including an investment in a passive index fund.

THE HYPOTHETICAL INVESTMENT METHODOLOGY TRACKED BY THE INDEX MAY NOT PRODUCE FAVOURABLE RETURNS

Once each month, the Index selects as the Selected Portfolio to track for the next month the Eligible Market Portfolio that, out of all possible Eligible Market Portfolios, had the greatest historical performance without exceeding the Index’s target volatility of 5% (except as otherwise described below). The performance of the Index over the next month will then be based on the performance of that Selected Portfolio, *minus* an excess return deduction, an index fee and notional costs, and subject to a volatility targeting feature that may adjust the Index’s exposure to the excess return performance of the Selected Portfolio on a daily basis in an attempt to maintain a 20-Day Realized Volatility of 5%. This hypothetical investment methodology may not produce favorable returns for a number of reasons, including the following:

- ***Historical performance may be a poor indicator of future performance.*** A fundamental assumption of the Index is that the historical performance of the Eligible Market Portfolios, as measured by the Index, may be an accurate predictor of their future performance. Accordingly, each month, the Index seeks to select as the Selected Portfolio to track for the next month the Eligible Market Portfolio that had the greatest exponentially weighted moving average of daily returns over the relevant Look-Back Period, while having an exponentially weighted moving average volatility over the Look-Back Period not in excess of 5%. The Look-Back Period for each monthly Selection Day is the historical period of 252 Index Business Days (approximately one year) ending on that Selection Day.

However, the fact that the Selected Portfolio performed favorably over the relevant Look-Back Period does not mean that it will necessarily continue to perform favorably over the next month. Future market conditions may differ from past market conditions, and the conditions that may have caused the favorable performance over the Look-Back Period may no longer exist. Moreover, past appreciation may not necessarily be an indicator of future appreciation even if future market conditions do not differ materially from past market conditions. The efficient market hypothesis, a well-known theory in academic financial literature, states that the market is efficient and that current asset prices reflect all available relevant information. If true, the efficient market hypothesis implies that any perceived historical trend in the performance of any Eligible Market Portfolio should not be an accurate predictor of its future performance. If the past performance of the Selected Portfolio proves not to be an

accurate indicator of its actual performance over the next month, then the Selected Portfolio followed by the Index for any given month may, in hindsight, turn out to have been far from the optimal hypothetical investment portfolio for that month, and the Index may perform poorly.

By continually seeking to track the last year's optimal portfolio, the Index may perpetually "buy high". By the time the Index hypothetically invests in a Selected Portfolio each month, the Selected Portfolio may already have experienced significant appreciation, and the Index may therefore perpetually make hypothetical investments in portfolios when they are expensive, which may lead to poor returns.

- **Historical volatility may be a poor indicator of future volatility and risk.** The Index seeks to take on a defined and limited degree of expected risk by selecting as the Selected Portfolio an Eligible Market Portfolio with an expected risk that does not exceed a pre-defined level. The Index measures the expected risk of an Eligible Market Portfolio based on its historical volatility. However, there can be no assurance that the historical volatility of the Selected Portfolio will be indicative of its future volatility. As circumstances change, an Eligible Market Portfolio that had a relatively low volatility over the Look-Back Period may have significant volatility over the next month. Other potential measures of volatility might be more predictive of future volatility than historical volatility. For example, "implied volatility" derived from the prices of listed options on the Eligible Market Constituents would reflect current market expectations about future volatility and might prove to be a more accurate indicator of future volatility than historical volatility. As a result, the measure of expected risk used by the Index may be less accurate than other measures that could have been used.

Moreover, it is important to understand that, although the Index uses historical volatility as a measure of expected risk, historical volatility is **not** an indication of how likely it is that any Eligible Market Portfolio will decline over the next month. The fact that the Selected Portfolio may have had a historical volatility of 5% over the Look-Back Period does not mean that there is a 5% chance that the Selected Portfolio will decline over the next month. Volatility is simply a statistical measure of the degree of variability in daily returns over a given historical period. It is not possible to predict the likelihood of a future decline in the value of the Selected Portfolio. Even a Selected Portfolio with a low historical volatility may experience significant declines in the future.

- **The particular ways in which the Index measures historical performance and volatility may not accurately capture any trend in the performance and volatility of the Eligible Market Portfolios.** The Index uses a Look-Back Period of 252 Index Business Days, which is approximately one year, to measure the historical performance and volatility of the Eligible Market Portfolios. That time period may be too long, and performance earlier in the Look-Back Period may mask more recent trends in performance and volatility. Although the Index uses the exponentially weighted moving average of daily returns and volatility, which gives more weight to more recent performance, in an attempt to capture more recent trends, there can be no assurance that this will be successful.

Furthermore, it is important to understand what the exponentially weighted moving average of daily returns does, and does not, measure. The exponentially weighted moving average of daily returns is simply the average of daily returns of an Eligible Market Portfolio over the relevant Look-Back Period, where more recent daily returns have exponentially greater weight than daily returns earlier in the Look-Back Period. This measure is not a measure of total performance over the relevant Look-Back Period or any other period. The exponentially weighted moving average of daily returns could show positive historical performance even if the relevant Eligible Market Portfolio has declined overall from the beginning to the end of the Look-Back Period, or over any more recent period, and vice versa. Therefore, the exponentially weighted moving average of daily returns could indicate that an Eligible Market Portfolio is in a positive trend even if other measures would indicate a negative trend. If the Index fails to correctly identify the trend in the performance of the Eligible Market Portfolios, then the Selected Portfolio followed by the Index for any given month may, in hindsight, turn out to have been far from the optimal hypothetical investment portfolio for that month, and the Index may perform poorly.

In addition, the exponentially weighted moving average volatility used by the Index differs from other measures of historical volatility. Other ways of measuring the historical volatility of the Eligible Market Portfolios (for example, using the standard deviation of daily returns or using a different time period) might have yielded a historical volatility that is more predictive of future volatility than the measure used by the Index.

- **The Index may be subject to “whipsaws” in “choppy” markets.** Past performance is particularly likely to be a poor indicator of future performance in “choppy” markets, which are characterized by short-term volatility and the absence of consistent long-term performance trends. In such markets, strategies that use past performance as an indicator of future performance, such as that followed by the Index, are subject to “whipsaws,” which occur when the market reverses and does the opposite of what is indicated by past performance. In these market conditions, the Index will select a Selected Portfolio assuming a trend in one direction, only to have the trend reverse and move in the other direction. The Index may experience significant declines in such market conditions.
- **The excess return deduction, index fee and notional costs will adversely affect Index performance.** The Index is an “excess return” index, which means that, in calculating the performance of the Index, the daily performance of the Selected Portfolio tracked by the Index will be reduced by a notional funding rate equal to the federal funds effective rate. The federal funds effective rate is the volume-weighted average of interest rates (expressed as an annual rate) at which depository institutions lend balances at the Federal Reserve to other depository institutions overnight, and is reflective of the Federal Reserve’s then current monetary policy. Although the Federal Reserve has maintained the federal funds effective rate at relatively low levels in recent years, the Federal Reserve may change its monetary policy at any time. In the period since January 1, 2005, the federal funds effective rate has been as high as 5.41% per annum. The federal funds effective rate may return to or exceed that level in the future. If the Federal Reserve begins to raise interest rates (specifically, its federal funds target rate), or if interest rates otherwise rise, the federal funds effective rate will increase and the excess return performance of the Selected Portfolio (and, therefore, the performance of the Index) will be adversely affected.

In addition, an index fee of 0.50% per annum and two types of notional costs are deducted in the calculation of the Index. Notional transaction costs are deducted each time there is an increase in the unit weight of any Eligible Market Constituent in the Selected Portfolio, which may occur on any day in a monthly Rebalancing Period. Notional transaction costs are also deducted each time there is a change in the Index’s exposure (referred to as its Exposure) to the excess return performance of the Selected Portfolio as a result of the Index’s volatility targeting feature. The monthly rebalancing, and the potential for a change in the Index’s Exposure on a daily basis, may result in the more frequent incurrence of notional transaction costs (and therefore greater notional transaction costs) than if the Index’s hypothetical investment methodology involved less frequent rebalancings or changes in Exposure. In addition, notional exposure costs are deducted on a daily basis from the level of each Eligible Market Constituent included in the Selected Portfolio.

The excess return deduction, index fee and notional costs will place a drag on the performance of the Index, offsetting any appreciation of the Selected Portfolio, exacerbating any depreciation of the Selected Portfolio and causing the level of the Index to decline steadily if the value of the Selected Portfolio remains relatively constant. The Index will not appreciate unless the performance of the Selected Portfolio is sufficiently great to offset the negative effects of the excess return deduction, index fee and notional costs, and then only to the extent that the favorable performance of the Selected Portfolio is greater than the deducted amounts. As a result of these deductions, the level of the Index may decline even if the Selected Portfolio appreciates.

- **In certain circumstances, the Index will select as the Selected Portfolio for a given month the Eligible Market Portfolio with the lowest historical volatility, without regard to historical performance.** For any given month, if there is no Eligible Market Portfolio with a historical volatility that is less than or equal to 5%, the Selected Portfolio for that month will not be the Eligible Market Portfolio that maximizes historical performance for its level of risk, but rather will be the Eligible Market Portfolio with the lowest historical volatility, regardless of historical performance (and with a pro rata allocation to the Cash Constituent to reduce its historical volatility to 5%). In this circumstance, the Selected Portfolio would not be determined in a way that seeks to maximize expected returns given the volatility target, but instead would be determined in a manner designed to minimize historical volatility. The Selected Portfolio so chosen may have had poor historical performance and may continue to have poor performance in the future.
- **In certain circumstances, the Selected Portfolio will consist 100% of the Cash Constituent, and in these circumstances the Index is nearly certain to decline.** If the Eligible Market Portfolio that is otherwise identified as the Selected Portfolio for any given month has a historical performance that is less than the 90-day U.S. Treasury bill rate on the relevant monthly Selection Day, the Selected Portfolio will instead consist of a 100% allocation to the Cash Constituent. In addition, if an

Extraordinary Rebalancing Event occurs as a result of a decline of more than 8% in the value of the Selected Portfolio over any 21 Index Business Day period, the Eligible Market Constituents in the Selected Portfolio will be replaced with a 100% allocation to the Cash Constituent. Because the Selected Portfolio during the earlier part of any 21 Index Business Day period may have been different from the current Selected Portfolio, an Extraordinary Rebalancing Event may occur even when the current Selected Portfolio has not experienced so significant a decline over that period.

The Cash Constituent reflects an accrual at the 90-day U.S. Treasury bill rate. However, the excess return deduction will be at the federal funds effective rate. The federal funds effective rate is a “risky” rate, in that it represents the rate at which depository institutions lend balances to each other. By contrast, the 90-day U.S. Treasury bill rate is a “risk-free” rate, because it is a rate on an obligation of the United States government. Therefore, the federal funds effective rate is nearly certain to be, and historically has been, greater than the 90-day U.S. Treasury bill rate. As a result, the excess return deduction is nearly certain to be greater than the performance of the Cash Constituent, resulting in net negative Index performance. In addition, the index fee will be deducted, further reducing the Index performance. Therefore, at any time when the Index has 100% exposure to the Cash Constituent, the Index is nearly certain to decline.

One consequence of this is that the reallocation to the Cash Constituent as a result of an Extraordinary Rebalancing Event is nearly certain to lead to continuing declines in the level of the Index. The Index will continue to decline following an Extraordinary Rebalancing Event even in circumstances in which the original Selected Portfolio would have rebounded and recovered from earlier losses, so that the Index would have performed better had the reallocation into the Cash Constituent not occurred.

- ***The Index’s target volatility of 5% may result in Selected Portfolios with significant allocations to U.S. Treasuries, which may underperform alternative portfolios more heavily weighted toward equities and/or commodities.*** Each month, the Index will select as the Selected Portfolio an Eligible Market Portfolio with a historical volatility that does not exceed 5% (unless there is no such Eligible Market Portfolio, in which case the Index will select the Eligible Market Portfolio with the lowest historical volatility). You should understand that, by recent historical standards, a 5% volatility would be relatively low for a portfolio of equities or commodities, which means that a significant allocation to the U.S. Treasury asset class, which is typically less volatile than equities or commodities, may frequently be needed in order for a hypothetical investment portfolio to achieve a historical volatility that does not exceed 5%. Therefore, the 5% target volatility may tend to cause the Selected Portfolio to have a greater allocation to the U.S. Treasury asset class than it would if there were a higher target volatility. Moreover, although there is an 80% asset class cap on equities and a 40% asset cap on commodities, a Selected Portfolio may be 100% allocated to U.S. Treasuries. Although U.S. Treasuries are typically less volatile than equities and commodities, they may also have lower return potential. As a result, in bull markets for equities and/or commodities, a Selected Portfolio with a significant allocation to U.S. Treasuries may significantly underperform an alternative portfolio with a greater allocation to equities and/or commodities.

