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INDEX SUPPLEMENT NO. IS-01-04

(To the prospectus and prospectus supplement each dated May 14, 2018)

Citigroup Global Markets Holdings Inc.

Medium-Term Senior Notes, Series N

Payments Due from Citigroup Global Markets Holdings Inc.

Fully and Unconditionally Guaranteed by Citigroup Inc.

Notes Linked to the Citi ETF Market Pilot 5 Excess Return Index

This index supplement sets forth terms that will apply generally to notes that we may offer from time to time using this index supplement. The specific terms of a particular issuance of notes will be set forth in a pricing supplement that we will deliver in connection with that issuance. If the terms specified in any pricing supplement are inconsistent with the terms specified in this index supplement or in the accompanying prospectus supplement or prospectus, the terms specified in the applicable pricing supplement will control. We refer to all notes offered under this index supplement as the "notes."

- **Underlying Index.** The notes will be linked to the performance of the Citi ETF Market Pilot 5 Excess Return Index (the "Index"). The Index was developed by Citigroup Global Markets Limited (the "Index Sponsor"), an affiliate of Citigroup Global Markets Holdings Inc. You should carefully review the sections "Description of the Citi ETF Market Pilot 5 Excess Return Index" and "Risk Factors Relating to the Notes" in this index supplement for more information about the Index and for a discussion of important risks relating to the Index.

- **Payment at Maturity.** The notes provide for the repayment of the stated principal amount at maturity, regardless of the performance of the Index. If so specified in the applicable pricing supplement, the notes offer the possibility of an additional payment at maturity based on the performance of the Index.

- **Coupon.** The notes will not pay a coupon unless the applicable pricing supplement specifically provides otherwise. If the applicable pricing supplement provides for the payment of a coupon, the coupon rate, which may be fixed or may vary depending on the performance of the Index or otherwise, and the coupon payment date(s) will be specified in the

applicable pricing supplement.

- **No Guaranteed Return on Your Investment.** The notes do not guarantee any positive return on your investment, unless otherwise specified in the applicable pricing supplement. Any potential payment on the notes that depends on the performance of the Index may be zero, unless otherwise specified in the applicable pricing supplement. In that event, you will only receive the stated principal amount at maturity of the notes and will not be compensated for the time value of money.

- **Credit Risk.** The notes are unsecured senior debt securities of Citigroup Global Markets Holdings Inc., and the guarantee of the notes is an unsecured obligation of Citigroup Inc. Accordingly, all payments on the notes are subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc. If Citigroup Global Markets Holdings Inc. and Citigroup Inc. default on their obligations, you may not receive any payment owed to you under the notes, including the repayment of principal at maturity.

- **No Listing.** The notes will not be listed on any securities exchange, unless otherwise specified in the applicable pricing supplement. Accordingly, unless otherwise specified, the notes may have limited or no liquidity, and you should not invest in the notes unless you are willing to hold them until maturity. You are entitled to the repayment of the stated principal amount (and any other amount that may be payable at maturity) only if you hold the notes at maturity.

- **Not Equivalent to Investing in the Index**. Investing in the notes is not equivalent to investing directly in the constituents of the Index. You will not have any ownership interest or any other right with respect to the constituents of the Index.

- **Tax Consequences.** For important information regarding certain tax consequences of investing in the notes, see "United States Federal Tax Considerations" beginning on page IS-52.

You should carefully review the specific terms of the notes described in the applicable pricing supplement together with the information contained in this index supplement and the accompanying prospectus supplement and prospectus before investing in the notes.

Investing in the notes is subject to risks not associated with an investment in conventional debt securities. See "Risk Factors Relating to the Notes" beginning on page IS-7.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the notes or determined if this index supplement, the accompanying prospectus supplement and prospectus or any pricing supplement is truthful or complete. Any representation to the contrary is a criminal offense.

The notes, and the guarantee of the notes by Citigroup Inc., are not deposits or savings accounts but are, respectively, unsecured debt obligations of Citigroup Global Markets Holdings Inc. and unsecured obligations of Citigroup Inc. The notes are not insured or guaranteed by the Federal Deposit Insurance Corporation or by any other governmental agency or instrumentality.

Investment Products Not FDIC Insured May Lose Value No Bank Guarantee

Citigroup

March April 3, 2019

We are responsible for the information contained or incorporated by reference in this index supplement, the accompanying prospectus supplement and prospectus and any applicable pricing supplement. We have not authorized anyone to give you any other information, and we take no responsibility for any other information that others may give you. You should not assume that the information contained or incorporated by reference in this index supplement, the accompanying prospectus supplement and prospectus or any applicable pricing supplement is accurate as of any date other than the date on the front of such document. We are not making an offer of these notes in any state where the offer is not permitted.

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About this INDEX Supplement

The pricing supplement for a particular issuance of notes will describe certain specific terms of those notes, but will not describe all of the material terms of those notes or contain all of the other material disclosures that you should consider before investing in those notes. The material terms of the notes and other material disclosures that are not contained in the applicable pricing supplement are set forth in this index supplement and, to the extent not set forth in this index supplement, in the accompanying prospectus supplement and prospectus. Accordingly, it is important that you read the applicable pricing supplement together with this index supplement and the accompanying prospectus supplement and prospectus and before investing in the notes.

You may find the prospectus and prospectus supplement each dated May 14, 2018 here:
https://www.sec.gov/Archives/edgar/data/200245/000119312518162183/d583728d424b2.htm

References in this index supplement, the applicable pricing supplement and the accompanying prospectus supplement and prospectus, to “we,” “our” or “us” are to Citigroup Global Markets Holdings Inc., and not any of its subsidiaries, unless the context indicates otherwise.

Summary Description of the Index

The Citi ETF Market Pilot 5 Excess Return Index (the "Index") is published by Citigroup Global Markets Limited (the "Index Sponsor"), which is an affiliate of ours. The Index tracks the hypothetical performance of a rules-based investment methodology that, once each month, selects a hypothetical investment portfolio to track for the next month (referred to as the "Selected Portfolio" for that month). The Selected Portfolio for each month is selected from a universe of eligible constituents consisting of 12 exchange-traded funds ("ETFs") representing the following asset classes: global equities, fixed income, commodities, real estate equities and preferred stock. In certain circumstances, the Selected Portfolio may also include (or be composed solely of) a hypothetical money market instrument with a return equal to 3-month U.S. dollar LIBOR, which we refer to as the "Cash Constituent". The Index was launched on June 30, 2015 and, therefore, has a limited performance history.

The Index selects the Selected Portfolio for each month using certain concepts drawn from the "modern portfolio theory" approach to asset allocation. One tenet of modern portfolio theory is that an optimal 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. The Index seeks to implement this concept by selecting as the Selected Portfolio to track for each month, out of all possible Eligible Market Portfolios, the portfolio that has the highest expected return without exceeding the Index's target volatility of 5%. The "Eligible Market Portfolios" are all of the possible hypothetical investment portfolios that could be constructed using the eligible ETFs and that comply with the applicable maximum weights listed in the table below.

Although expected return and expected volatility are key concepts in modern portfolio theory, the theory does not prescribe how expected return and expected volatility should be determined. The approach taken by the Index is to determine the expected return and volatility of the Eligible Market Portfolios using **historical** measures of the returns and volatility of, and the correlation among, the ETFs included in the Eligible Market Portfolios. Accordingly, the Index's Selected Portfolio for each month will be the Eligible Market Portfolio that, out of all Eligible Market Portfolios, had the greatest historical return while having a historical volatility that did not exceed 5%. The historical measures used by the Index are based on the exponentially weighted moving average of daily returns of the eligible ETFs over a historical period of approximately one year. The exponentially weighted moving average of daily returns is a type of average that gives greater weight to more recent returns. The Index uses this exponential weighting in an attempt to give the greatest weight to the most recent trends in the performances of the eligible ETFs.

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. If future performance and volatility differ significantly from the historical measures used by the Index, the Selected Portfolio tracked 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.

If there is no Eligible Market Portfolio with a historical volatility less than or equal to 5%, the Selected Portfolio will not be selected in the manner described above and, instead, will be the Eligible Market Portfolio with the lowest historical volatility (with a pro rata allocation to the Cash Constituent to the extent necessary to reduce historical volatility to 5%). Furthermore, if the Selected Portfolio otherwise selected would have had a historical performance that is less than 3-month U.S. dollar LIBOR, then the Selected Portfolio will not be selected in the manner described above and instead will be allocated 100% to the Cash Constituent. In addition, if the Selected Portfolio declines in value by more than 8% over any period of 21 Index Business Days, an "extraordinary rebalancing" will occur and the Selected Portfolio will be reallocated out of its eligible ETFs and 100% into the Cash Constituent. Any portion of the Index that is allocated to the Cash Constituent will experience a net decline as a result of the excess return deduction and index fee described below.

Although the Selected Portfolio may be constructed from eligible ETFs representing a number of different asset classes and market sectors, there is no requirement that the Selected Portfolio be diversified, and it may be concentrated in one or a small number of asset classes and/or market sectors. The Selected Portfolio may consist of as few as two eligible ETFs.