In addition, if the Selected Portfolio has a relatively high allocation to U.S. Treasuries, it will be particularly sensitive to factors that adversely affect the value of U.S. Treasury bonds, such as an increase in interest rates or inflation or declining perceptions of U.S. government credit quality. It is important to understand that a relatively low target volatility does not mean that the Index is less likely to decline than it would be if it had a higher target volatility. In fact, a low-volatility portfolio may decline in value even while a high-volatility portfolio appreciates. For example, in a bull market in equities that is accompanied by rising interest rates, a portfolio heavily weighted toward U.S. Treasuries might decline in value as a result of the rising interest rates, while a portfolio heavily weighted toward equities would appreciate.

- ***The Selected Portfolio may not be a diversified portfolio, and the Eligible Market Constituents in the Selected Portfolio may become correlated in decline, especially in times of financial stress.*** Although the Eligible Market Constituents cover a number of different asset classes and market sectors, there is no requirement that the Selected Portfolio be a diversified portfolio. The Selected Portfolio may have as much as a 100% allocation to the U.S. Treasury asset class and as much as an 80% allocation to the equities asset class at any time, and may consist of as few as only two Eligible Market Constituents. At any time when the Selected Portfolio is concentrated in any one asset class, it will be subject to the risks affecting that asset class on a concentrated basis. Moreover, even when the Selected Portfolio is allocated among a number of different asset classes, these asset classes may prove to be correlated with each other in decline, which means that they may all decline at the same

time. In that case, you would not receive any benefits from diversification. Especially in times of financial stress, previously uncorrelated asset classes may suddenly become correlated in decline, which may result in significant declines in the level of the Index.

- **The Selected Portfolio may be composed of Eligible Market Constituents in a number of different asset classes and market sectors, and they may offset each other.** Over any given period of time, some of the Eligible Market Constituents in the Selected Portfolio may appreciate and others may depreciate. The performance of the depreciating Eligible Market Constituents will offset the performance of any appreciating Eligible Market Constituents. In this circumstance, the performance of the Selected Portfolio overall will be lower than it would have been had the Selected Portfolio only consisted of the appreciating Eligible Market Constituents. The target volatility of 5% is likely to favor Selected Portfolios with a relatively low degree of historical correlation among its Eligible Market Constituents, because lower correlation among Eligible Market Constituents results in lower volatility overall for an Eligible Market Portfolio. If that historical relationship for the Eligible Market Constituents holds in the future, that may increase the likelihood that some Eligible Market Constituents in the Selected Portfolio will have less favorable performance that will significantly dampen more favorable performance by other Eligible Market Constituents in the Selected Portfolio.
- **The Index's volatility targeting feature may adversely affect Index performance.** In addition to selecting a Selected Portfolio with a historical volatility that does not exceed 5%, the Index seeks to maintain a 5% volatility by adjusting its exposure to the excess return performance of the Selected Portfolio on a daily basis. At any time when the 20-Day Realized Volatility of the excess return performance of the Selected Portfolio is greater than 5%, the Index will reduce its exposure to that performance (i.e., its Exposure) below 100%. The difference between the Exposure and 100% will be effectively uninvested and will not accrue any interest or other return. At any time when the Exposure is less than 100%, the Index will not fully participate in any appreciation in the excess return performance of the Selected Portfolio. Alternatively, at any time when 20-Day Realized Volatility is less than 5%, the Index will increase the Exposure to an amount greater than 100%, subject to a maximum Exposure of 120%. At any time when the Exposure is greater than 100%, the Index will participate on a leveraged basis in any decline in the excess return performance of the Selected Portfolio. Moreover, the Selected Portfolio during the earlier part of the relevant 20 Index Business Day period may be different than the current Selected Portfolio, and if the earlier Selected Portfolio was significantly more volatile than the current Selected Portfolio, the Index may calculate a high 20-Day Realized Volatility, resulting in low Exposure, even though the current Selected Portfolio may have much lower volatility.
- **The Index may fail to maintain a 5% volatility.** Although the Index aims to maintain a 20-Day Realized Volatility of 5%, there is no guarantee that it will successfully do so. There is a time lag associated with the Index's Exposure adjustments. Because realized volatility is measured over the period of 20 Index Business Days ending on the second Index Business Day prior to the current day, it may be some period of time before a recent increase in the volatility of the excess return performance of the Selected Portfolio is sufficiently reflected in the calculation of 20-Day Realized Volatility to cause a compensating adjustment in the Exposure. During the intervening period, if the increased volatility is associated with a significant decline in the value of the Selected Portfolio, the Index may in turn experience a significant decline without the reduction in exposure to the Selected Portfolio that the volatility targeting feature is intended to trigger. Moreover, the Selected Portfolio during the earlier part of the relevant 20 Index Business Day period may be different than the current Selected Portfolio, and if the earlier Selected Portfolio was significantly less volatile than the current Selected Portfolio, the Index may be slow to adjust to significant volatility in the current Selected Portfolio.
- **The Selected Portfolio may be composed of risky assets.** The Selected Portfolio may include Eligible Market Constituents in the equity, commodity and U.S. Treasury asset classes. Set forth below are some of the risks associated with the asset classes and market sectors represented by the Eligible Market Constituents.
 - **Risks associated with equities.** The Eligible Market Constituents in the equity asset class may include large-capitalization U.S. stocks, as well as stocks of companies in foreign developed and emerging markets. Equity indices may make up as much as 80% of the Selected Portfolio. Equities are risky assets and may be subject to significant declines.

The Selected Portfolio may have as much as an 80% allocation solely to international equities, and as much as a 40% allocation to emerging market equities. International equities, and especially emerging market equities, may be subject to greater volatility and heightened risks as compared to U.S. equities and other asset classes. In addition to the risk of declines in stock prices, international equities are subject to risks associated with currency exchange rate fluctuations. In general, if the U.S. dollar appreciates against the currencies in which international equities trade, the levels of the Eligible Market Constituents consisting of international equities would be expected to decline for that reason alone.

- o *Risks associated with commodities.* The Selected Portfolio may have up to a 40% allocation to commodity futures. Commodity futures prices tend to be highly volatile and difficult to predict and may be significantly influenced by actions of governments or speculators. The Eligible Market Constituents that track commodity futures prices are also subject to a phenomenon known as “negative roll yield”, which refers to the tendency of commodity futures prices to decline solely as a result of the passage of time in certain market conditions. Accordingly, even if spot prices for the underlying commodities remain stable, an Eligible Market Constituent that tracks the performance of futures contracts referencing the underlying commodities may tend to decline over time, and in this circumstance the spot prices of the underlying commodities would need to increase significantly in order for an Eligible Market Constituent tracking commodity futures to appreciate. Like equities, commodity futures are risky assets and may be subject to significant declines.

The Eligible Market Constituent that tracks the price of gold futures is subject to risks associated with a single asset, gold. The Selected Portfolio may have up to a 20% allocation to this Eligible Market Constituent alone. The price of gold may be highly volatile and subject to large and rapid declines. The price of gold has at times been inversely correlated with the strength or weakness of the U.S. dollar relative to other currencies. If the U.S. dollar generally strengthens relative to other currencies and all other conditions remain constant, the price of gold may be expected to decline. However, because many factors other than the value of the U.S. dollar affect the price of gold, the price of gold may decline even at a time when the value of the U.S. dollar is declining.

- o *Risks associated with U.S. Treasuries.* As discussed above, although U.S. Treasuries tend to be less volatile than equities and commodities, they are also subject to risks and may decline in value. If general interest rates rise, if inflation increases or if the perceived credit quality of the U.S. government deteriorates, U.S. Treasuries are likely to decline in value, perhaps significantly.

- ***There is a time lag between the selection of a Selected Portfolio and its inclusion in the Index.*** The Index identifies the allocation of Eligible Constituents in the Selected Portfolio and rebalances the Index to match that allocation on different days. The Selected Portfolio for a given month is selected two Index Business Days prior to the first Index Business Day of that month and then included in the Index gradually over a Rebalancing Period of five Index Business Days beginning on the first Index Business Day of that month. Sudden market movements may occur in the gap between a monthly Selection Day and the completion of the rebalancing and, while it might be desirable to select a different Selected Portfolio as a result of those market movements, this will not be done because it would involve a departure from the Index methodology.

THE INDEX MAY NOT BE AN EFFECTIVE WAY TO IMPLEMENT “MODERN PORTFOLIO THEORY”.

The Index selects a hypothetical investment portfolio to track for each month using certain concepts drawn from the “modern portfolio theory” approach to asset allocation. However, it is important to understand that the Index contains a number of features that are not found in modern portfolio theory or that are inconsistent with modern portfolio theory, and that the Index may not be an effective way to implement modern portfolio theory. For example:

- Modern portfolio theory does not prescribe the manner in which expected return or risk should be measured, nor does it specify whether 5% is an appropriate level of expected volatility to target. Therefore, although the historical measures of performance and volatility used by the Index and the 5% volatility target are key features of the Index, they cannot be said to be drawn from modern portfolio theory. Other investment methodologies using the same modern portfolio theory concepts, but that

determine expected return and risk in different ways or that accept a greater or lesser level of expected risk, may perform significantly better than the Index.

- There is no single way to implement the concepts of modern portfolio theory, and the approach reflected in the Index may not be as successful as other approaches to implementing modern portfolio theory. For example, modern portfolio theory does not necessarily suggest the Index's approach of maximizing expected returns without exceeding a pre-defined level of expected risk. One alternative approach would be to maximize the *ratio* of expected returns to expected risk within a defined range of expected risk. For example, if there are two portfolios, one with a 10% expected return and a 5% expected risk (Portfolio A) and one with a 9.8% expected return and a 2.5% expected risk (Portfolio B), the Index would select Portfolio A, because Portfolio A has a higher expected return than Portfolio B and its volatility did not exceed 5%. However, Portfolio B might be viewed as a more optimal portfolio, because although it had a slightly lower expected return than Portfolio A, it had a significantly lower volatility, and therefore a significantly higher ratio of expected return to expected risk. Therefore, the Selected Portfolio that the Index selects may not be the optimal portfolio under alternative approaches to implementing modern portfolio theory.
- Under modern portfolio theory, if the assumption is made that investors can lend or borrow at a risk-free rate, there is a single optimal investment portfolio of risky assets that all rational investors would select, regardless of risk tolerance (assuming identical views about expected return, volatility and correlation). All investors would hold the same risky portfolio and would differ only in the amount they would allocate between that risky portfolio and the risk-free asset, or in the amount that they would borrow at the risk-free rate in order to invest in the risky portfolio. An approach designed to implement this feature of modern portfolio theory would identify the optimal portfolio as the one that lies at the point of tangency between the efficient frontier and a line that meets the expected return axis at the risk-free rate, without a target volatility requirement and without seeking to maximize expected returns below a target volatility level. This approach would seek to achieve the target volatility only after the optimal portfolio is identified and would do so by adding either a lending or a borrowing component at the risk-free rate. The approach reflected in the Index, which imposes a target volatility requirement in the selection of the Selected Portfolio and does not reflect either lending or borrowing at the risk-free rate, is entirely different from this approach and will select an entirely different Selected Portfolio. Therefore, the Index does not reflect modern portfolio theory where the assumption is made that investors can lend or borrow at a risk-free rate. Although it may not be possible for most investors to borrow at a risk-free rate, there may be practical approaches that use concepts drawn from this approach to modern portfolio theory, and these approaches may be more successful, and more faithful to modern portfolio theory, than the approach reflected in the Index.
- The Index does not construct hypothetical investment portfolios from all assets that would be available to an investor, but only from the limited universe of Eligible Constituents. Although the Eligible Constituents cover a number of different asset classes, they include only a limited number of market sectors within those asset classes. For example, the equities asset class includes large-capitalization U.S. stocks but not mid- or small-capitalization U.S. stocks; the commodities asset class includes very limited exposure to energy commodities like oil or natural gas; and the only fixed income instruments that are included are selected U.S. Treasury bonds. Moreover, the Eligible Constituents exclude a number of major asset classes altogether, such as currencies and real estate. The Index might have achieved a better return if the universe of Eligible Constituents were more representative of the universe of assets available to an investor.
- The Index applies weighting constraints to the percentage weights that may be assigned to Eligible Market Constituents, which may result in the selection of a Selected Portfolio that is different from the hypothetical investment portfolio that would be selected in the absence of those constraints.
- If no Eligible Market Portfolio has a historical volatility that is less than or equal to 5%, the Selected Portfolio for any given month will not be selected pursuant to concepts drawn from modern portfolio theory, but instead will be the Minimum Volatility Portfolio. In addition, if the Selected Portfolio otherwise chosen has a historical performance below the 90-day U.S. Treasury bill rate, or if an Extraordinary Rebalancing Event occurs, the Selected Portfolio will be allocated 100% into the Cash Constituent.
- The Index's excess return deduction and the index fee will exert a drag on Index performance. Even if the Selected Portfolio proves to be the optimal portfolio under modern portfolio theory, the Index will always underperform the Selected Portfolio, perhaps significantly.

- Modern portfolio theory does not suggest monthly rebalancing or daily Exposure adjustments to maintain a constant volatility, both of which may have an adverse effect on Index performance as a result of the incurrence of notional transaction costs at the time of each rebalancing or adjustment. In addition, the Index's daily adjustment of Exposure may cause the Index to have more or less than 100% exposure to the excess return performance of the Selected Portfolio at any given time.

For these reasons, the Index may not be an effective way to implement modern portfolio theory and may underperform alternative strategies that could have implemented based on modern portfolio theory.

THE INDEX WILL BE CALCULATED PURSUANT TO A SET OF FIXED RULES AND WILL NOT BE ACTIVELY MANAGED. IF THE INDEX PERFORMS POORLY, THE INDEX SPONSOR WILL NOT CHANGE THE RULES IN AN ATTEMPT TO IMPROVE PERFORMANCE.

The Index tracks the performance of the hypothetical, rules-based methodology described under "Description of the Citi Market Pilot 5 Excess Return Index" below. The Index will not be actively managed. If the hypothetical, rules-based investment methodology tracked by the Index performs poorly, the Index Sponsor will not change the rules in an attempt to improve performance. The Index rules will remain unchanged, even if those rules might prove to be ill-suited to future market conditions.

THE INDEX HAS LIMITED ACTUAL PERFORMANCE INFORMATION.

The Index launched on March 2, 2015. Accordingly, the Index has limited actual performance data. Because the Index is of recent origin with limited performance history, an investment linked to the Index may involve a greater risk than an investment linked to one or more indices with an established record of performance. A longer history of actual performance may have provided more reliable information on which to assess the validity of the Index's hypothetical investment methodology. However, any historical performance of the Index is not an indication of how the Index will perform in the future.

HYPOTHETICAL BACK-TESTED PERFORMANCE INFORMATION IS SUBJECT TO SIGNIFICANT LIMITATIONS.

All information regarding the performance of the Index prior to March 2, 2015 is hypothetical and back-tested, as the Index did not exist prior to that time. It is important to understand that hypothetical back-tested Index performance information is subject to significant limitations, in addition to the fact that past performance is never a guarantee of future performance. In particular:

- The Index Sponsor developed the rules of the Index with the benefit of hindsight—that is, with the benefit of being able to evaluate how the Index rules would have caused the Index to perform had it existed during the hypothetical back-tested period. The fact that the Index generally appreciated over the hypothetical back-tested period may not therefore be an accurate or reliable indication of any fundamental aspect of the Index methodology.
- The hypothetical back-tested performance of the Index might look different if it covered a different historical period. The market conditions that existed during the historical period covered by the hypothetical back-tested Index performance information is not necessarily representative of the market conditions that will exist in the future.
- Prior to December 31, 2001, due to the unavailability of certain Eligible Market Constituents prior to that time, the back-tested performance of the Index has been calculated using proxies for certain of the Eligible Market Constituents, as discussed in more detail under "Description of the Citi Market Pilot 5 Excess Return Index—Hypothetical Back-Tested and Historical Index Performance Information" below. These proxies differed from the corresponding Eligible Market Constituents in certain respects, and as a result the back-tested Index performance information prior to December 31, 2001 may not reflect how the Index would have performed had the relevant Eligible Market Constituents been available during that time period.

It is impossible to predict whether the Index will rise or fall. The actual future performance of the Index may bear no relation to the historical or hypothetical back-tested levels of the Index.

INVESTORS IN ANY FINANCIAL INSTRUMENT LINKED TO THE INDEX WILL NOT HAVE ANY OWNERSHIP OR OTHER INTEREST IN THE ELIGIBLE CONSTITUENTS UNDERLYING THE INDEX.

The Selected Portfolio is described as a hypothetical investment portfolio because there is no actual portfolio of assets to which any investor is entitled or in which any investor has any ownership or other interest. The Index is merely a mathematical calculation that is performed by reference to hypothetical positions in the Eligible Constituents included in the Selected Portfolio and the other Index Rules.

THE INDEX CALCULATION AGENT IS OUR AFFILIATE, WHICH MAY GIVE RISE TO CONFLICTS OF INTEREST.

The Index Calculation Agent, which is also the Index Sponsor, is our affiliate. Although the Index is rules-based, there are certain circumstances in which the Index Calculation Agent may be required to exercise judgment in calculating the Index, including the following:

- If a Market Disruption Event occurs on a Rebalancing Date and the Rebalancing Date is postponed to the last day to which it may be postponed, and if the Market Disruption Event is still not resolved by that day, the Index Calculation Agent will be required to exercise discretion in calculating the level of each affected Eligible Market Constituent on that day.
- If an Eligible Market Constituent is removed from the Index as a result of the occurrence of a specified event, the Index Calculation Agent will be required to exercise discretion in determining what action to take in response to that removal, which may include selecting a replacement Eligible Market Constituent and determining any adjustments to the Index Rules that may be appropriate to account for the effect on the Index of that replacement.

In exercising these judgments, the Index Calculation Agent's status as our affiliate may cause its interests to be adverse to yours. The Index Calculation Agent is not your fiduciary and is not obligated to take your interests into account in calculating the Index. Any actions taken by the Index Calculation Agent in calculating the level of the Index could adversely affect the performance of the Index.

ADJUSTMENTS TO ANY OF THE ELIGIBLE MARKET CONSTITUENTS COULD ADVERSELY AFFECT THE LEVEL OF THE INDEX.

The sponsors of the Eligible Market Constituents may add, delete or substitute the components that underlie the Eligible Market Constituents or make other methodological changes to the Eligible Market Constituents that could result in an adverse effect on the performance of the Eligible Market Constituents. The sponsors of the Eligible Market Constituents are not involved with the Index in any way. In addition, the sponsors of the Eligible Market Constituents may discontinue or suspend calculation or publication of the Eligible Market Constituents at any time. Any of these actions could adversely affect the performance of the Index.

Part G : Constituent Disclaimers

Constituent Disclaimers

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Index General Conditions

1 April 2015

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Section A: Introduction

Introduction

This document constitutes the Index General Conditions applicable to each index (each, an “**Index**”) for which the applicable Index Methodology states that these Index General Conditions are to be applicable to it.

These Index General Conditions are made available by Citigroup Global Markets Limited in its capacity as the Index Sponsor.

These Index General Conditions may be amended from time to time without notice, and will be available from the Index Sponsor. See Section E (*Miscellaneous*) for a description of the circumstances in which a change to these Index General Conditions may be required.

RISKS

Any investment exposure to an Index created by an Index Linked Product gives rise to a number of risks. Please refer to Section C (*General Risks*) and to the applicable Index Methodology for a discussion of some of the risks to which such an investment exposure to the Index gives rise. The Index Conditions in respect of such Index do not describe all of the risks to which an investment in such Index Linked Product gives rise; please refer to the associated prospectus or offering document (however described) in respect of such Index Linked Product for a discussion of these risks.

PUBLICATION

The Index and the Index Level shall be announced and published as specified in the Index Methodology.

BASIC SCHEME OF THE INDEX CONDITIONS OF AN INDEX

The Index Conditions of an Index comprise these Index General Conditions and the applicable Index Methodology, which must be read together. Full information in respect of an Index is only available on the basis of the combination of these Index General Conditions and the applicable Index Methodology (each as amended from time to time).

In the case of any inconsistency between the applicable Index Methodology and these Index General Conditions, such applicable Index Methodology shall prevail.

The following paragraphs of this Section A are provided for information only, and in the case of any discrepancy between any such paragraph and any other provision of the Index Conditions, such other provision shall prevail.

The Index is a notional rules-based proprietary index which is made up of two or more Constituents. These Constituents are specified in the applicable Index Methodology. The Constituents comprising the Index from time to time may also be selected from an Eligible Universe, if an Eligible Universe is specified for the Index, in accordance with the rules set out in the applicable Index Methodology. The classification of each Constituent is also specified in the applicable Index Methodology, together with any other data necessary to calculate the Index Level of the Index from time to time.

The Index Level of the Index from time to time is calculated by the Index Calculation Agent with reference to the formulae and rules set out in the applicable Index Methodology. The applicable Index Methodology also contains a description of the strategy to which the Index is intended to give effect. The Index Level of the Index is calculated with reference to either the closing levels, prices, rates or values (as applicable) of each Constituent (i.e. Constituent Closing Levels), or intraday levels, prices, rates or values (as applicable) of each Constituent (i.e. Constituent Levels).

Standard detailed rules govern “valuation”, that is, how the Constituent Closing Level and the Constituent Level of each classification of Constituent are determined, broadly with reference to the levels, prices, rates or values (as applicable) in the relevant markets for that Constituent or for futures contracts and options contracts relating to such Constituent (such markets together, the “relevant markets”). Other standard rules apply to

Constituents which are themselves indices. These standard rules are set out in the various Constituent Schedules which are included in these Index General Conditions as necessary.

Although the Index Level of the Index on a particular day for which a valuation is required (i.e. a Scheduled Valuation Date) should reflect the Constituent Closing Level or the Constituent Level (as applicable) on that day of each Constituent contained in the Index, the relevant markets on that day may not be open or may be disrupted (or other difficulties may arise in respect of Constituents which are themselves indices, affecting the publication of the levels of these indices). The Constituent Schedule applicable to a Constituent defines the circumstances when the relevant markets for that Constituent are closed or disrupted.

Therefore it may not be possible to determine the Index Level of the Index on a Scheduled Valuation Date using Constituent Closing Levels or Constituent Levels (as applicable) for that day. Section B (*Valuations and Adjustments*) contains detailed rules which govern which particular Constituent Closing Levels or Constituent Levels (as applicable) are instead used, whether those for a preceding day or a succeeding day. Different rules require either looking back to the Constituent Closing Level or Constituent Level (as applicable) of a previous day, or postponing valuation to a day when the relevant markets are open or not disrupted. The applicable Index Methodology specifies which particular rules apply to the Index.

Certain events and circumstances may affect a Constituent, resulting in a change in that Constituent or the disappearance of that Constituent (i.e. Adjustment Events). The Constituent Schedule applicable to a Constituent defines these events and circumstances. Section B (*Valuations and Adjustments*) contains detailed rules which govern the adjustment of the Index to account for the effect on the Index of the occurrence of an Adjustment Event, or (if such an adjustment would not produce a commercially reasonable result) the replacement of the affected Constituent in the Index. Although any such adjustment or replacement is intended to account for the effect on the Index of the occurrence of the relevant Adjustment Event, any such adjustment or replacement may have an unforeseen effect on the Index and may have an adverse effect on the value of an Index Linked Product. Please see Section C (*General Risks*) for a discussion of the effect of these rules.

The terms and conditions of any Index Linked Product may contain provisions as to the consequences of certain events and circumstances. These events and circumstances may include any adjustment made to the Index or any replacement effected of any Constituent. These consequences may include the early termination of such Index Linked Product and the payment of an amount to reflect the valuation of such Index Linked Product at the time of such early termination. Depending on the terms and conditions of such Index Linked Product, an investor may receive back on such early termination less than the amount of the original investment. The Index Conditions do not include any such terms and conditions of such Index Linked Product. Please refer to the terms and conditions of such Index Linked Product.