The Index's target volatility of 5% is a relatively low volatility level for most of the eligible ETFs, which means that the Selected Portfolio for each month may need to have a significant allocation to the fixed income asset class in order to meet the requirement that its historical volatility not exceed 5%. Although the fixed income asset

class is typically less volatile than other asset classes such as global equities, commodities, real estate equities and preferred stock, it may also have lower return potential. As a result, in bull markets for the other asset classes, a Selected Portfolio with a significant allocation to the fixed income asset class may significantly underperform an alternative portfolio with a greater allocation to those other asset classes.

The Index is an "excess return" index, which means that the performance of the Cash Constituent is deducted from the performance of the Selected Portfolio in calculating the performance of the Index. The performance of the Index is also reduced by an index fee of 0.75% per annum. **The excess return deduction and the index fee 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.** In addition, the Index is a "volatility target" index, which means that the Index adjusts its exposure to the excess return performance of the Selected Portfolio, as often as daily, in an attempt to maintain a 20-Day Realized Volatility of 5%.

This section contains only a summary description of the Index and does not describe all of its important features in detail. Before investing in the notes, you should carefully review the more detailed description of the Index contained in the section "Description of the Citi ETF Market Pilot 5 Excess Return Index".

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 further information about this and other important risks relating to the Index, see "Risk Factors Relating to the Notes".

The table below lists the eligible ETFs (referred to below as "Eligible Market Constituents") that may be used to construct the Selected Portfolio to be tracked by the Index for any month as well as the Cash Constituent. We refer to the Eligible Market Constituents, together with the Cash Constituent, as the "Eligible Constituents". The table also indicates the NYSE Arca ticker and the maximum percentage weight for each Eligible Constituent.

Asset Class	**Eligible Constituent**	**Market Sector**	**Ticker**	**Max. % Weight**
Eligible Market Constituents				
Global Equities	iShares Core S&P 500 ETF	Large-cap U.S. equities	IVV	50%
	Vanguard FTSE Europe ETF	Large-, mid- and small-cap developed European equities	VGK	25%
	iShares MSCI Japan ETF	Large- and mid-cap Japanese equities	EWJ	25%
	Vanguard FTSE Emerging Markets ETF	Large-, mid- and small-cap emerging market equities	VWO	50%
	iShares 20+ Year Treasury Bond ETF	U.S. Treasury bonds with >20-year maturities	TLT	50%

Fixed Income

	iShares TIPS Bond ETF	Inflation-protected U.S. Treasury bonds	TIP	10%
	iShares iBoxx $ Investment Grade Corporate Bond ETF	U.S. dollar investment-grade corporate bonds	LQD	25%
	SPDR Barclays High Yield Bond ETF	U.S. dollar below-investment grade corporate bonds	JNK	25%
Real Estate Equities	iShares U.S. Real Estate ETF	Real estate sector of U.S. equity market	IYR	10%
Preferred Stock	iShares U.S. Preferred Stock ETF	U.S.-listed preferred stocks	PFF	10%
Commodities	PowerShares DB Commodity Index Tracking Fund	Selected commodity futures	DBC	10%
	SPDR Gold Trust	Gold bullion	GLD	50%
Cash Constituent				
Money Market	Citi 3M Cash Constituent	Money market	N/A	100%

You should carefully review the sections “Description of the Citi ETF Market Pilot 5 Excess Return Index” and “Risk Factors Relating to the Notes” in this index supplement for more information about the Index and for a discussion of important risks relating to the Index.

Summary Payment Terms

The particular payment terms of the notes will be set forth in the applicable pricing supplement and will be linked to the performance of the Index. The notes provide for the repayment of the stated principal amount at maturity, regardless of the performance of the Index. The notes may pay coupon payments at a rate that varies based on the performance of the Index, or the notes may not pay interest and may instead provide for a single payment at maturity based on the performance of the Index. The specific terms of the notes will be specified in the applicable pricing supplement.

Any potential payment on the notes that depends on the performance of the Index may be positive, or it may be zero, depending on the specific terms of the notes. You should carefully read the applicable pricing supplement to understand the payment terms of the notes and the circumstances in which you may not receive any return on your investment in the notes. The specific terms of the notes will be determined on the date we price the notes for initial sale to the public, which we refer to as the "Pricing Date."

Any potential payment on the notes that depends on the performance of the Index will be based on the Closing Level of the Index on one or more dates specified in the applicable pricing supplement (each, a "Valuation Date"), subject to the specific terms set forth in the applicable pricing supplement.

In addition to the risks associated with the performance of the Index, all payments due on the notes are subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc., as guarantor of the obligations of Citigroup Global Markets Holdings Inc. If Citigroup Global Markets Holdings Inc. and Citigroup Inc. default on their obligations under the notes, you may not receive any payment owed to you, including the repayment of the stated principal amount of your notes at maturity.

Before deciding whether to invest in the notes, you should carefully read and understand the sections "Risk Factors Relating to the Notes" and "Description of the Citi ETF Market Pilot 5 Excess Return Index" in this index supplement as well as the particular terms and risk factors described in the applicable pricing supplement.

Certain events may happen that could affect any payment owed to you under the notes, such as the occurrence of market disruption events or other events affecting the Index. Those events are described in this index supplement under "Description of the Notes" and "Description of the Citi ETF Market Pilot 5 Excess Return Index" and will not be repeated in the applicable pricing supplement. As a result, you should carefully review and understand the section "Description of the Notes" and "Description of the Citi ETF Market Pilot 5 Excess Return Index" in this index supplement.

Risk Factors Relating to the Notes

An investment in the notes is significantly riskier than an investment in conventional debt securities. The notes are subject to all of the risks associated with an investment in our conventional debt securities, including the risk that we may default on our obligations under the notes, and are also subject to risks associated with the Index because your return on the notes will depend on the performance of the Index.

Risk Factors Relating to All Notes

You May Not Receive Any Return On Your Investment in the Notes, in Which Case You Will Suffer a Loss On Your Investment in Real Value Terms. Your return on the notes, if any, will depend on the performance of the Index. If the Index does not perform favorably (which will depend on the specific terms of the notes set forth in the applicable pricing supplement), you may not receive any return on your investment in the notes. Although the notes provide for the repayment of the stated principal amount at maturity regardless of the performance of the Index, you may nevertheless suffer a loss on your investment in the notes, in real value terms, if you do not receive a positive return on the notes. This is because inflation may cause the real value of the stated principal amount to be less at maturity than it is at the time you invest, and because an investment in the notes represents a forgone opportunity to invest in an alternative asset that does generate a positive return. The potential loss in real value terms will be greater the longer the term of the notes.

Even if you do receive a positive return on your investment in the notes, there can be no assurance that your total return at maturity on the notes will compensate you for the effects of inflation or be as great as the return you could have achieved on a conventional debt security of Citigroup Global Markets Holdings Inc. (guaranteed by Citigroup Inc.) of comparable maturity. You should carefully consider whether an investment that may not provide for any return on your investment, or may provide a return that is lower than the return on conventional debt securities, is appropriate for you.

The Notes Will Not Pay Any Coupon Unless Otherwise Specified in the Applicable Pricing Supplement. Unless the applicable pricing supplement specifies that the notes will pay a coupon, the notes will not pay any interest or provide for any other payments prior to maturity. Accordingly, unless the applicable pricing supplement specifically provides for a coupon payment, you should not invest in the notes if you seek current income during the term of the notes.

If the Notes Provide For a Coupon That Depends on the Performance of the Index, the Coupon Payment May Be Zero on One or More Coupon Payment Dates. If the applicable pricing supplement provides for a coupon payment but the amount of such payment varies depending on the performance of the Index or otherwise, you should understand that you may not receive any payment on one or more (or any) coupon payment dates during the term of the notes. You should not invest in notes with such terms if you seek certainty of receiving current income during the term of the

notes.

If a Maximum Return Applies to the Notes, Your Return on the Notes Will Be Limited. If applicable, the maximum return will be a percentage of the stated principal amount of the notes that will be determined on the Pricing Date and set forth in the applicable pricing supplement. Your total return at maturity on notes with a maximum return will be limited to the specified maximum return (excluding any coupon payments, if applicable), even if the return of the Index is significantly greater. You should not invest in notes that have a maximum return if you seek to participate in the full appreciation of the Index.

The Notes are Subject to the Credit Risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc., the Guarantor of any Payments Due on the Notes. You are subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc. The notes are not guaranteed by any entity other than Citigroup Inc. Any actual or anticipated changes to Citigroup Global Markets Holdings Inc.'s or Citigroup Inc.'s credit ratings or credit spreads may adversely affect the value of the notes. If Citigroup Global Markets Holdings Inc. defaults on its obligations and Citigroup Inc. defaults on its guarantee obligations under the notes, your investment will be at risk and you could lose some or all of your investment. As a result, the value of the notes prior to maturity will be affected by changes in the market's view of Citigroup Global Markets Holdings Inc.'s and Citigroup Inc.'s creditworthiness. Any decline, or anticipated decline, in either of their credit ratings or increase, or anticipated increase, in the credit spreads charged by the market for taking either of their credit risk is likely to adversely affect the value of the notes.