Section B: Valuations and Adjustments

Valuations and Adjustments

1. CONSTITUENT CLOSING LEVEL OR CONSTITUENT LEVEL

The Constituent Closing Level or the Constituent Level (as applicable) of a Constituent on a Valuation Date shall be determined as specified in the Constituent Schedule applicable to such Constituent.

2. ADJUSTMENTS TO VALUATION DATES (SCHEDULED TRADING DAYS: "HOLIDAYS")

(a) "Look Back"

If "Look Back" is specified in the applicable Index Methodology and a Scheduled Valuation Date is not a Scheduled Trading Day for any Constituent, then:

- (i) the Valuation Date for each Constituent for which such Scheduled Valuation Date is a Scheduled Trading Day shall be such Scheduled Valuation Date; and
- (ii) the Valuation Date for each Constituent for which such Scheduled Valuation Date is not a Scheduled Trading Day shall be the first day immediately preceding such Scheduled Valuation Date which is a Scheduled Trading Day and not a Disrupted Day for such Constituent.

(b) "Move In Block"

If "Move In Block" is specified in the applicable Index Methodology and a Scheduled Valuation Date is not a Scheduled Trading Day for any Constituent, then such Valuation Date shall be the first day immediately following such Scheduled Valuation Date which is a Scheduled Trading Day for all Constituents.

(c) "Value What You Can"

If "Value What You Can" is specified in the applicable Index Methodology and a Scheduled Valuation Date is not a Scheduled Trading Day for any Constituent, then:

- (i) the Valuation Date for each Constituent for which such Scheduled Valuation Date is a Scheduled Trading Day shall be such Scheduled Valuation Date; and
- (ii) the Valuation Date for each Constituent for which such Scheduled Valuation Date is not a Scheduled Trading Day shall be the first day immediately following such Scheduled Valuation Date which is a Scheduled Trading Day for such Constituent.

(d) *Not postponing to a Disrupted Day*

If any day to which a Scheduled Valuation Date is postponed under paragraph 2(b) or 2(c) above is a Disrupted Day for the relevant Constituent, then paragraph 3 below shall apply.

3. ADJUSTMENTS TO VALUATION DATES (DISRUPTED DAYS)

(a) "Look Back"

If "Look Back" is specified in the applicable Index Methodology and a Scheduled Valuation Date is a Disrupted Day for any Constituent, then:

- (i) the Valuation Date for each Constituent for which such Scheduled Valuation Date is not a Disrupted Day shall be such Scheduled Valuation Date; and
- (ii) the Valuation Date for each Constituent for which such Scheduled Valuation Date is a Disrupted Day shall be the first day immediately preceding such Scheduled Valuation Date which is a Scheduled Trading Day and not a Disrupted Day for such Constituent.

(b) *“Move In Block”*

If “Move in Block” is specified in the applicable Index Methodology and a Scheduled Valuation Date is a Disrupted Day for any Constituent, then such Valuation Date shall be the earlier of (A) the first day immediately following such Scheduled Valuation Date which is a Scheduled Trading Day for all Constituents and not a Disrupted Day for any Constituent; and (B) the Scheduled Trading Day for all Constituents which is the Valuation Roll number of Scheduled Trading Days for all Constituents immediately following such Scheduled Valuation Date.

(c) *“Value What You Can”*

If “Value What You Can” is specified in the applicable Index Methodology and a Scheduled Valuation Date is a Disrupted Day for any Constituent, then:

- (i) the Valuation Date for each Constituent for which such Scheduled Valuation Date is not a Disrupted Day shall be such Scheduled Valuation Date; and
- (ii) the Valuation Date for each Constituent for which such Scheduled Valuation Date is a Disrupted Day shall be the earlier of (A) the first day immediately following such Scheduled Valuation Date which is a Scheduled Trading Day and not a Disrupted Day for such Constituent; and (B) the Scheduled Trading Day for such Constituent which is the Valuation Roll number of Scheduled Trading Days for such Constituent immediately following such Scheduled Valuation Date.

(d) *Postponing to a Disrupted Day*

If any day to which a Scheduled Valuation Date is postponed under paragraph 3(b) or 3(c) above is a Disrupted Day for the relevant Constituent, then (unless otherwise specified in the Constituent Schedule applicable to such Constituent) the Index Calculation Agent shall determine the Constituent Closing Level of such Constituent on such Valuation Date using its good faith estimate of the Constituent Closing Level of such Constituent at the Valuation Time (where relevant) on or for such day.

4. CORRECTIONS OF PUBLISHED OR ANNOUNCED LEVELS, PRICES, RATES OR VALUES

If a Correction Period is specified in respect of a Constituent, and in the event that the level, price, rate or value (as applicable) of such Constituent for any time on any day which is announced by or on behalf of the person or entity responsible for such publication or announcement and which is used for any calculation or determination in respect of the Index is subsequently corrected, and such correction (the **“Corrected Level”**) is published by or on behalf of such person or entity within such Correction Period for such Constituent after the original publication, then such Corrected Level shall be deemed to be the level, price, rate or value (as applicable) for such Constituent for the relevant time on the relevant day and the Index Calculation Agent may, but shall not be obliged to, revise the Index Level for such day.

Corrections published after the Correction Period after the original publication shall be disregarded.

For the avoidance of doubt, if a Correction Period is not specified in respect of a Constituent, then the preceding two paragraphs shall not apply in respect of such Constituent.

5. ADJUSTMENT EVENTS

Subject as provided in the applicable Index Methodology, if an Adjustment Event occurs in respect of any Constituent (the **“Affected Constituent”**), then the consequences of such Adjustment Event shall be as follows.

- (a) The Index Calculation Agent will effect as soon as reasonably practicable a Reweighting in respect of such Affected Constituent.

- (b) If the Index Calculation Agent determines that no such Reweighting it can make will produce a commercially reasonable result, then the Index Calculation Agent will effect as soon as reasonably practicable a Replacement of such Affected Constituent.

“Replacement” shall mean that the Index Calculation Agent will remove the Affected Constituent from the Index and either:

- (a) (if the Index is specified in the applicable Index Methodology to operate with reference to an Eligible Universe) replace the Affected Constituent with an Eligible Constituent selected in accordance with the relevant rules set out in the applicable Index Methodology; or
- (b) (if the Index is not specified in the applicable Index Methodology to operate with reference to an Eligible Universe) replace the Affected Constituent with a replacement Constituent selected in accordance with the Replacement Criteria specified in respect of such Constituent in the Constituent Schedule applicable to the Affected Constituent; or
- (c) (if either (i) the Index is not specified in the applicable Index Methodology to operate with reference to an Eligible Universe; or (ii) no Replacement Criteria are specified; or (iii) no such replacement can be made under sub-paragraph (a) or sub-paragraph (b) above; or (iv) the Index Calculation Agent determines that no such replacement it can make will produce a commercially reasonable result) replace the Affected Constituent with either (1) a notional exposure in accordance with the relevant rules specified in the applicable Index Methodology; or (2) (if no such rules are so specified) a replacement constituent (which shall be deemed to be a Constituent) which shall confer no investment exposure.

“Reweighting” shall mean that the Index Calculation Agent will revise the Weight attributed to the Affected Constituent to account for the economic effect on the Index of the relevant Adjustment Event. For the avoidance of doubt, the Weight attributed to the Affected Constituent may be zero.

In the case of either a Replacement or a Reweighting, the Index Calculation Agent will (a) make such adjustment to the calculation of the Index and the Index Level as it determines appropriate to account for the effect on the Index of any such Replacement or Reweighting (as applicable) that is made (including without limitation rebalancing the Index); and (b) determine the effective date of any such Replacement or Reweighting that is made.

6. SUSPENSION AND CANCELLATION

- (a) If any Index Business Day is a Disrupted Day for any Constituent, the Index Calculation Agent may suspend the calculation, publication and dissemination of the Index and the Index Level until the first succeeding Index Business Day which is not a Disrupted Day for any Constituent.
- (b) The Index Sponsor may discontinue and cancel the Index at any time and is under no obligation to continue, or procure the continuation of, the calculation, publication and dissemination of the Index Level.

Section C: General Risks

General Risks

1. INTRODUCTION

The Index Level may go down as well as up, depending on the performance of the Constituents and their effect on the strategy that the Index has been developed to reflect. There can be no assurance as to the future performance of the Index, and the Index Level on any day may not reflect either its past performance or its future performance. The strategy that the Index has been developed to reflect may not be successful, and other strategies using the Constituents or the Eligible Universe (as relevant) may perform better than the Index.

The Index represents the weighted value of its Constituents. The Index has been developed to be “investable”, but the methodology set out in the Index Conditions is quantitative, which means that the Index Level is determined according to the rules and the processes set out in the Index Conditions on a purely notional basis, without reference to any actual investment in the Index or any of its Constituents. The result of any such actual investment may be different to the performance of the Index. In particular, any notional fees or costs deducted in the calculation of the Index Level, and any proportionate amount included in the Index Level of any dividend, distribution or payment in respect of any Constituent, may be different from those arising in respect of any actual investment in any Constituent or any combination of Constituents.

Prospective investors in any Index Linked Product should be familiar with investments in the global financial and commodity markets, financial instruments and indices generally.

2. RISKS IN RESPECT OF THE CONSTITUENTS (INCLUDING MARKET RISK)

The performance of the Index is dependent on the performance of all of the Constituents contained in the Index.

Fluctuations in the level, price, rate or value (as applicable) of the Constituents contained in the Index from time to time will directly affect the Index Level. The extent to which fluctuations in the Constituent Closing Level or Constituent Level (as applicable) of a particular Constituent will affect the Index Level will, amongst other things, depend on the Weight attributed to that Constituent at the relevant time. Please refer to the applicable Index Methodology for a discussion of the strategy that the Index has been developed to reflect.

Please refer to the following paragraphs for a discussion of the particular general market risks arising in respect of each classification of Constituent.

Certain events and circumstances may affect a Constituent, resulting in a change in that Constituent or the disappearance of that Constituent (i.e. Adjustment Events). The Constituent Schedule applicable to a Constituent sets out the Adjustment Events which apply to such Constituent.

Please refer to Section 2(j) below for a discussion of the process that is followed following the occurrence of an Adjustment Event.

(a) *Commodity*

Prospective investors in an Index Linked Product linked to an Index containing a Commodity should be familiar with commodities generally. Movements in the price of a Commodity (which may consist of a commodity futures contract or a commodity option contract) may be subject to significant fluctuations which may not correlate with changes in interest rates, currencies or other indices.

Commodity markets (both spot and future) are highly volatile. Commodity markets are influenced by, among other things, (i) changing supply and demand; (ii) weather; (iii) governmental, agricultural, commercial and trade programs and policies introduced to influence commodity prices; (iv) global political and economic events; and (v) changes in interest rates. Moreover, investments in futures contracts and option contracts involve

additional risks including, without limitation, leverage (margin is usually a percentage of the face value of the contract and exposure can be nearly unlimited).

A holder of a commodity futures contract may find the position becomes illiquid because certain commodity exchanges limit fluctuations in the price of certain commodity futures contracts during a single day by regulations referred to as “daily price fluctuation limits” or “daily limits”. Under such daily limits, during a single trading day no trades may be executed at prices beyond the daily limits. Once the price of a commodity futures contract has increased or decreased by an amount equal to the daily limit, positions can be neither taken nor liquidated unless traders are willing to effect trades at or within the limit. This could prevent the holder from promptly liquidating unfavorable positions and subject the holder to substantial losses. The prices of various commodity futures contracts have occasionally exceeded the daily limit for several consecutive days with little or no trading. Similar occurrences could affect the Index Level of an Index containing a Commodity.

The trend in the Index Level of an Index containing a Commodity may not perfectly correlate with the trend in the price of the Commodity, as the use of futures contracts generally involves a rolling mechanism. This means that commodity futures contracts approaching delivery at a particular time are replaced with other commodity futures contracts which have a later delivery date, and the Index Level may not therefore fully reflect any rise or fall in the price of the Commodity.

In addition, commodity futures markets may exhibit a trend which differs significantly from that of the underlying commodity spot markets. The trend in the price of a commodity futures contract relative to the trend in the price of the underlying commodity is closely linked to the present and future level of production of the commodity or to the level of estimated natural reserves, particularly in the case of energy commodities. Moreover, the price of a commodity futures contract should not be considered an accurate prediction of a market price, since it also includes the so-called “carrying costs” (which are the costs of, for example, warehousing, insurance, transportation, etc.), which also contribute toward the determination of the price of commodity futures contracts. These factors, which directly influence commodity prices, substantially explain the imperfect correlation between commodity futures markets and underlying commodity spot markets.