Sale of the Notes Prior to Maturity May Result In a Loss of Principal. You will be entitled to receive at least the full stated principal amount of your notes, subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc., only if you hold the notes to maturity. The value of the notes may fluctuate during the term of the notes, and if you are able to sell your notes prior to maturity, you may receive less than the full stated principal amount of your notes.

The Notes Will Not Be Listed on a Securities Exchange and You May Not Be Able To Sell Your Notes Prior To Maturity. Unless otherwise specified in the applicable pricing supplement, the notes will not be listed on a securities exchange. Accordingly, the notes may have limited or no liquidity, and you should not invest in the notes unless you are willing to hold them to maturity.

Citigroup Global Markets Inc. ("CGMI") or, if applicable, any other entity named as underwriter or agent in the applicable pricing supplement may, but is not obligated to, make a market in the notes. If CGMI or such other underwriter or agent does make a market in the notes, it may discontinue doing so at any time. Because we do not expect that other broker-dealers will participate significantly in any secondary market for the notes, the price at which you may be able to sell your notes prior to maturity is likely to depend on the price, if any, at which CGMI or such other underwriter or agent is willing to transact. If at any time CGMI or such other underwriter or agent were not to make a market in the notes, it is likely that there would be no secondary market at all for the notes. The price, if any, at which CGMI, such other underwriter or agent or any other buyer may be willing to purchase your notes in any secondary market that may develop may be significantly less than the stated principal amount; therefore, any sale of the notes prior to maturity may result in a substantial loss. As a result, you should be prepared to hold your notes to maturity.

The Value Of Your Notes Prior To Maturity Will Fluctuate Based On Many Unpredictable Factors. The value of your notes prior to maturity will fluctuate based on the level of the Index and a number of other factors, including those described below. Some of these factors are interrelated in complex ways. As a result, the effect of any one factor may be offset or magnified by the effect of one or more other factors. The paragraphs below describe what we expect to be the impact on the value of the notes of a change in a specific factor, assuming all other conditions remain constant. You should understand that the value of your notes at any time prior to maturity may be significantly less than the stated principal amount.

- *Level of the Index*. We expect that the value of the notes at any time will depend substantially on the level of the Index at that time. If the level of the Index declines following the Pricing Date, the value of your notes will also likely decline, perhaps significantly. Even at a time when the level of the Index exceeds its level on the Pricing Date, the value of your notes may nevertheless be significantly less than the stated principal amount of your notes because of expectations that the level will continue to fluctuate over the term of the notes, among other reasons.

The level of the Index will be influenced by the value and volatility of its Eligible Market Constituents, as well as by complex and interrelated political, economic, financial and other factors that affect the capital markets generally. Hedging by us or our counterparties (which may include our affiliates), the issuance of other securities similar to the

notes and other trading activities by our affiliates may also affect the level, which could negatively affect the value of the notes.

- *Volatility of the Index*. Volatility refers to the magnitude and frequency of changes in level over any given period. Any change in the expected volatility of the Index may adversely affect the value of the notes.

- *Interest Rates*. We expect that the value of the notes will be affected by changes in U.S. interest rates. In general, if U.S. interest rates increase, the value of the notes may decrease.

- *Time Remaining to Maturity*. At any given time, a portion of the value of the notes will be attributable to time value, which is based on the amount of time then remaining to maturity. You should understand that the value of the notes may be adversely affected solely as a result of the passage of time.

- *Creditworthiness of Citigroup Global Markets Holdings Inc. and Citigroup Inc*. The notes are subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc., the guarantor of any payments due on the notes. Therefore, actual or anticipated changes in either of their credit ratings or credit spreads may affect the value of the notes.

It is important for you to understand that the impact of one of the factors discussed above may offset, or magnify, some or all of any change in the value of the notes attributable to one or more of the other factors.

Our Affiliates May Have Published Research, Expressed Opinions or Provided Recommendations that are Inconsistent With Investing in the Notes and May Do So in the Future, and any such Research, Opinions or Recommendations Could Adversely Affect the Level of the Index. CGMI and other of our affiliates may publish research from time to time relating to the financial markets, any of the Eligible Market Constituents of the Index or the hypothetical investment methodology of the Index. Any research, opinions or recommendations provided by CGMI may influence the price of any Eligible Market Constituent, and they may be inconsistent with purchasing or holding the notes. CGMI and other of our affiliates may have published or may publish research or other opinions that call into question the investment view implicit in an investment in the notes. Any research, opinions or recommendations expressed by such affiliates of ours may not be consistent with each other and may be modified from time to time without notice. Investors should make their own independent investigation of the constituents of the Index, the Index itself and the merits of investing in the notes.

The Price of an Eligible Market Constituent or the Level of the Index May Be Affected by Our or Our Affiliates' Hedging and Other Trading Activities. In anticipation of the sale of the notes, we expect to hedge our obligations under the notes directly or through one of our affiliates, which may involve taking positions directly in the Eligible Market Constituents of the Index or other instruments that may affect the price of the Eligible Market Constituents. We or our counterparties may also adjust this hedge during the term of the notes and close out or unwind this hedge on or before any Valuation Date, which may involve, among other things, us or our counterparties purchasing or selling the Eligible Market Constituents or such other instruments. This hedging activity on or prior to the Pricing Date could potentially affect the price of the Eligible Market Constituents or underlying assets on the Pricing Date and, accordingly, potentially increase the Initial Index Level, which may adversely affect your return on the notes. Additionally, this hedging activity during the term of the notes, including on or near any Valuation Date, could negatively affect the level of the Index and, therefore, adversely affect your return on the notes. This hedging activity may present a conflict of interest between your interests as a holder of the notes and the interests we and/or our counterparties, which may be our affiliates, have in executing, maintaining and adjusting hedging transactions. These hedging activities could also affect the price, if any, at which CGMI or, if applicable, any other entity may be willing to purchase your notes in a secondary market transaction.

We and our affiliates may also trade the Eligible Market Constituents, the underlying assets held by the Eligible Market Constituents and/or other instruments that may affect the price of the Eligible Market Constituents on a regular basis (taking long or short positions or both), for our or their accounts, for other accounts under management or to facilitate transactions, including block transactions, on behalf of customers. As with our or our affiliates' hedging activity, this trading activity could affect the price of the Eligible Market Constituents on any Valuation Date and, therefore, adversely affect the performance of the Index and the notes.

It is possible that these hedging or trading activities could result in substantial returns for us or our affiliates while the value of the notes declines.

We and Our Affiliates May Have Economic Interests That Are Adverse to Those of the Holders of the Notes as a Result of Our or Our Affiliates' Business Activities. We or our affiliates may currently or from time to time engage in business with a company whose securities are held by an Eligible Market Constituent of the Index (each, a "relevant company"). These activities may include extending loans to, making equity investments in or providing advisory services to a relevant company, including merger and acquisition advisory services. In the course of this business, we or our affiliates may acquire non-public information about a relevant company and we will not disclose any such information to you. We do not make any representation or warranty to any purchaser of the notes with respect to any matters whatsoever relating to our or our affiliates' business with any relevant company. If we or any of our affiliates are or become a creditor of a relevant company or otherwise enter into any transaction with a relevant company in the regular course of business, we or such affiliate may exercise remedies against that relevant company without regard to the impact on your interests as a holder of the notes. In addition, we or our affiliates

may make equity investments in a relevant company, which may have a dilutive impact on, and therefore reduce, that relevant company's share price.

The Notes Calculation Agent, Which is an Affiliate of Ours, Will Make Important Determinations With Respect to the Notes. As Notes Calculation Agent, CGMI, our affiliate, will determine, among other things, any level or price required to be determined under the notes and the amount of any payment owed to you under the terms of the notes that depends on the performance of the Index. In addition, if certain events occur, CGMI will be required to make certain discretionary judgments that could significantly affect one or more payments owed to you under the notes. In making these judgments, CGMI's interests as an affiliate of ours could be adverse to your interests as a holder of the notes. Such judgments could include, among other things:

- determining whether a Market Disruption Event exists on any Valuation Date with respect to any Eligible Market Constituent then included in the Index;
- if the Index Level is not published by the Index Calculation Agent or if a Market Disruption Event exists with respect to any Eligible Market Constituent then included in the Index on any Valuation Date, determining the Closing Level of the Index with respect to that date, which may require us to make a good faith estimate of the closing price of one or more underlying Eligible Market Constituents if the Market Disruption Event is continuing on the Backstop Date; and
- selecting a Successor Index or performing an alternative calculation of the Closing Level of the Index if the Index is discontinued.

Any of these determinations made by the Notes Calculation Agent may adversely affect any payment owed to you under the notes.