(b) *Commodity Index*

Prospective investors in an Index Linked Product linked to an Index containing a Commodity Index should be familiar with commodity indices generally. The level of a Commodity Index is generally based on the value of commodities and/or other securities contained in the Commodity Index, and therefore the risks discussed under the heading “Commodity” above are also relevant. Global, financial and political developments, among other things, may have a material effect on the value and performance of the commodities and/or commodity futures contracts contained in a Commodity Index.

(c) *Depository Receipt*

Prospective investors in an Index Linked Product linked to an Index containing a Depository Receipt should be familiar with depository receipts generally. The value and price volatility of the Depository Receipts contained in an Index and of the stocks underlying such Depository Receipts must be considered. The value of the Depository Receipts and the underlying stocks may go down as well as up, and the value of the Depository Receipts and the underlying stocks on any date may not, respectively, reflect their performance in any prior period. There can be no assurance as to the future value of the Depository Receipts or the underlying stocks, or as to the continued existence of the Depository Receipts, the underlying stocks, the issuer of the Depository Receipts or the issuer of the underlying stocks.

(d) *ETF Share (exchange-traded fund)*

Prospective investors in an Index Linked Product linked to an Index containing an ETF Share should be familiar with exchange traded funds generally. The value and price volatility of ETF Shares contained in an Index must be considered. The value of ETF Shares may go down as well as up, and the value of the ETF Shares on any date may not reflect their performance in

any prior period. There can be no assurance as to the future value of the ETF Shares, or as to the continued existence of the ETF Shares.

Although ETF Shares are traded on an exchange and are therefore valued in a similar manner as a stock traded on an exchange, the Adjustment Events defined with respect to an ETF Share include certain events and circumstances which would be applicable to a fund.

(e) *FX Rate*

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

Movements in currency exchange rates may be subject to significant fluctuations which may not correlate with changes in interest rates or other indices.

Emerging market currencies may exhibit greater volatility and less certainty as to future levels than other currencies. Emerging market currencies are highly exposed to the risk of a currency crisis.

Currency exchange markets may be affected by complex economic and political factors, including government action to fix or support the value of a currency, or to impose exchange controls. These economic and political factors are independent of other market forces of supply and demand.

(f) *Inflation Index*

Prospective investors in an Index Linked Product linked to an Index containing an Inflation Index should be familiar with inflation indices generally.

Many economic and market factors may influence an Inflation Index (and therefore the Index Level of an Index containing an Inflation Index), including: (i) general economic, financial, political or regulatory conditions and/or events; (ii) fluctuations in the prices of various assets, goods, services and energy resources (including in response to the supply of any of them and the demand for any of them); and (iii) the level of inflation in the economy of the relevant country and expectations of inflation.

In particular, the level of an Inflation Index may be affected by factors unconnected with the financial markets.

(g) *Mutual Fund Interest*

Prospective investors in an Index Linked Product linked to an Index containing a Mutual Fund Interest should be familiar with mutual funds generally. The value and price volatility of a Mutual Fund Interest contained in an Index must be considered. The value of a Mutual Fund Interest may go down as well as up, and the value of a Mutual Fund Interest on any date may not reflect its performance in any prior period.

A mutual fund may trade and invest in a broad range of investments such as debt and equity securities, commodities and foreign exchange, and may enter into derivative transactions, including without limitation futures contracts and options contracts. The trading strategies of a mutual fund can be opaque. The trend in the Index Level of an Index containing a Mutual Fund Interest may not correlate with the trend in any market to which the relevant mutual fund creates an investment exposure.

The value of a Mutual Fund Interest may be affected by the performance of persons providing services to the relevant mutual fund, including the investment manager or the investment adviser to the mutual fund.

(h) *Share*

Prospective investors in an Index Linked Product linked to an Index containing a Share should be familiar with stocks generally. The value and price volatility of the Shares contained in an

Index must be considered. The value of the Shares may go down as well as up, and the value of the Shares on any date may not reflect their performance in any prior period. There can be no assurance as to the future value of the Shares, or as to the continued existence of the Shares or the issuer of the Shares.

(i) *Share Index*

Prospective investors in an Index Linked Product linked to an Index containing a Share Index should be familiar with stock indices generally. The level of a Share Index is based on the value of the shares contained in that Share Index, although prospective investors should note that the level of a Share Index at any time may not reflect the reinvestment yield on the shares included in that Share Index. Global economic, financial and political developments, among other things, may have a material effect on the value of the shares included in a Share Index and/or the performance of the Share Index.

Market volatility reflects the degree of instability and expected instability of the performance of a Share Index and the shares contained in that Share Index. The level of market volatility is largely determined by the prices for financial instruments supposed to protect investors against such market volatility. The prices of these financial instruments are determined by forces of supply and demand in the futures contracts, option contracts and derivative markets generally. These forces of supply and demand are themselves affected by factors such as actual market volatility, expected volatility, economic factors and speculation.

(j) *Process following the occurrence of an Adjustment Event*

Following the occurrence of an Adjustment Event in respect of a Constituent, the Index Calculation Agent will attempt to revise the Weight in the Index of the affected Constituent as it determines appropriate to account for the economic effect on the Index of such Adjustment Event.

If the Index Calculation Agent determines that no reweighting it can make under the preceding paragraph will produce a commercially reasonable result, then it will attempt to replace the affected Constituent with a suitable replacement which satisfies the relevant criteria (if any) specified in the applicable Constituent Schedule. If the Index is specified in the applicable Index Methodology to operate with reference to an Eligible Universe, then the replacement Constituent will be selected from the Constituents contained in such Eligible Universe. A commercially reasonable result will only be obtained if a reweighting preserves the ability of the Index to reflect the strategy that it is intended to reflect.

If either no replacement can be made under the preceding paragraph or if the Index Calculation Agent determines that no replacement it can make under the preceding paragraph will produce a commercially reasonable result, then the Index Calculation Agent will remove the affected Constituent from the Index and replace the affected Constituent with either a notional exposure in accordance with the relevant rules (if any) specified in the applicable Index Methodology or (if no such rules are specified) a Constituent which confers no investment exposure. A commercially reasonable result will only be obtained if a replacement preserves the ability of the Index to reflect the strategy that it is intended to reflect.

At any time, either a reweighting or a replacement, as discussed in the preceding paragraphs, may have an unforeseen effect on the Index. Assumptions as to the inclusion in the Index of a particular Constituent will no longer be valid if that Constituent is removed from the Index, whether temporarily or permanently.

The terms and conditions of any Index Linked Product may contain provisions as to the consequences of any such replacement or reweighting of a Constituent or discontinuation of the Index.

Any such reweighting, replacement or discontinuation of the Index may have an adverse effect on the value of such Index Linked Product.

Any such reweighting, replacement or discontinuation of the Index may (depending on the terms and conditions of such Index Linked Product) result in the early termination of such

Index Linked Product and the payment of an amount to reflect the valuation of such Index Linked Product at the time of such early termination. Depending on the terms and conditions of such Index Linked Product, an investor may receive back on such early termination less than the amount of the original investment.

Please refer to the terms and conditions of such Index Linked Product. In the case of a prospectus or offering document which contains provisions under the heading “Risk Factors”, “Investment Considerations” or the equivalent, please refer to these provisions for a discussion of these consequences.

3. NOTIONAL EXPOSURE

The Index creates a notional exposure to the Constituents and such notional exposure will only exist in the books and records of the Index Sponsor and the Index Calculation Agent.

(a) *No rights*

Investors in Index Linked Products (a) have no legal or beneficial ownership interest in any Constituent and therefore have no recourse to any Constituent; (b) have no right to take delivery of any Constituent; (c) have no voting rights with respect to any Constituent; (d) have no right to receive dividends, distributions or other payments with respect to any Constituent.

(b) *No offer*

Nothing in these Index General Conditions constitutes an offer to buy or to sell any Constituent or any other asset, commodity, contract or security (including without limitation any asset, contract, commodity or security included in any Constituent).

(c) *Reinvestment*

Whether or not the Index is a “total return index” and includes the notional reinvestment of amounts calculated by reference to any dividend, distribution or payment that would be received by a holder of a Constituent is specified in the applicable Index Methodology. If the Index is not a “total return index”, it will not include any such notional reinvestment.

4. NO INVOLVEMENT OF PERSONS CONNECTED WITH ANY CONSTITUENT

The Index does not create any obligation of any person connected with any Constituent (each such person, for the purposes of this paragraph, a “**Relevant Person**”), including without limitation the issuer of any Constituent which is a security, the sponsor or calculation agent of any Constituent which is itself an index, and the provider of any service (such as an investment adviser or an investment manager) to any Constituent which is a fund.

No Relevant Person has participated in the preparation of the Index Conditions or in the arrangement and offer of any Index Linked Product.

5. NO INVESTIGATION

Neither the Index Sponsor nor the Index Calculation Agent has made or will make any investigation or enquiry with respect to any Constituent, including with respect to any publicly-available information that is disclosed in the applicable Index Methodology with respect to any Constituent. Consequently there can be no assurance that all events have been disclosed which would affect the performance of the Index or the value of any Index Linked Product.

6. EFFECT OF FEES

The Index Level may include a deduction of notional fees, as described in the applicable Index Methodology. Any such deduction of notional fees will result in the Index underperforming a hypothetical investment portfolio from which no such deduction is made.

7. EFFECT OF NOTIONAL COSTS

The Index Level may include a deduction of notional costs (which may be referred to as a notional cost, charge, spread or similar term), as described in the applicable Index Methodology. Any such deduction of notional costs will result in the Index underperforming a hypothetical investment portfolio from which no such deduction is made.

8. DISRUPTION TO THE INDEX

Certain events may affect the calculation of the Index and the Index Level. These events, which are described elsewhere in the Index Conditions, may have consequences including:

- (a) the Index Calculation Agent following the relevant process described in Section B (Valuations and *Adjustments*);
- (b) the Index Calculation Agent exercising certain discretions conferred by the Index Conditions;
- (c) the Index Calculation Agent suspending the calculation, publication and dissemination of the Index and the Index Level;
- (d) the Index Sponsor making a modification or change to the Index Conditions; and
- (e) the Index Sponsor discontinuing and cancelling the Index.

Unless otherwise stated, the Index Sponsor has no obligation to inform any person of the result of any action taken on the occurrence of such events.

The occurrence or existence of Disrupted Days may also result in the calculation, publication and dissemination of the Index being postponed to a later time than as provided in the Index Conditions or as is customary of the Index.

9. INDEX SPONSOR AND INDEX CALCULATION AGENT

These Index General Conditions confer on the Index Sponsor and the Index Calculation Agent a degree of discretion in making certain determinations and calculations, for example in connection with the occurrence of disruptions and adjustments. Although each of the Index Sponsor and the Index Calculation Agent will act in good faith and in a commercially reasonable manner, the exercise of any such discretion may have an adverse effect on the Index Level and therefore may have an adverse effect on the value of any Index Linked Product.

Section D: Definitions

Definitions

References to the “**applicable Index Methodology**” are references to the Index Methodology relating to the relevant Index which together with these Index General Conditions completes the Index Conditions for such Index.

References to a “Section” shall be references to a section of these Index General Conditions.

References to a “Part” shall be references to a part of the applicable Index Methodology.

“**Adjustment Event**” shall, in respect of a Constituent, have the meaning given to it in the Constituent Schedule applicable to such Constituent.

“**Affected Constituent**” shall have the meaning given to it in Section B (*Valuations and Adjustments*).

“**Affiliate**” shall mean, in respect of a person, any entity controlled (directly or indirectly) by such person, any entity which controls (directly or indirectly) such person or any entity (directly or indirectly) under common control with such person. For this purpose, “control” of any person or entity shall mean the ownership or a majority of the voting power of such person or entity.

“**Amount**” shall have the meaning given to it in Section E (*Miscellaneous*).

“**Calculations**” shall have the meaning given to it in Section E (*Miscellaneous*).

“**Citi**” shall mean Citigroup Inc. and its Affiliates.

“**Classification**” shall mean, in respect of a Constituent, the classification assigned to it in the applicable Index Methodology.

“**Constituent**” shall mean each Constituent of the Index specified as such in, or determined in accordance with, the applicable Index Methodology and the Index General Conditions. Each Constituent is assigned an identifying number denoted as “i” (and the total number of Constituents shall be denoted as “n”), unless specified otherwise.

“**Constituent Closing Level**” shall, in respect of a Constituent, have the meaning given to it in the Constituent Schedule applicable to such Constituent.

“**Constituent Inclusion Date**” shall mean, in respect of a Constituent, the date with effect from which such Constituent is included in the Index.

“**Constituent Level**” shall, in respect of a Constituent, have the meaning given to it in the Constituent Schedule applicable to such Constituent.

“**Constituent Schedule**” shall mean, in respect of a Constituent, the schedule that is specified to be applicable to such Constituent as a result of the classification of such Constituent in the applicable Index Methodology.

“**Corrected Level**” shall have the meaning given to it in Section B (*Valuations and Adjustments*).

“**Correction Period**” shall mean, in respect of a Constituent, the period specified as such in the Constituent Schedule applicable to such Constituent.

“**Current Percentage Weight**” shall have the meaning given to it in the applicable Index Methodology.

“**Disrupted Day**” shall, in respect of a Constituent, have the meaning given to it in the Constituent Schedule applicable to such Constituent.

“**Electronic Page**” shall mean, in respect of a Constituent, (1) the electronic page or source specified for such Constituent in the applicable Index Methodology, or (2) if no such electronic page or source is so specified for such Constituent, such Bloomberg or Reuters page or other widely recognised source of financial data as the

Index Calculation Agent may determine appropriate, or (3) in any such case, any successor electronic page or source that has been designated by either (a) the sponsor of the original electronic page or source; or (b) the relevant information vendor or provider of the original electronic page or source; or (4) any alternative electronic page or source of financial data that may be designated by the Index Calculation Agent, provided that such page or source is widely recognised by participants in the relevant market.

“Eligible Constituent” shall mean (if the Index is specified in the applicable Index Methodology to operate with reference to an Eligible Universe) each constituent eligible for inclusion as a Constituent in the Index, specified as such and classified in the applicable Index Methodology.

“Eligible Universe” shall mean (if the Index is specified in the applicable Index Methodology to operate with reference to an Eligible Universe) all of the Eligible Constituents. The rules for adding Eligible Constituents to the Index as Constituents and for removing Constituents from the Index are set out in the applicable Index Methodology.

“Index Base Currency” shall mean the currency specified as such in the applicable Index Methodology.

“Index Business Day” shall have the meaning given to it in the applicable Index Methodology.

“Index Calculation Agent” shall mean the person specified as such in the applicable Index Methodology and appointed by the Index Sponsor, any successor to such person, or any alternative calculation agent appointed by the Index Sponsor.

“Index Conditions” shall mean, in respect of the Index, these Index General Conditions together with the applicable Index Methodology.

“Index Electronic Page” shall mean (1) the electronic page or source specified as such in Part B (*Key Information*) of the applicable Index Methodology, or (2) any successor electronic page or source that has been designated by either (a) the sponsor of the original electronic page or source; or (b) the relevant information vendor or provider of the original electronic page or source; or (3) any alternative electronic page or source designated by the Index Sponsor.

“Index Launch Date” shall mean the date specified as such in the applicable Index Methodology.

“Index Level” shall mean, in respect of an Index Business Day, the closing level of the Index as of the Index Valuation Time on such Index Business Day.

“Index Linked Product” shall mean any security, contract or other financial product the return on which is linked to the performance of the Index.

“Index Sponsor” shall mean the person specified as such in the applicable Index Methodology or any successor to or assignee of such person.

“Index Start Date” shall mean the date specified as such in the applicable Index Methodology.

“Index Start Level” shall mean the Index Level on the Index Start Date, as specified in the applicable Index Methodology.

“Index Valuation Time” have the meaning given to it in the applicable Index Methodology.

“Information” shall have the meaning given to it in Section E (*Miscellaneous*).

“Percentage Weight” shall have the meaning given to it in the applicable Index Methodology.

“Rebalancing Date” shall mean each date specified as such in, or determined in accordance with, the applicable Index Methodology.

“Rebalancing Period” means the period specified as such in the applicable Index Methodology.

“Replacement” shall have the meaning given to it in Section B (*Valuations and Adjustments*).

“**Replacement Criteria**” shall, in respect of a Constituent, have the meaning given to it in the Constituent Schedule applicable to such Constituent.

“**Reweighting**” shall have the meaning given to it in Section B (*Valuations and Adjustments*).

“**Scheduled Valuation Date**” shall mean each date specified as such in the applicable Index Methodology.

“**Selection Day**” shall mean each date specified as such in the applicable Index Methodology.

“**Theoretical Percentage Weight**” shall have the meaning given to it in the applicable Index Methodology.

“**Valuation Date**” shall mean each Scheduled Valuation Date as adjusted in accordance with Section B (*Valuations and Adjustments*).

“**Unit Weight**” shall have the meaning given to it in the applicable Index Methodology.

“**Valuation Roll**” shall mean the number specified as such in the applicable Index Methodology.

“**Weight**” shall mean Current Percentage Weight, Percentage Weight, Theoretical Percentage Weight and Unit Weight (as the case may be).

Section E: Miscellaneous

Miscellaneous

1. CALCULATIONS AND DETERMINATIONS

(a) *General*

The Index Calculation Agent will perform all calculations, determinations, rebalancings and adjustments (together, “**Calculations**”) in respect of the Index. Neither the Index Calculation Agent nor the Index Sponsor will have any responsibility for errors made in good faith or omissions in Calculations or other actions as provided in the Index Conditions.

The Calculations of the Index Calculation Agent shall be performed by it in accordance with the Index Conditions, acting in its sole, absolute and unfettered discretion, but in good faith and in a commercially reasonable manner (having regard in each case to the criteria stipulated in the Index Conditions and, where relevant, on the basis of information provided to or obtained by employees or officers of the Index Calculation Agent responsible for making relevant Calculations). All Calculations shall, in the absence of manifest error, be final, conclusive and binding on any user of the Index, including any holder of, or counterparty to, an Index Linked Product.

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

(b) *Rounding*

Subject as provided in the applicable Index Methodology, any amount, currency amount, level, percentage, price, rate or value (“**Amount**”) calculated by the Index Calculation Agent shall be rounded to such number of decimal points and in such manner as the Index Calculation Agent determines is appropriate, acting in a commercially reasonable manner.

(c) *Use of estimates*

The Index Calculation Agent will perform the Calculations described in the Index Conditions using the information, data sources or factors specified in these Index Conditions and any Amount (together, “**Information**”) and may perform any Calculation and any action required in respect of the Index Conditions in any sequence. However, in the event that the Index Calculation Agent is not able to obtain or use any necessary Information, then (after using reasonable endeavors and after applying any fallback provision specified in the Index Conditions in respect of the relevant Calculation) the Index Calculation Agent may, but shall not be obliged to, use its estimate (made in good faith and in a commercially reasonable manner) of the relevant Information in performing such Calculation, should the Index Calculation Agent determine that such estimate is reasonably necessary in order to give effect to any provision or to perform any Calculation necessary under the Index Conditions.

(d) *No verification of Information*

Although the Index Calculation Agent will obtain Information for inclusion in the Index or for use in performing any Calculation under the Index Conditions from sources that the Index Calculation Agent considers reliable (including databases maintained by the Index Calculation Agent or its Affiliates, and public sources such as Bloomberg and Reuters), the Index Calculation Agent will not publish or independently verify such Information.

(e) *Corrections*

Subject as provided in the applicable Index Methodology and any Correction Period specified,

if the Index Calculation Agent becomes aware that any Information used by it in connection with any Calculation under the Index Conditions has subsequently been corrected or adjusted, then the Index Calculation Agent may, but shall not be obliged to, use such corrected or adjusted Information and as a consequence make any further Calculation that it determines necessary or desirable in order to give effect to or to reflect such corrected or adjusted Information, including without limitation any redenomination, exchange or conversion of any currency into a successor currency.

(f) *Reliance*

In performing any Calculation under the Index Conditions, the Index Calculation Agent may rely upon the opinion of any person who appears to it as being competent to value any asset or instrument of any class, or to perform any other calculation or determination, by reason of any appropriate relevant professional qualification or experience.

(g) *Not acting as fiduciary or agent*

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

If through performing any such Calculation or other action the Index Calculation Agent or the Index Sponsor is rendered an agent or fiduciary of another person under applicable law, then (at the option of the Index Calculation Agent or the Index Sponsor, as relevant) the rights and obligations of the Index Calculation Agent or the Index Sponsor to perform such Calculation or other action may be suspended (or, if already performed, the application of such Calculation or other action may be suspended) until such time when such Calculation or other action can be performed either by the Index Calculation Agent or the Index Sponsor as principal and not as an agent or fiduciary or by an appropriate third party who is both willing and able to perform such Calculation or other action.

(h) *Dates and times of calculations*

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

2. CONFLICTS OF INTEREST

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

During the normal course of their business, the Index Sponsor, the Index Calculation Agent, any of their respective Affiliates, directors, officers, employees, representatives, delegates and agents (each, for the purposes of this Section E, a “**Relevant Person**”) may enter into, promote, offer or sell securities or contracts (whether or not structured) linked to the Index and/or any Constituent. Any Relevant Person may at any time (a) have long or short principal positions or actively trade (whether or not through making markets to its clients) positions in or relating to the Index or any Constituent; (b) invest in or engage in transactions with or on behalf of other persons relating to the Index and/or any Constituent; (c) undertake hedging transactions (for the purposes of any security or contract) which may adversely affect the level, price or rate or other factor underlying the Index and/or any Constituent; (d) have an investment banking or commercial relationship with the issuer of any Constituent and have access to information from any such issuer; or (e) publish research in respect of any Constituent or the issuer of any Constituent. Such activity may or may not affect the Index Level, but potential investors and counterparties should be aware that a conflict of interest may arise when a person acts in more than one capacity, and such conflict of interest may affect (whether in a positive manner or a negative manner) the Index Level.

3. DISCLAIMER

No Relevant Person makes any express or implied representation or warranty as to (a) the advisability of purchasing or entering into any Index Linked Product; (b) the levels of the Index at any particular date or time; (c) the results to be obtained from the use of the Index or any datum included in the Index Conditions for any purpose; or (d) any other matter. Each Relevant Person hereby expressly disclaims, to the fullest extent permitted by applicable law, all warranties of accuracy, completeness, merchantability or fitness for a particular purpose with respect to the Index and any information contained in the Index Conditions. No Relevant Person will have any liability (direct or indirect, special, punitive, consequential or otherwise) to any person even if notified of the possibility of damages.

The Index Conditions have been prepared solely for the purposes of information and nothing in the Index Conditions constitutes (a) an offer to buy or to sell any security or contract, to participate in any transaction or to adopt any investment strategy; or (b) legal, tax, regulatory, financial or accounting advice. Any decision to purchase any Index Linked Product should be based on the information contained in the associated prospectus or offering document (however described). In the case of a prospectus or offering document which contains provisions under the heading "Risk Factors", "Investment Considerations" or the equivalent, please refer to these provisions for a discussion of the factors that must be considered in connection with an investment in the security or contract described therein.

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

4. INTELLECTUAL PROPERTY

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

The Index is not in any way sponsored or promoted by any sponsor or issuer, as relevant, of any Constituent.

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Section F: Constituent Schedules

Constituent Schedule

SHARE INDEX

This Constituent Schedule shall apply to each Constituent classified in the applicable Index Methodology as a “Share Index”.

For the avoidance of doubt, defined terms used in this Constituent Schedule shall only apply in respect of an Index containing one or more Share Indices.

References to a “Paragraph” shall be references to a paragraph of this Constituent Schedule and references to a “Sub-paragraph” shall be references to a sub-paragraph of this Constituent Schedule.

1. VALUATION

(a) Closing valuations

“**Constituent Closing Level**” shall mean, in respect of a Share Index and a Valuation Date for such Share Index and unless otherwise specified in the applicable Index Methodology, the official closing level of such Share Index on such Valuation Date, as displayed on the applicable Electronic Page.

“**Valuation Time**” shall mean (i) in respect of a Single Exchange Index and a Scheduled Trading Day for such Single Exchange Index, the Scheduled Closing Time on the relevant Exchange on such Scheduled Trading Day; and (ii) in respect of a Multiple Exchange Index and a Scheduled Trading Day for such Multiple Exchange Index, (A) for the purposes of determining whether a Market Disruption Event has occurred: (x) in respect of any Component Security, the Scheduled Closing Time on the Exchange in respect of such Component Security; and (y) in respect of any futures contracts or options contracts on such Multiple Exchange Index, the close of trading on the relevant Related Exchange; and (B) in all other circumstances, the time when the official closing level of such Multiple Exchange Index is calculated and published by the relevant Share Index Sponsor.