Discontinuance of the Index Could Adversely Affect the Value of the Notes. The Index Sponsor is not required to publish the Index throughout the term of the notes. The Index Sponsor may determine to discontinue the Index, among other reasons, as a result of the occurrence of a Regulatory Event. See "Description of the Citi ETF Market Pilot 5 Excess Return Index" for more information. If the Index is discontinued, the Notes Calculation Agent will have the sole discretion to substitute a successor index that is comparable to the discontinued Index and is not precluded from considering other indices that are calculated and published by the Notes Calculation Agent or any of its affiliates. Any such successor index may not perform favorably.

If the Notes Calculation Agent does not select a successor index, then the Closing Level of the Index will be calculated from and after the time of discontinuance based on the Eligible Constituents that are included in the Index at the time of discontinuance, without any rebalancing or substitution of such Eligible Constituents after such discontinuance and without giving effect to the Index's extraordinary rebalancing feature. In such an event, the level

that is used as the Closing Level of the Index will cease to reflect the Index's portfolio selection methodology and instead will track the excess return performance of a fixed portfolio of notional assets, which will consist of the Eligible Constituents included in the Index (or those Eligible Constituents that would have been included the Index but for the event that resulted in such discontinuance of the Index) immediately prior to such discontinuance, each having the weight it had (or would have had) immediately prior to such discontinuance. That level may perform unfavorably after the discontinuance. In addition, in such an event, even though the Index will no longer apply its portfolio selection methodology, the index fee will continue to be deducted. If the Index was allocated 100% to the Cash Constituent at the time of discontinuance, then the level that is used as the Closing Level of the Index thereafter would be based on the performance of the Cash Constituent less the excess return deduction and the index fee. Since the excess return deduction will offset the return on the Cash Constituent, and since the index fee would also continue to be deducted, the level that is used as the Closing Level of the Index in this circumstance would continually decline through to the Maturity Date.

Risk Factors Relating to All Notes

Certain U.S. Federal Tax Consequences of an Investment in the Notes are Uncertain. The notes may be assumed by Citigroup Inc., as provided in the accompanying prospectus. The law regarding whether or not such an assumption would be considered a "significant modification" of the notes is not entirely clear and, if the Internal Revenue Service (the "IRS") were to treat the assumption as a significant modification, a U.S. holder would

generally be required to recognize gain (if any) on the notes and the timing and character of income recognized with respect to the notes, as well as the withholding tax consequences to a non-U.S. holder of the notes, after the assumption could be affected significantly. You should read carefully the discussion under "United States Federal Tax Considerations" in this index supplement. You should also consult your tax adviser regarding the U.S. federal tax consequences of an assumption of the notes.

In addition, non-U.S. investors should review the discussion in "United States Federal Tax Considerations—Tax Consequences to Non-U.S. Holders—Possible Withholding Under Section 871(m) of the Code" regarding potential withholding tax risks under Section 871(m) of the Internal Revenue Code of 1986, as amended (the "Code").

Risk Factors Relating to the Index

The following discussion of risks relating to the Index should be read together with the section "Description of the Citi ETF Market Pilot 5 Excess Return Index" below, which defines and further describes a number of the terms and concepts referred to in this section.

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 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 and an index fee, 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 and index fee 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 and an index fee, 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 and Index Fee 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 the performance of the Cash Constituent. The Cash Constituent is a hypothetical money market instrument with a return equal to 3-month U.S. dollar LIBOR. Three-month U.S. dollar LIBOR reflects the rate at which banks lend U.S. dollars to each other for a term of 3 months in the London interbank market. Although many factors may affect the level of 3-month U.S. dollar LIBOR, one important factor is the monetary policy of the Federal Reserve. If the Federal Reserve raises its federal funds target rate, the level of 3-month U.S. Dollar LIBOR is very likely to rise. Although the Federal Reserve maintained the federal funds target rate at relatively low levels in recent years, the Federal Reserve has begun to raise the federal funds target rate and may do so further at any time and, as a result, 3-month U.S. dollar LIBOR may rise, perhaps significantly. In the period since January 1, 2006, 3-month U.S. dollar LIBOR has been as high as 5.725% per annum. The level of 3-month U.S. dollar LIBOR 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 3-month U.S. dollar LIBOR rises for any other reason, the excess return performance of the Selected Portfolio (and, therefore, the performance of the Index) will be adversely affected. In addition to the excess return deduction, an index fee of 0.75% per annum is deducted in the calculation of the Index.

The excess return deduction and the index fee 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 and the index fee, 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.

Any portion of the Selected Portfolio that is allocated to the Cash Constituent in order to reduce its historical volatility to 5% will experience a net decline after giving effect to the excess return deduction and the index fee. The excess return deduction will completely offset the positive accrual on the Cash Constituent, and the deduction of the index fee will then result in a net decline.

· *In Certain Circumstances, the Selected Portfolio Will Consist 100% of the Cash Constituent, and in these Circumstances the Index Will 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 3-month U.S. dollar LIBOR on the relevant monthly Selection Day, that Eligible Market Portfolio will not be the Selected Portfolio and the Selected Portfolio will instead consist of a 100% allocation to the Cash Constituent. If 3-month U.S. dollar LIBOR rises, this provision may be triggered with increasing frequency. 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 a rate equal to 3-month U.S. dollar LIBOR. The excess return deduction reflects a deduction at the same rate, completely offsetting the positive accrual of the Cash Constituent. Although the Cash Constituent and the excess return deduction will offset each other, resulting in no net change, the index fee will continue to be deducted. As a result, at any time when the Index has 100% exposure to the Cash Constituent, the Index will steadily decline at a rate equal to the index fee.

One consequence of this is that the reallocation to the Cash Constituent as a result of an Extraordinary Rebalancing Event will 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 Limit its Appreciation Potential Because it May Result in Selected Portfolios With Significant Allocations to the Fixed Income Asset Class, Which May Underperform Alternative Portfolios More Heavily Weighted Toward Equities, Commodities, Real Estate Equities and/or Preferred Stock.* 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, commodities, real estate equities and/or preferred stock, which means that a significant allocation to the fixed income asset class, which is typically less volatile than equities, commodities, real estate equities and preferred stock, 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 fixed income asset class than it would if there were a higher target volatility. The Selected Portfolio may allocate up to 100% of its exposure to the fixed income asset class, and as much as 60% of its exposure to Eligible Market Constituents holding U.S. Treasury bonds alone. Although fixed income instruments are typically less volatile than equities, commodities, real estate equities and preferred stock, they may also have lower return potential. As a result, in bull markets for equities, commodities, real estate equities and/or preferred stock, a Selected Portfolio with a significant allocation to the fixed income asset class may significantly underperform an alternative portfolio with a greater allocation to equities, commodities, real estate equities and/or preferred stock.

In addition, if the Selected Portfolio has a relatively high allocation to the fixed income asset class, it will be particularly sensitive to factors that adversely affect the value of fixed income instruments, such as an increase in interest rates or inflation or declining perceptions of credit quality of the U.S. government or the underlying corporate issuers. 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 the fixed income asset class 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 allocate as much as 100% of its exposure to a single 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. After giving effect to the deduction of the index fee, that effectively uninvested portion of the Index will experience a net decline. In addition, 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, real estate equities, preferred stock and fixed income 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 track indices of large-capitalization U.S. stocks, large- and mid-capitalization Japanese stocks and large-, mid- and small-capitalization developed European and emerging market stock. Eligible Market Constituents holding equities may make up as much as 100% of the Selected Portfolio. Equities are risky assets and may be subject to significant declines.

The Selected Portfolio may have as much as a 100% allocation solely to international equities, and as much as a 50% allocation solely 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 prices of the Eligible Market Constituents that hold international equities would be expected to decline for that reason alone.

  - *Risks Associated with Commodities.* The Selected Portfolio may have up to a 50% allocation to the SPDR Gold Trust, which holds gold bullion. Therefore, the Selected Portfolio may have up to a 50% exposure to the price of gold 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.

The Selected Portfolio may have up to 10% exposure to the Powershares DB Commodity Index Tracking Fund, an ETF that tracks an index of 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 Powershares DB Commodity Index Tracking Fund may be a particularly unreliable indicator of its future performance. The Powershares DB Commodity Index Tracking Fund is 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, 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 the Powershares DB Commodity Index Tracking Fund to avoid a decline and appreciate at all. Like equities, commodity futures are risky assets and may be subject to significant declines.