(b) Intraday valuations

“**Constituent Level**” shall mean, in respect of a Share Index and a Valuation Time on a Valuation Date for such Share Index, the level of such Share Index at such Valuation Time on such Valuation Date, as displayed on the applicable Electronic Page.

“**Valuation Time**” shall mean, in respect of a Share Index and a Scheduled Trading Day for such Share Index, the time when the level of such Share Index is being determined during such Scheduled Trading Day.

2. DISRUPTION TO VALUATION

“**Disrupted Day**” shall mean, in respect of a Share Index, any Scheduled Trading Day for such Share Index on which a Market Disruption Event occurs.

(a) Single Exchange Index

“**Market Disruption Event**” shall mean, in respect of a Share Index which is a Single Exchange Index, the occurrence of any of the events set out below:

- (i) the relevant Share Index Sponsor fails to publish the level of such Share Index; or
- (ii) any relevant Exchange or any relevant Related Exchange fails to open for trading during its regular trading session; or

- (iii) the occurrence or existence at any time during the one hour period which ends at the relevant Valuation Time of any material suspension of or limitation imposed (whether by reason of movements in price exceeding permitted limits or otherwise) on the trading on (A) any relevant Exchange, of Component Securities which in aggregate comprise 20 per cent. or more of the level of such Share Index; or (B) any relevant Related Exchange, of futures contracts or options contracts relating to such Share Index; or
- (iv) the occurrence or existence at any time during the one hour period which ends at the relevant Valuation Time of any other event (other than an event described in Sub-paragraph (v) or Sub-paragraph (vi) of this definition) which materially disrupts or impairs the ability of market participants in general (A) (on any relevant Exchange) to effect transactions in or to obtain market values for Component Securities which in aggregate comprise 20 per cent. or more of the level of such Share Index; or (B) (on any relevant Related Exchange) to effect transactions in or to obtain market values for any futures contracts or options contracts relating to such Share Index; or
- (v) the closure (which has a material effect on the Index) on any Exchange Business Day of any relevant Exchange in respect of Component Securities which in aggregate comprise 20 per cent. or more of the level of such Share Index prior to its Scheduled Closing Time (unless such earlier closing time is announced by such Exchange at least one hour prior to the earlier of (A) the actual closing time for the regular trading session on such Exchange on such Exchange Business Day; and (B) the deadline for the submission of orders to be entered into such Exchange system for execution at the Scheduled Closing Time on such Exchange Business Day); or
- (vi) the closure (which has a material effect on the Index) on any Exchange Business Day of any relevant Related Exchange in respect of futures contracts or options contracts relating to such Share Index prior to its Scheduled Closing Time (unless such earlier closing time is announced by such Related Exchange at least one hour prior to the earlier of (A) the actual closing time for the regular trading session on such Related Exchange on such Exchange Business Day; and (B) the deadline for the submission of orders to be entered into such Related Exchange system for execution at the Scheduled Closing Time on such Exchange Business Day).

(b) *Multiple Exchange Index*

"Market Disruption Event" shall mean, in respect of a Share Index which is a Multiple Exchange Index, the occurrence of any of the events set out below:

- (i) the relevant Index Sponsor fails to publish the level of such Share Index; or
- (ii) any relevant Related Exchange fails to open for trading during its regular trading session; or
- (iii) the occurrence or existence at any time during the one hour period which ends at the relevant Valuation Time of any material suspension of or limitation imposed (whether by reason of movements in price exceeding permitted limits or otherwise) on the trading on (A) any relevant Exchange, of any Component Security of such Share Index, and the aggregate of all Component Securities so affected plus the X Percentage accounts for 20 per cent. or more of such Share Index; or (B) any relevant Related Exchange, of futures contracts or options contracts relating to such Share Index; or
- (iv) the occurrence or existence at any time during the one hour period which ends at the relevant Valuation Time of any other event (other than an event described in Sub-paragraph (v) or Sub-paragraph (vi) of this definition) which materially disrupts or impairs the ability of market participants in general (A) (on any relevant Exchange) to effect transactions in or to obtain market values for any Component Security of such Share Index, and the aggregate of all Component Securities so affected plus the X Percentage accounts for 20 per cent. or more of such Share Index; or (B) (on any relevant Related Exchange) to effect transactions in or to obtain market values for any futures contracts or options contracts relating to such Share Index; or
- (v) the closure (which has a material effect on the Index) on any Exchange Business Day of any relevant Exchange in respect of any Component Security of such Share Index prior to its

Scheduled Closing Time (unless such earlier closing time is announced by such Exchange at least one hour prior to the earlier of (A) the actual closing time for the regular trading session on such Exchange on such Exchange Business Day; and (B) the deadline for the submission of orders to be entered into such Exchange system for execution at the Scheduled Closing Time on such Exchange Business Day), and the aggregate of all Component Securities so affected plus the X Percentage accounts for 20 per cent. or more of such Share Index; or

- (vi) the closure (which has a material effect on the Index) on any Exchange Business Day of any relevant Related Exchange in respect of futures contracts or options contracts relating to such Share Index prior to its Scheduled Closing Time (unless such earlier closing time is announced by such Related Exchange at least one hour prior to the earlier of (A) the actual closing time for the regular trading session on such Related Exchange on such Exchange Business Day; and (B) the deadline for the submission of orders to be entered into such Related Exchange system for execution at the Scheduled Closing Time on such Exchange Business Day).

(c) *Determining whether or not a Market Disruption Event exists*

For the purposes of determining whether or not a Market Disruption Event exists in respect of a Share Index at any time, if an event giving rise to a Market Disruption Event occurs in respect of a Component Security included in such Share Index at that time, then the relevant percentage contribution of such Component Security to the level of such Share Index shall be based on a comparison of (i) the portion of the level of such Share Index attributable to such Component Security; and (ii) the overall level of such Share Index, either (A) in the case of a Single Exchange Index, immediately before the occurrence of such Market Disruption Event; or (B) in the case of a Multiple Exchange Index, using the applicable weightings as published by, or derived from data published by, the relevant Share Index Sponsor.

3. CORRECTIONS

“**Correction Period**” shall mean, in respect of a Share Index, two Index Business Days.

4. ADJUSTMENTS AND MODIFICATIONS AFFECTING SHARE INDICES

(a) *Successor Share Index and Successor Share Index Sponsor*

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

(b) *Share Index Modification and Share Index Cancellation*

If a Share Index Sponsor announces that it will make a material change in the formula for or method of calculating a Share Index or in any other way materially modifies that Share Index (other than a modification prescribed in that formula or method to maintain that Share Index in the event of changes in constituent stock and capitalization and other routine events) (a “**Share Index Modification**”) or permanently cancels that Share Index and no Successor Share Index exists (a “**Share Index Cancellation**”) and, together with a Share Index Modification, each a “**Share Index Adjustment Event**”), then:

- (iii) the Index Calculation Agent may suspend the calculation, publication and dissemination of the Index and the Index Level until the first succeeding Index Business Day on which such event does not occur or continue to occur; and/or
- (iv) the Index Calculation Agent may select a replacement Share Index that has substantially similar characteristics to the Share Index that is being replaced, having regard to the manner in which such Share Index is used in the calculation of the Index, in which case the Index

Calculation Agent will (a) determine the effective date of such replacement, and (b) make such adjustment(s) to the Index Conditions as it determines appropriate to account for the effect on the Index of such replacement; and/or

- (iii) the Index Sponsor may discontinue and cancel the Index.

5. REPLACEMENT CRITERIA

“**Replacement Criteria**” shall mean, in respect of a Share Index, the criteria (if any) specified as such in the applicable Index Methodology.

6. DEFINITIONS

“**Component Security**” shall mean, in respect of a Share Index, each share included in such Share Index.

“**Exchange**” shall mean (a) in respect of a Single Exchange Index, each exchange, trading system or quotation system specified as such in respect of such Single Exchange Index in the applicable Index Methodology or any successor to any such exchange, trading system or quotation system, or any substitute exchange, trading system or quotation system to which trading in the relevant Component Securities has temporarily relocated (PROVIDED THAT there is comparable liquidity relative to such Component Securities on such temporary substitute exchange, trading system or quotation system as on the original exchange, trading system or quotation system); and (b) in respect of a Multiple Exchange Index and each relevant Component Security, the exchange, trading system or quotation system on which each Component Security is principally traded.

“**Exchange Business Day**” shall mean (a) in respect of a Single Exchange Index, any Scheduled Trading Day for such Single Exchange Index on which each relevant Exchange and each relevant Related Exchange for such Single Exchange Index are open for trading during their respective regular trading sessions, notwithstanding any such Exchange or any such Related Exchange closing prior to its Scheduled Closing Time; and (b) in respect of a Multiple Exchange Index, any Scheduled Trading Day for such Multiple Exchange Index on which the relevant Share Index Sponsor publishes the level of such Multiple Exchange Index and on which each relevant Related Exchange for such Multiple Exchange Index is open for trading during its regular trading session, notwithstanding any relevant Exchange or Related Exchange closing prior to its Scheduled Closing Time.

“**Multiple Exchange Index**” shall mean each Share Index specified as such in the applicable Index Conditions.

“**Related Exchange**” shall mean, in respect of a Share Index and unless otherwise specified in the applicable Index Methodology, each exchange, trading system or quotation system in respect of futures contracts or options contracts relating to such Share Index or any successor to such exchange, trading system or quotation system, or any substitute exchange, trading system or quotation system to which trading in futures contracts or options contracts relating to such Share Index has temporarily relocated (PROVIDED THAT there is comparable liquidity relative to such futures contracts or options contracts relating to such Share Index on such temporary substitute exchange, trading system or quotation system as on the original exchange, trading system or quotation system). Where “All Exchanges” is specified in the applicable Index Methodology as the applicable Related Exchange in respect of a Share Index, then “**Related Exchange**” shall mean each exchange, trading system or quotation system where trading has a material effect on the overall market for futures contracts or options contracts relating to such Share Index.

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

“**Scheduled Trading Day**” shall mean (a) in respect of a Single Exchange Index, any day on which each relevant Exchange and each relevant Related Exchange for such Single Exchange Index is scheduled to be open for trading for their respective regular trading sessions; and (b) in respect of a Multiple Exchange Index, any day on which (i) the Share Index Sponsor in respect of such Multiple Exchange Index is scheduled to publish the level of such Multiple Exchange Index; and (ii) each relevant Related Exchange for such Multiple Exchange Index is scheduled to be open for trading for its regular trading session; and (iii) the X Percentage is no more than 20 per cent. of the relevant Component Securities.

“**Share Index**” shall mean each Constituent classified as such in the applicable Index Methodology.

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

“Single Exchange Index” shall mean each Share Index specified as such in the applicable Index Methodology.

“X Percentage” shall mean, in respect of a Multiple Exchange Index and any day, the percentage of relevant Component Securities which are scheduled to be unavailable for trading on any relevant Exchange on such day by virtue of that day not being a day on which such relevant Exchange is scheduled to be open for trading during its regular trading session. For the purposes of determining the X Percentage in respect of a Multiple Exchange Index, the relevant percentage of a Component Security unavailable for trading shall be based on a comparison of (a) the portion of the level of such Multiple Exchange Index attributable to such Component Security; and (b) the overall level of such Multiple Exchange Index, in each case using the official opening weightings as published by the relevant Share Index Sponsor as part of the market “opening data”.

Constituent Schedule

COMMODITY INDEX

This Constituent Schedule shall apply to each Constituent classified in the applicable Index Methodology as a “Commodity Index”.

For the avoidance of doubt, defined terms used in this Constituent Schedule shall only apply in respect of an Index containing one or more Commodity Indices.

References to a “Paragraph” shall be references to a paragraph of this Constituent Schedule and references to a “Sub-paragraph” shall be references to a sub-paragraph of this Constituent Schedule.

1. VALUATION

(a) Closing valuations

“**Constituent Closing Level**” shall mean, in respect of a Commodity Index and a Valuation Date for such Commodity Index, and unless otherwise specified in the applicable Index Methodology, the official closing level of such Commodity Index on such Valuation Date (or, where the level of such Commodity Index is only published once a day, the level of such Commodity Index for such Valuation Date), as displayed on the applicable Electronic Page.