- o *Risks Associated with Real Estate Equities*. The Selected Portfolio may have up to 10% exposure to the iShares U.S. Real Estate ETF, an ETF that tracks an index of U.S. equities in the real estate sector, primarily real estate investment trusts (known as REITs). REITs are subject to the risks of owning real estate directly. In addition, some REITs have relatively small market capitalizations, which can increase the volatility of the market price of securities issued by those REITs. Furthermore, REITs are often dependent upon specialized management skills, have limited diversification and are, as a result, subject to risks inherent in operating and financing a limited number of projects. The real estate industry is cyclical, highly sensitive to general and local economic conditions and developments, and characterized by intense competition and periodic

overbuilding. Accordingly, the iShares U.S. Real Estate ETF may be subject to significant volatility and risk.

o *Risks Associated with Preferred Stocks*. The Selected Portfolio may have up to 10% exposure to the iShares U.S. Preferred Stock ETF, an ETF that tracks the performance of an index of preferred stocks that are publicly traded in the United States. Preferred stocks combine certain risks of fixed income instruments and equities. Because many preferred stocks pay dividends at a fixed rate, their market price can be sensitive to changes in interest rates in a manner similar to bonds — that is, as interest rates rise, the value of preferred stocks is likely to decline. In addition, because many preferred stocks allow holders to convert the preferred stock into common stock of the issuer, the market price of preferred stocks can also be sensitive to changes in the value of the issuer's common stock.

o *Risks Associated with Fixed Income.* As discussed above, although the fixed income asset class tends to be less volatile than equities, commodities, real estate equities and preferred stock, it is 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 or underlying corporate borrowers deteriorates, the fixed income asset class is 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. 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 and the Notes May Not be Effective Ways 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 and the notes may not be effective ways to 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 is primarily concentrated in gold and permits only a limited allocation to a more broad-based commodity ETF; and the only U.S. Treasury bonds that are included (other than TIPS) are Treasury bonds with a maturity of greater than 20 years. Moreover, the Eligible Constituents exclude a number of major asset classes altogether, such as currencies. 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.

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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 rate of 3-month U.S. dollar LIBOR, 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. The Index's excess return feature will cause the Index to perform as if the hypothetical investment in the Selected Portfolio were financed by borrowing at the 3-month U.S. dollar LIBOR rate, even though you are required to pay the full purchase price of your notes at the time of your initial investment and therefore will not receive the potential benefits that could be realized by an investment financed by borrowing.

- Although the Selected Portfolio may include a number of different asset classes and/or market sectors, an investment in the notes is an investment in a single financial instrument and, therefore, is not a diversified investment. If we default on our obligations under the notes, and Citigroup Inc. defaults on its guarantee obligations, your entire investment would be at risk.

- Modern portfolio theory does not suggest monthly rebalancing, which may adversely affect Index performance by limiting the exposure of the Index to assets that would otherwise experience long-term appreciation. 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 and the notes may not be effective ways 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 rules-based investment methodology described under "Description of the Citi ETF Market Pilot 5 Excess Return Index" below. The Index will not be actively managed. If the 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 notes 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 June 30, 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 June 30, 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.

- A number of the Eligible Market Constituents did not exist for varying lengths of time prior to December 4, 2007. For any period prior to the date a particular Eligible Market Constituent was created, the back-tested performance of the Index has been calculated using the underlying index tracked by that Eligible Market Constituent (or, in the case of the SPDR Gold Trust, the afternoon gold fixing price published by the

London Bullion Market Association) as a proxy for the performance of that Eligible Market Constituent, as discussed in more detail under “Description of the Citi ETF Market Pilot 5 Excess Return Index—Hypothetical Back-Tested Index Performance Information” below. These proxies differ from the corresponding Eligible Market Constituents in a number of ways:

- Each proxy reflects the performance of the total return version of the underlying index tracked by the applicable Eligible Market Constituent (or the fixing price of gold, in the case of the SPDR Gold Trust), without giving effect to any fees and expenses that would reduce the performance of the Eligible Market Constituent. Therefore, to the extent that the hypothetical back-tested performance of the Index for the period prior to December 4, 2007 is based on a proxy for an Eligible Market Constituent, that performance information may overstate the performance of the Index as compared to the performance that would have been achieved if these fees and expenses had been reflected.

- The underlying indices do not reflect any tracking error that would have been experienced by the Eligible Market Constituent with respect to its underlying index.

- The total return versions of the underlying indices reflect changes in the prices of the underlying assets and, in addition, reflect (i) in the case of an equity index, the hypothetical reinvestment of dividends and (ii) in the case of a bond index, the hypothetical reinvestment of interest payments. The manner in which these hypothetical reinvestments are made differs from the manner in which the Index accounts for hypothetical reinvestments of dividends or distributions in the Eligible Market Constituents.

For these reasons, the hypothetical back-tested Index performance information, to the extent that it utilizes proxy data, may not reflect how the Index would have performed had the relevant Eligible Market Constituents existed during the relevant time period.

- Certain of the Eligible Market Constituents have changed the underlying indices that they seek to track, and the underlying indices tracked by certain of the Eligible Market Constituents have made changes to their rules, as discussed in more detail under “Description of the Citi ETF Market Pilot 5 Excess Return Index—Hypothetical Back-Tested Index Performance Information” below. As a result of these changes, the underlying indices to be tracked in the future by certain of the Eligible Market Constituents differ in certain respects from the underlying indices tracked by the same Eligible Market Constituents during some or all of the back-tested period. The sponsor of any Eligible Market Constituent or its underlying index may make additional changes in the future. The hypothetical back-tested Index performance may not reflect how the Index would have performed had the relevant Eligible Market Constituents tracked the same underlying indices (with the same rules) during the full back-tested period that they will track in the future.

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.

There Are Drawbacks Associated with Tracking the Value of ETFs rather than the Underlying Indices that the ETFs Seek to Track. The Eligible Market Constituents are ETFs. Each ETF seeks to track the performance of its underlying index before giving effect to fees and expenses of the ETF. After giving effect to these fees and expenses, the performance of each ETF is likely to be less favorable than the performance of the underlying index that it tracks. In addition, the price of the shares of each ETF may not perfectly track the performance of its underlying index or its net asset value per share. An ETF may not hold all of the assets that constitute its underlying index or may hold assets and/or derivative contracts not included in that underlying index. Moreover, the trading price of an ETF is determined by market supply and demand and can deviate from the value of the ETF's assets. As a result, in certain circumstances, the performance of an ETF may diverge significantly from, and may be less favorable than, the performance of its underlying index. In addition, corporate actions with respect to the equity securities constituting an underlying index or held by its ETF (such as mergers and spin-offs) may impact the variance between the performances of the ETF and its underlying index.

During periods of market volatility, securities underlying an ETF may be unavailable in the secondary market, market participants may be unable to calculate accurately the net asset value per share of an ETF and the liquidity of

an ETF may be adversely affected. This kind of market volatility may also disrupt the ability of market participants to create and redeem shares in an ETF. Further, market volatility may adversely affect, sometimes materially, the prices at which market participants are willing to buy and sell shares of an ETF. As a result, under these circumstances, the market value of shares of an ETF may vary substantially from its net asset value per share. For all of the foregoing reasons, the performance of an ETF may not correlate with the performance of its underlying index or its net asset value per share, which could materially and adversely affect the performance of the Index and the value of the notes in the secondary market and/or reduce your payment at maturity.

Investors in the Notes 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 any Index Business Day is a Disrupted Day (as determined by the Index Calculation Agent) with respect to any Index Constituent and the disruption is continuing on the fifth succeeding Scheduled Trading Day in respect of such Index Constituent, the Index Calculation Agent will determine the Index Constituent Level of that Index Constituent on that day in its good faith discretion and, if the applicable day is a Rebalancing Date that has been postponed for five Scheduled Trading Days, the Index Calculation Agent will determine the unit weight of that Index Constituent in the rebalancing using its good faith judgment.

- If certain events occur with respect to an Eligible Market Constituent, the Index Calculation Agent will be required to exercise discretion in determining whether the event constituted an Adjustment Event and, if so, what action to take in response to that event, which may include revising the weight of the affected Eligible Market Constituent or replacing that Eligible Market Constituent with a substitute 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 or regulation that is implemented in order to comply with regulatory requirements on positions, contracts or instruments held by the Index Sponsor or its affiliates in order to hedge any financial instrument linked to the Index, including the notes. 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'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.

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 that is implemented in order to comply with regulatory requirements 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, including the notes. 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 the Eligible Market Constituent that tracks commodity futures 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.

Changes to Any Eligible Market Constituent or its Underlying Index Could Adversely Affect the Level of the Index. The sponsor of an Eligible Market Constituent may change the underlying index tracked by the Eligible Market Constituent or make a change to its policies or investment methodologies at any time. The sponsor of the underlying index tracked by an Eligible Market Constituent may add, delete or substitute the components that underlie the index or make other methodological changes to the index at any time. In fact, a number of the Eligible Market Constituents have experienced such changes, as described under "Description of the Citi ETF Market Pilot 5 Excess Return Index—Hypothetical Back-Tested Index Performance Information" below. In addition, the sponsors of the Eligible Market Constituents may terminate the Eligible Market Constituents at any time, and the sponsors of the underlying indices may discontinue or suspend calculation or publication of the underlying indices at any time. Any change to any Eligible Market Constituent or its underlying index could adversely affect the performance of the Eligible Market Constituent and, therefore, could adversely affect the performance of the Index. The sponsors of the Eligible Market Constituents and their underlying indices are not involved with the Index in any way, and it is not possible to predict what actions they may take in the future that could adversely affect the Index.

Description of the Notes

The following description of the general terms of the Notes supplements the general terms and provisions set forth in the accompanying prospectus supplement and prospectus. If any specific information regarding the Notes in this index supplement is inconsistent with the more general terms described in the accompanying prospectus supplement and prospectus, you should rely on the information in this index supplement.

The pricing supplement applicable to a particular issuance of Notes will contain the specific terms of those Notes. If any information in the applicable pricing supplement is inconsistent with this index supplement, you should rely on the information in the applicable pricing supplement. The applicable pricing supplement may also add, update or change information contained in this index supplement or in the accompanying prospectus supplement and prospectus. It is important for you to consider carefully the information contained in this index supplement together with the information contained in the applicable pricing supplement and the accompanying prospectus supplement and prospectus before investing in the Notes.

General

The notes offered under this index supplement (the "Notes") are senior unsecured debt securities issued by Citigroup Global Markets Holdings Inc. under the senior debt indenture described in the accompanying prospectus supplement and prospectus. Any payments due on the Notes are fully and unconditionally guaranteed by Citigroup Inc. The Notes will constitute part of the senior debt of Citigroup Global Markets Holdings Inc. and will rank equally with all other unsecured and unsubordinated debt of Citigroup Global Markets Holdings Inc. The guarantee of payments due on the Notes will constitute part of the senior debt of Citigroup Inc. and will rank equally with all other unsecured and unsubordinated debt of Citigroup Inc.

The particular payment terms of the Notes will be set forth in the applicable pricing supplement and will be linked to the performance of the Citi ETF Market Pilot 5 Excess Return Index (the "Index"). The Index is described in "Description of the Citi ETF Market Pilot 5 Excess Return Index" below.

The Notes provide for the repayment of the stated principal amount at maturity. If so specified in the applicable pricing supplement, the Notes offer the possibility of an additional payment at maturity (other than any coupon payment, if specified in the applicable pricing supplement) based on the performance of the Index. The stated principal amount of each Note will be specified in the applicable pricing supplement.

In addition to the risks associated with the performance of the Index, all payments due on the Notes are subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc., as guarantor of any payments due on the Notes. If Citigroup Global Markets Holdings Inc. and Citigroup Inc. default on their obligations under the Notes, you may not receive any payment owed to you, including the repayment of the stated principal amount of your Notes at maturity.

Any potential payment on the Notes that depends on the performance of the Index will be based on the Closing Level of the Index on one or more dates specified in the applicable pricing supplement (each, a "Valuation Date"), subject to the specific terms set forth in the applicable pricing supplement. If any scheduled Valuation Date is not an Index Scheduled Trading Day, such Valuation Date will be postponed to the next succeeding Index Scheduled Trading Day.

An "Index Scheduled Trading Day" is an Index Business Day that is also a Scheduled Trading Day for each Eligible Market Constituent included in the Index on that Index Business Day.

An "Index Business Day" is a day on which commercial banks are open for general business in New York and London.

The term "Scheduled Trading Day" has, in respect of each Eligible Constituent, the meaning specified under "Description of the Citi ETF Market Pilot 5 Excess Return Index" below.

The term "Eligible Constituent" has the meaning specified under "Description of the Citi ETF Market Pilot 5 Excess Return Index" below.

The term "Eligible Market Constituent" has the meaning specified under "Description of the Citi ETF Market Pilot 5 Excess Return Index" below.

Maturity

The Notes will mature on the date specified in the applicable pricing supplement (the "Maturity Date"). If the Maturity Date falls on a day that is not a New York Business Day, the payment to be made on the Maturity Date will be made on the next succeeding New York Business Day with the same force and effect as if made on the Maturity Date, and no interest will accrue as a result of such delayed payment. If a Notes Disruption Event occurs on the Valuation Date (or if there is more than one Valuation Date, on the final Valuation Date), then the Maturity Date will be postponed to the third New York Business Day after the Final Determination Date with respect to such Valuation Date. In addition, if the originally scheduled Valuation Date (or if there is more than one Valuation Date, the originally scheduled final Valuation Date) is not an Index Scheduled Trading Day and such Valuation Date is postponed so that it falls fewer than three New York Business Days prior to the Maturity Date, the Maturity Date will be postponed to the third New York Business Day after such Valuation Date as postponed.

"New York Business Day" means any day that is not a Saturday, a Sunday or a day on which the securities exchanges, bank institutions or trust companies in the City of New York are authorized or obligated by law or executive order to close.

Notes Calculation Agent

The "Notes Calculation Agent" for each issuance of Notes will be our affiliate, Citigroup Global Markets Inc. ("CGMI"), or any successor appointed by us, unless otherwise specified in the applicable pricing supplement. The Notes Calculation Agent will make the determinations specified in this index supplement or in the applicable pricing supplement. All determinations made by the Notes Calculation Agent will be at the sole discretion of the Notes Calculation Agent and will, in the absence of manifest error, be conclusive for all purposes and binding on Citigroup Global Markets Holdings Inc., Citigroup Inc. and the holders of the Notes. The Notes Calculation Agent is obligated to carry out its duties and functions in good faith and using its reasonable judgment.

Determining the Closing Level of the Index

The "Closing Level" of the Index means, on any date of determination, the Index Level (as defined under "Description of the Citi ETF Market Pilot 5 Excess Return Index" below) for such day as published by the Index Calculation Agent, subject to the terms described under "—Discontinuance of the Index" below. If the Index Level is not published by the

Index Calculation Agent for any date of determination, or if the Notes Calculation Agent determines that a Market Disruption Event exists with respect to any Eligible Market Constituent then included in the Index on any date of determination, the Notes Calculation Agent will calculate the Closing Level of the Index in respect of that date of determination in good faith in accordance with the formula for and method of calculating the Index last in effect prior to commencement of the Market Disruption Event or failure to publish, using:

(i) for each Eligible Constituent with respect to which a Market Disruption Event does not occur on that date of determination, the Index Constituent Level of such Eligible Constituent on that date of determination; and

(ii) for each Eligible Constituent with respect to which a Market Disruption Event occurs or is continuing on that date of determination, the Index Constituent Level of such Eligible Constituent on the immediately succeeding Scheduled Trading Day for such Eligible Constituent on which no Market Disruption Event occurs or is continuing with respect to such Eligible Constituent, unless such Scheduled Trading Day has not occurred by the fifth Scheduled Trading Day for such Eligible Constituent following that date of determination (the "Backstop Date"), in which case the Notes Calculation Agent will use an alternative Index Constituent Level for such Eligible Constituent determined using its good faith estimate of the Closing Price of that Eligible Constituent as of such Backstop Date.

For any date of determination on which the Index Level is not published or a Market Disruption Event exists, the Notes Calculation Agent will, following that date of determination, calculate the Closing Level in respect of that date, and the Notes Calculation Agent will reflect in such Closing Level the excess return deduction and the index fee described under "Description of the Citi ETF Market Pilot 5 Excess Return Index" to the date of such calculation. If the Notes Calculation Agent determines that a Market Disruption Event exists with respect to any

Eligible Market Constituent then included in the Index on a Valuation Date (such event, a "Notes Disruption Event"), the date on which the Closing Level of the Index in respect of such Valuation Date is finally determined (*i.e.*, the first date on which the Index Constituent Level has been determined for all Eligible Market Constituents then included in the Index in respect of such Valuation Date) is referred to as the "Final Determination Date" for such Valuation Date.

The term "Index Constituent Level" has, in respect of each Eligible Constituent, the meaning specified under "Description of the Citi ETF Market Pilot 5 Excess Return Index" below, except as otherwise provided in the definition of "Closing Level" above.

The term "Closing Price" has the meaning specified under "Description of the Citi ETF Market Pilot 5 Excess Return Index" below.

The term "Market Disruption Event" means, in respect of each Eligible Constituent, any event that would result in a Disrupted Day with respect to that Eligible Constituent, as described under "Description of the Citi ETF Market Pilot 5 Excess Return Index" below.

Discontinuance of the Index

If the Index Sponsor discontinues publication of the Index, and it or another entity (including CGMI) publishes a successor or substitute index that the Notes Calculation Agent determines, in its sole discretion, to be comparable to the discontinued Index, then the Closing Level of the Index thereafter will be determined by reference to the level of that index, which we refer to as a "Successor Index." In such an event, the Notes Calculation Agent will, in its sole discretion, make any adjustment to any level of the Index or the Successor Index used for purposes of the Notes as it may deem appropriate in order to account for the effect of the substitution.