“**Valuation Time**” shall mean, in respect of a Commodity Index, a Constituent Closing Level and a Scheduled Trading Day for such Commodity Index, either (i) the Scheduled Closing Time on the relevant Exchange on such Scheduled Trading Day; or (ii) where the level of such Commodity Index is only published once a day (A) for the purposes of determining whether a Market Disruption Event has occurred: (x) in respect of any Component, the time at which such Component is valued for the purposes of determining the level of such Commodity Index for the relevant day; and (y) in respect of any futures contracts or options contracts relating to such Commodity Index, the close of trading on the relevant Related Exchange; and (B) in all other circumstances, the time when the official closing level of such Commodity Index for such day is calculated and published by the relevant Commodity Index Sponsor.

(b) Intraday valuations

“**Constituent Level**” shall mean, in respect of a Commodity Index and a Valuation Time on a Valuation Date for such Commodity Index, the level of such Commodity Index at such time on such Valuation Date, as displayed on the applicable Electronic Page.

“**Valuation Time**” shall mean, in respect of a Commodity Index and a Scheduled Trading Day for such Commodity Index, the time when the level of such Commodity Index is being determined during such Scheduled Trading Day.

2. DISRUPTION TO VALUATION

“**Disrupted Day**” shall mean, in respect of a Commodity Index, any Scheduled Trading Day for such Commodity Index on which a Market Disruption Event occurs.

“**Market Disruption Event**” shall mean, in respect of a Commodity Index, the occurrence of any of the events set out below:

- (i) the relevant Commodity Index Sponsor fails to publish the level of such Commodity Index; or
- (ii) any relevant Exchange or any relevant Related Exchange fails to open for trading during its regular trading session; or

- (iii) the occurrence or existence at any time during the one hour period which ends at the relevant Valuation Time of any material suspension of or limitation imposed (whether by reason of movements in price exceeding permitted limits or otherwise) on the trading on (i) any relevant Exchange, of Components which in aggregate comprise 20 per cent. or more of the level of such Commodity Index; or (ii) any relevant Related Exchange, of futures contracts or options contracts relating to such Commodity Index; or
- (iv) the occurrence or existence at any time during the one hour period which ends at the relevant Valuation Time of any other event (other than an event described in Sub-paragraph (e) or Sub-paragraph (f) of this definition) which materially disrupts or impairs the ability of market participants in general (i) (on any relevant Exchange) to effect transactions in or to obtain market values for Components which in aggregate comprise 20 per cent. or more of the level of such Commodity Index; or (ii) (on any relevant Related Exchange) to effect transactions in or to obtain market values for futures contracts or options contracts relating to such Commodity Index; or
- (v) the closure (which has a material effect on the Index) on any Exchange Business Day of any relevant Exchange in respect of Components which in aggregate comprise 20 per cent. or more of the level of such Commodity Index prior to its Scheduled Closing Time (unless such earlier closing time is announced by such Exchange at least one hour prior to the earlier of (i) the actual closing time for the regular trading session on such Exchange on such Exchange Business Day; and (ii) the deadline for the submission of orders to be entered into such Exchange system for execution at the Scheduled Closing Time on such Exchange Business Day); or
- (vi) the closure (which has a material effect on the Index) on any Exchange Business Day of any relevant Related Exchange in respect of futures contracts or options contracts relating to such Commodity Index prior to its Scheduled Closing Time (unless such earlier closing time is announced by such Related Exchange at least one hour prior to the earlier of (i) the actual closing time for the regular trading session on such Related Exchange on such Exchange Business Day; and (ii) the deadline for the submission of orders to be entered into such Related Exchange system for execution at the Scheduled Closing Time on such Exchange Business Day).

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

3. CORRECTIONS

“**Correction Period**” shall mean, in respect of a Commodity Index, 30 calendar days.

4. ADJUSTMENTS AND MODIFICATIONS AFFECTING COMMODITY INDICES

(a) *Successor Commodity Index and Successor Commodity Index Sponsor*

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

(b) *Commodity Index Modification and Commodity Index Cancellation*

If a Commodity Index Sponsor announces that it will make a material change in the formula for or method of calculating a Commodity Index or in any other way materially modifies that Commodity Index (other than a modification prescribed in that formula or method to maintain that Commodity Index in the event of changes in constituent stock and capitalization and other routine events) (a “**Commodity Index Modification**”) or permanently cancels that Commodity Index and no Successor Commodity Index exists (a “**Commodity Index Cancellation**” and, together with a Commodity Index Modification, each a “**Commodity Index Adjustment Event**”), then:

- (i) the Index Calculation Agent may suspend the calculation, publication and dissemination of the Index and the Index Level until the first succeeding Index Business Day on which such event does not occur or continue to occur; and/or
- (ii) the Index Calculation Agent may select a replacement Commodity Index that has substantially similar characteristics to the Commodity Index that is being replaced, having regard to the manner in which such Commodity Index is used in the calculation of the Index, in which case the Index Calculation Agent will (a) determine the effective date of such replacement, and (b) make such adjustment(s) to the Index Conditions as it determines appropriate to account for the effect on the Index of such replacement; and/or
- (iii) the Index Sponsor may discontinue and cancel the Index.

5. **REPLACEMENT CRITERIA**

“**Replacement Criteria**” shall mean, in respect of a Commodity Index, the criteria (if any) specified as such in the applicable Index Methodology.

6. **DEFINITIONS**

“**Commodity Index**” shall mean each Constituent classified as such in the applicable Index Methodology.

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

“**Component**” shall mean, in respect of a Commodity Index, each component included in such Commodity Index.

“**Exchange**” shall mean, in respect of a Commodity Index and each relevant Component, and unless otherwise specified in the applicable Index Methodology, the primary exchange, trading system or quotation system in respect of such Component or any successor to such exchange, trading system or quotation system, or any substitute exchange, trading system or quotation system to which trading in such Component has temporarily relocated (PROVIDED THAT there is comparable liquidity relative to such Component on such temporary exchange, trading system or quotation system as on the original exchange, trading system or quotation system).

“**Exchange Business Day**” shall mean, in respect of a Commodity Index, any Scheduled Trading Day for such Commodity Index on which the relevant Commodity Index Sponsor publishes the level of such Commodity Index.

“**Related Exchange**” shall mean, in respect of a Commodity Index, and unless otherwise specified in the applicable Index Methodology, each exchange, trading system or quotation system in respect of futures contracts or options contracts relating to such Commodity Index or any successor to such exchange, trading system or quotation system, or any substitute exchange, trading system or quotation system to which trading in futures contracts or options contracts relating to such Commodity Index has temporarily relocated (PROVIDED THAT there is comparable liquidity relative to such futures contracts or options contracts relating to such Commodity Index on such temporary substitute exchange, trading system or quotation system as on the original exchange, trading system or quotation system). Where “All Exchanges” is specified in the applicable Index Methodology as the applicable Related Exchange

in respect of a Commodity Index, then “**Related Exchange**” shall mean each exchange, trading system or quotation system where trading has a material effect on the overall market for futures contracts or options contracts relating to such Commodity Index.

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

“**Scheduled Trading Day**” shall mean, in respect of a Commodity Index, any day on which the Commodity Index Sponsor in respect of such Commodity Index is scheduled to publish the level of such Commodity Index.

Constituent Schedule

BOND INDEX

This Constituent Schedule shall apply to each Constituent classified in the applicable Index Methodology as a “Bond Index”.

For the avoidance of doubt, defined terms used in this Constituent Schedule shall only apply in respect of an Index containing one or more Bond Indices.

References to a “Paragraph” shall be references to a paragraph of this Constituent Schedule and references to a “Sub-paragraph” shall be references to a sub-paragraph of this Constituent Schedule.

1. VALUATION

(a) Closing valuations

“**Constituent Closing Level**” shall mean, in respect of a Bond Index and a Valuation Date for such Bond Index and unless otherwise specified in the applicable Index Methodology, the official closing level of such Bond Index on such Valuation Date, as displayed on the applicable Electronic Page.

“**Valuation Time**” shall mean, in respect of a Bond Index and a Scheduled Trading Day for such Bond Index, the time at which the official closing level of such Bond Index is calculated and published by the relevant Bond Index Sponsor.

(b) Intraday valuations

“**Constituent Level**” shall mean, in respect of a Bond Index and a Valuation Time on a Valuation Date for such Bond Index, the level of such Bond Index at such Valuation Time on such Valuation Date, as displayed on the applicable Electronic Page.

“**Valuation Time**” shall mean, in respect of a Bond Index and a Scheduled Trading Day for such Bond Index, the time when the level of such Bond Index is being determined during such Scheduled Trading Day.

2. DISRUPTION TO VALUATION

“**Disrupted Day**” shall mean, in respect of a Bond Index, any Scheduled Trading Day for such Bond Index on which a Market Disruption Event occurs.

“**Market Disruption Event**” shall mean, in respect of a Bond Index, the occurrence of any of the events set out below:

- (i) the relevant Bond Index Sponsor fails to publish the level of such Bond Index; or
- (ii) the occurrence or existence at any time on any Scheduled Trading Day for such Bond Index of any event, or market conditions, which materially disrupts or impairs the ability of market participants in general to acquire, dispose of or otherwise effect transactions in, or to obtain market values for, Component Securities which in aggregate comprise 20 per cent. or more of the level of such Bond Index; or
- (iii) the occurrence or existence at any time on any Scheduled Trading Day for such Bond Index of any event, or market conditions, which materially reduces the liquidity in Component Securities which in aggregate comprise 20 per cent. or more of the level of such Bond Index; or
- (iv) a general moratorium is declared in respect of bond trading or general banking activities in any of the jurisdictions in which the Component Securities of such Bond Index are primarily traded.

For the purposes of determining whether or not a Market Disruption Event exists in respect of a Bond Index at any time, if an event giving rise to a Market Disruption Event occurs in respect of a Component Security included in such Bond Index at that time, then the relevant percentage contribution of such Component Security to the level of such Bond Index shall be based on a comparison of (i) the portion of the level of such Bond Index attributable to such Component Security; and (ii) the overall level of such Bond Index, using the applicable weightings as published by, or derived from data published by, the relevant Bond Index Sponsor.

3. CORRECTIONS

“**Correction Period**” shall mean, in respect of a Bond Index, two Index Business Days.

4. ADJUSTMENTS AND MODIFICATIONS AFFECTING BOND INDICES

(a) *Successor Bond Index and Successor Bond Index Sponsor*

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

(b) *Bond Index Modification and Bond Index Cancellation*

If a Bond Index Sponsor announces that it will make a material change in the formula for or method of calculating a Bond Index or in any other way materially modifies that Bond Index (other than a modification prescribed in that formula or method to maintain that Bond Index in the event of changes in constituent stock and capitalization and other routine events) (a “**Bond Index Modification**”) or permanently cancels that Bond Index and no Successor Bond Index exists (a “**Bond Index Cancellation**”) and, together with a Bond Index Modification, each a “**Bond Index Adjustment Event**”), then:

- (i) the Index Calculation Agent may suspend the calculation, publication and dissemination of the Index and the Index Level until the first succeeding Index Business Day on which such event does not occur or continue to occur; and/or
- (ii) the Index Calculation Agent may select a replacement Bond Index that has substantially similar characteristics to the Bond Index that is being replaced, having regard to the manner in which such Bond Index is used in the calculation of the Index, in which case the Index Calculation Agent will (a) determine the effective date of such replacement, and (b) make such adjustment(s) to the Index Conditions as it determines appropriate to account for the effect on the Index of such replacement; and/or
- (iii) the Index Sponsor may discontinue and cancel the Index.

5. REPLACEMENT CRITERIA

“**Replacement Criteria**” shall mean, in respect of a Bond Index, the criteria specified as such in the applicable Index Methodology.

6. DEFINITIONS

“**Bond Index**” shall mean each Constituent classified as such in the applicable Index Methodology.

“**Bond Index Sponsor**” shall mean, in respect of a Bond Index, the corporation or other entity which (a) is responsible for setting and reviewing the rules and procedures and methods of calculations and

adjustments, if any, related to such Bond Index; and (b) announces (directly or through an agent) the level of such Bond Index on a regular basis.

“Component Security” shall mean, in respect of a Bond Index, each fixed income instrument included in such Bond Index.

“Scheduled Trading Day” shall mean, in respect of a Bond Index, any day on which the Bond Index Sponsor in respect of such Bond Index is scheduled to publish the level of such Bond Index.