If the Index Sponsor discontinues publication of the Index prior to, and such discontinuance is continuing on, a Valuation Date and the Notes Calculation Agent determines, in its sole discretion, that no Successor Index is available at such time, then the Notes Calculation Agent will determine a substitute Closing Level for the Index for such date. Such Closing Level will be determined by the Notes Calculation Agent in accordance with the formula for calculating the Index last in effect prior to such discontinuance, using only the Eligible Constituents included in the Index (or those Eligible Constituents that would have been included the Index but for the event that resulted in such discontinuance of the Index) immediately prior to such discontinuance, without any rebalancing or substitution of such Eligible Constituents after such discontinuance and without giving effect to an extraordinary rebalancing (as described below under "Description of the Citi ETF Market Pilot 5 Excess Return Index"). In such an event, the Closing Level of the Index so determined will cease to reflect the Index's portfolio selection methodology and instead will track the excess return performance of a fixed portfolio of notional assets, which will consist of the Eligible Constituents included in the Index (or those Eligible Constituents that would have been included the Index but for the

event that resulted in such discontinuance of the Index) immediately prior to such discontinuance, each having the weight (as defined below under “Description of the Citi ETF Market Pilot 5 Excess Return Index”) it had (or would have had) immediately prior to such discontinuance. In addition, in such an event, the maximum VT Exposure will be 100%, rather than 120% (see “Description of the Citi ETF Market Pilot 5 Excess Return Index” below). For purposes of clarity, if the Index Sponsor discontinues publication of the Index and the Notes Calculation Agent is required to calculate a substitute Closing Level for the Index, the Notes Calculation Agent will make that calculation applying all of the current features of the Index, including the excess return deduction, the volatility targeting and the index fee, with the following exceptions: the Selected Portfolio will no longer be re-selected monthly, the extraordinary rebalancing will not apply and the maximum VT Exposure will be reduced from 120% to 100%.

If the discontinuance of the Index was the result of a material modification or permanent cancellation of an Eligible Market Constituent, and such modification or cancellation is continuing on a Valuation Date, or if an Eligible Market Constituent is otherwise unavailable on a Valuation Date, then the Notes Calculation Agent will determine the Constituent Closing Level for such Eligible Market Constituent with respect to any date for which a Constituent Closing Level of such Constituent may be required using its good faith estimate of the closing level of that Eligible Market Constituent on each such date. Notwithstanding these alternative arrangements, discontinuance of the publication of the Index may adversely affect the value of the Notes.

Coupon

The Notes will not pay a coupon unless the applicable pricing supplement specifically provides otherwise. If the applicable pricing supplement specifies that the Notes will pay a coupon, the Notes will pay a coupon at the per annum rate specified in the applicable pricing supplement, which may be a fixed rate or may be determined by reference to the performance of the Index or otherwise. If the applicable pricing supplement provides that the Notes will pay a coupon, holders of the Notes will receive the applicable coupon payment on the coupon payment dates specified in the applicable pricing supplement (each, a "Coupon Payment Date"). If the per annum rate varies over the term of the Notes based on the performance of the Index or otherwise, the per annum rate for each Coupon Payment Date will be determined in the manner and on the Valuation Date specified in the applicable pricing supplement. Unless otherwise specified in the applicable pricing supplement, each coupon payment will be computed on the basis of a 360-day year of twelve 30-day months or, in the case of an incomplete month, the number of days elapsed. Unless otherwise specified in the applicable pricing supplement, the coupon payable on the first Coupon Payment Date for an issuance of Notes will accrue from and including the issue date of such Notes to but excluding such first Coupon Payment Date, and the coupon payable on each succeeding Coupon Payment Date for an issuance of Notes will accrue from and including the immediately preceding Coupon Payment Date to but excluding such succeeding Coupon Payment Date.

Unless otherwise specified in the applicable pricing supplement, each coupon payment will be payable to the persons in whose names the Notes are registered at the close of business on the New York Business Day immediately preceding the applicable Coupon Payment Date (each a "Regular Record Date"), except that the final coupon payment will be payable to the persons who receive the payment at maturity. If any Coupon Payment Date is not a New York Business Day, the coupon payment to be made on that Coupon Payment Date will be made on the next succeeding New York Business Day with the same force and effect as if made on that Coupon Payment Date, and no interest will accrue as a result of delayed payment. If any coupon payment on the Notes depends on the Closing Level of the Index on a Valuation Date and such Valuation Date is postponed as provided under "—Determining the Closing Level of the Index" and the relevant Coupon Payment Date is specified as a fixed date, such coupon payment will be made on the later of (i) the third New York Business Day after such Valuation Date (or the last such Valuation Date, if two or more consecutive Scheduled Trading Days are each scheduled Valuation Dates), as postponed and (ii) the Coupon Payment Date.

Automatic Call

If specified in the applicable pricing supplement, an automatic call feature will apply to the Notes in the circumstances and on the date(s) specified in the applicable pricing supplement. If an automatic call is triggered, the Notes will be redeemed for a cash payment that will be determined as set forth in the applicable pricing supplement. The minimum amount of such cash payment will be equal to the stated principal amount per Note. The Notes will not be subject to an automatic call feature unless the applicable pricing supplement so provides.

Call Right

If specified in the applicable pricing supplement, we will have the right to call the Notes, in whole or in part, on terms specified in the applicable pricing supplement. If applicable, the pricing supplement will specify the dates on which we may call the Notes, the price at which we may call the Notes, the circumstances in which we may call the Notes and the payment to be made upon redemption. If any date on which we elect to redeem the Notes falls on a day that is not a New York Business Day, the payment to be made upon redemption will be made on the next succeeding New York Business Day with the same force and effect as if made on the original date of redemption, and no interest will accrue as a result of delayed payment. We will not have the right to call the Notes unless the applicable pricing supplement so provides.

If we have the right to call the Notes, the provisions set forth under "Description of the Notes—Optional Redemption, Repayment and Repurchase" in the accompanying prospectus supplement will apply, subject to the terms set forth in the applicable pricing supplement.

Holders of the Notes will not have the right to require us to redeem the Notes prior to maturity, unless otherwise specified in the applicable pricing supplement.

No Redemption at the Option of the Holder; Defeasance

The Notes will not be subject to redemption at the option of any holder prior to maturity and will not be subject to the defeasance provisions described in the accompanying prospectus under "Description of Debt Securities—Defeasance."

Events of Default and Acceleration

In case an event of default (as described in the accompanying prospectus) with respect to any issuance of Notes shall have occurred and be continuing, the amount declared due and payable upon any acceleration of the Notes will be determined by the Calculation Agent and will equal, for each Note, the amount to be received on the Maturity Date, calculated using the Closing Level of the Index as though the date of acceleration were the Valuation Date (or the final Valuation Date if there is more than one Valuation Date). For purposes of the immediately preceding sentence, if the applicable pricing supplement specifies that the Notes will pay a coupon, your final coupon payment will reflect the portion of the coupon that has accrued (or will be prorated) from and including the immediately preceding Coupon Payment Date on which a coupon payment was made (if required) (or the issue date, if there is no such Coupon Payment Date) to but excluding the date of acceleration.

In case of default under the Notes, whether in the payment of a coupon or any other payment due under the Notes, no interest will accrue on such overdue payment either before or after the Maturity Date.

Paying Agent, Trustee and CUSIP

Citibank, N.A. will serve as paying agent and registrar for the Notes and will also hold the global notes representing each issuance of Notes as custodian for DTC. The Bank of New York Mellon will serve as trustee for the Notes.

The CUSIP number for each issuance of Notes will be set forth in the applicable pricing supplement.

DESCRIPTION OF THE CITI ETF MARKET PILOT 5 EXCESS RETURN INDEX

Overview

The Citi ETF 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 section is based on rules formulated by the Index Sponsor (the "Index Rules"), which are attached as Annex A to this Index Supplement. The Index launched on June 30, 2015 and, therefore, has a limited performance history. The Index is a member of the Index Sponsor's family of Market Pilot Indices that generally track the rules-based investment methodology described in this section.

The Index tracks the performance of the rules-based investment methodology described in this section. 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 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 exchange-traded funds ("ETFs") 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 ETFs (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 ETFs 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 ETFs as an "Eligible Market Constituent". In certain circumstances, the hypothetical investment portfolio for a given month may be wholly or partly allocated to a hypothetical money market instrument with a return equal to 3-month U.S. dollar LIBOR, which we refer to as the "Cash Constituent". We refer to the Eligible Market Constituents, together with the Cash Constituent, as the "Eligible Constituents". Table I also indicates the NYSE Arca ticker and the maximum percentage weight for each Eligible Constituent.

Table I

Asset Class	Eligible Constituent	Market Sector	Ticker	Max. % Weight
Eligible Market Constituents				
Global Equities	iShares Core S&P 500 ETF	Large-cap U.S. equities	IVV	50%
	Vanguard FTSE Europe ETF	Large-, mid- and small-cap developed European equities	VGK	25%
	iShares MSCI Japan ETF	Large- and mid-cap Japanese equities	EWJ	25%
	Vanguard FTSE Emerging Markets ETF	Large-, mid- and small-cap emerging market equities	VWO	50%
Fixed Income	iShares 20+ Year Treasury Bond ETF	U.S. Treasury bonds with >20-year maturities	TLT	50%
	iShares TIPS Bond ETF	Inflation-protected U.S. Treasury bonds	TIP	10%
	iShares iBoxx $ Investment Grade Corporate Bond ETF	U.S. dollar investment-grade corporate bonds	LQD	25%
	SPDR Barclays High Yield Bond ETF	U.S. dollar below-investment grade corporate bonds	JNK	25%
Real Estate Equities	iShares U.S. Real Estate ETF	Real estate sector of U.S. equity market	IYR	10%
Preferred Stock	iShares U.S. Preferred Stock ETF	U.S.-listed preferred stocks	PFF	10%
Commodities	PowerShares DB Commodity Index Tracking Fund	Selected commodity futures	DBC	10%
	SPDR Gold Trust	Gold bullion	GLD	50%
Cash Constituent				
Money Market	Citi 3M Cash Constituent	Money market	N/A	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 8.33% 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 level of 3-month U.S. dollar LIBOR 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 will continue to decline after allocating 100% to the Cash Constituent. The Cash Constituent reflects a positive accrual at a rate equal to 3-month U.S. dollar LIBOR. The excess return deduction reflects a deduction at the same rate, completely offsetting the positive accrual of the Cash Constituent. Although the Cash Constituent and the excess return deduction will offset each other, resulting in no net change, the index fee will continue to be deducted. As a result, at any time when the Index has 100% exposure to the Cash Constituent, the Index will steadily decline at a rate equal to the index fee. 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 the performance of the Cash Constituent. 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 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 a deduction for an index fee of 0.75% per annum. For more details, see "—Excess Return Deduction" and "—Index Fee" 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, and that uninvested portion will realize a net decline after the index fee is taken into account. 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 global equities asset class includes large-capitalization U.S. stocks but not mid- or small-capitalization U.S. stocks; the commodities asset class is primarily concentrated in gold and permits only a limited allocation to a more broad-based commodity ETF; and the only U.S. Treasury bonds that are included (other than TIPS) are Treasury bonds with a maturity of greater than 20 years. Moreover, the Eligible Constituents exclude a number of major asset classes altogether, such as currencies. 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 level of 3-month U.S. dollar LIBOR, 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, which may adversely affect Index performance by limiting the exposure of the Index to assets that would otherwise experience long-term appreciation. 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.

See "Key Risks Relating to the Index—The Index may not effectively implement modern portfolio theory".

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 section.

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 this Index Supplement. The Index Sponsor is not affiliated with the sponsors of any of the Eligible Market Constituents. All information included in this Index Supplement 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%; and

(ii) the percentage weight of each Eligible Market Constituent must not exceed its maximum percentage weight, 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 twelve, 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 Index Supplement, 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 level of 3-month U.S. dollar LIBOR 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 "Key Risks Relating to the Index" in this Index Supplement 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 the performance of the Cash Constituent. The Cash Constituent is a hypothetical money market instrument with a return equal to 3-month U.S. dollar LIBOR, which is

reset on each Rate Reset Day. On any Rate Reset Day, 3-month U.S. dollar LIBOR will be the rate displayed on Bloomberg page "US0003M <Index>" (or any successor page or any substitute page that is widely recognized by participants in the relevant market and that the Index Calculation Agent may determine appropriate) on that Rate Reset Day; *provided* that if 3-month U.S. dollar LIBOR is unavailable for any reason, 3-month U.S. dollar LIBOR will be the most recently available rate for an Index Business Day preceding the applicable Rate Reset Day. The last day in each Rebalancing Period is a "Rate Reset Day".

Three-month U.S. dollar LIBOR reflects the rate at which banks lend U.S. dollars to each other for a term of 3 months in the London interbank market. Although many factors may affect the level of 3-month U.S. dollar LIBOR, one important factor is the monetary policy of the Federal Reserve. Although the Federal Reserve maintained the federal funds target rate at relatively low levels in recent years, the Federal Reserve has begun to raise the federal funds target rate and may do so further at any time. If the Federal Reserve continues to raise interest rates (specifically, its federal funds target rate), or if 3-month U.S. dollar LIBOR rises for any other reason, 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, and that uninvested portion will realize a net decline after the index fee is taken into account.

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). 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).

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

An index fee is deducted in the calculation of the Index. The index fee is deducted from the daily performance of the Index at a rate of 0.75% per annum.

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 "CIISMP5N <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 June 30, 2015 and was set to a base Index Level of 1,000 on the "Index Base Date" of February 3, 2005. "Index Business Day" means each day that 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 New York.

The Index Level will be determined based on the Index Constituent Level of each Eligible Constituent in the Index. The "Index Constituent Level" for each Eligible Market Constituent is set to 100 on September 22, 2003 and, on each Index Business Day thereafter, fluctuates in a manner that corresponds to changes in the official closing price ("Closing Price") of the Eligible Market Constituent, subject to the following adjustments:

- The Index Constituent Level for each Eligible Market Constituent is calculated in a manner that gives effect to a hypothetical reinvestment of all regular Cash Dividends and Extraordinary Dividends in the applicable Eligible Market Constituent at its Closing Price on the Total Return Business Day immediately preceding the applicable Ex-Dividend Date (or, if such Total Return Business Day is not a Scheduled Trading Day for the applicable Eligible Market Constituent, on the immediately preceding Scheduled Trading Day for the applicable Eligible Market Constituent). For this purpose:

  - A "Cash Dividend" means, in respect of an Eligible Market Constituent, any regular dividend (in the form of a cash dividend only) declared by the issuer of such Eligible Market Constituent (excluding any Extraordinary Dividend).

  - "Extraordinary Dividend" means a dividend or a distribution or portion thereof which is determined by the Index Calculation Agent to be an extraordinary dividend relating to such Eligible Market Constituent having regard to general market consensus and will generally include any dividend (in the form of a cash dividend) which is described as "special", "extra", "irregular" or a "return of capital".

  - "Ex-Dividend Date" means, in respect of a share and a dividend payment which has been announced by the issuer of such share, the first day on which a purchaser of such share will not be entitled to receive the relevant dividend payment, as fixed by the issuer of such share and/or the primary exchange on which such share is traded.

- o "Total Return Business Day" means any weekday from Monday to Friday.

- o If a hypothetical U.S. investor would be subject to withholding tax on any Cash Dividend or Extraordinary Dividend, the amount of the dividend that is hypothetically reinvested would be reduced by the amount of the withholding tax.

- o If any Extraordinary Dividend is a non-cash dividend, the amount hypothetically reinvested will be equal to the cash value declared by the issuer of the relevant Eligible Market Constituent or, if no cash value is declared by the issuer of the relevant Eligible Market Constituent, the cash value of such non-cash dividend as determined by the Index Calculation Agent, calculated by reference, where available, to the closing price of any shares comprising such non-cash dividend on the last trading day immediately preceding the relevant Ex-Dividend Date. The cash value of a non-cash dividend shall be converted, if necessary, at the applicable FX Rate for the conversion of the currency in which the relevant non-cash dividend is denominated into U.S. dollars. "FX Rate" means, in respect of the notional exchange of one currency to another currency, the applicable WM/Reuters "Closing Spot Rate" as published by The World Markets Company plc in conjunction with Reuters at approximately 4.00 p.m. (London time) on the Ex-Dividend Date or, if such rate is discontinued or unavailable on the relevant day for any reason, such other exchange rate for the relevant currency conversion as the Index Calculation Agent shall determine appropriate by reference to an alternative foreign exchange rate service that is widely used, publicly available and not published by the Index Sponsor or any of its affiliates.

- · If any Eligible Market Constituent declares a Share Split or a Stock Dividend, the Closing Price of the Eligible Market Constituent will be adjusted so that there is no change in the Index Constituent Level resulting solely from the Share Split or Stock Dividend. For this purpose:

- o "Share Split" means, in respect of an Eligible Market Constituent, a share split, subdivision, reverse share split, consolidation or similar reclassification of the share of such Eligible Market Constituent.

- o "Stock Dividend" means, in respect of an Eligible Market Constituent, a dividend (in the form of a stock dividend) of shares of such Eligible Market Constituent declared by the issuer of such shares (excluding any Extraordinary Dividend) .

The Index Constituent Level for the Cash Constituent on any Index Business Day is calculated by the Index Calculation Agent in the manner described under "Descriptions of the Eligible Constituents—Cash Constituent" in this Index Supplement.

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 Eligible Market Constituents may be disrupted or other events may occur that affect the Eligible Market Constituents. 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.

Consequences of Disrupted Days or Non-Scheduled Trading Days

Daily Index Calculation. If any Index Business Day 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 non-Scheduled Trading Day or Disrupted 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 Index Constituent Level of the

relevant Index Constituent on such Index Business Day and (ii) in respect of each Affected Constituent, the Index Constituent 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. If any Index Business Day is a Disrupted Day for one or more Index Constituents, the Index Calculation Agent will calculate the Index Level in respect of such Index Business Day by reference to (i) for each Index Constituent which is not an Affected Constituent, the Index Constituent Level of the relevant Index Constituent on such Index Business Day and (ii) in respect of each Affected Constituent, the Index Constituent Level of such Affected Constituent on the first succeeding Scheduled Trading Day in respect of such Affected Constituent which is not a Disrupted Day for such Affected Constituent; *provided* that if such date has not occurred by the fifth Scheduled Trading Day for such Affected Constituent following the original Index Business Day, the Index Calculation Agent will determine the Index Constituent Level in respect of such Affected Constituent using its good faith estimate of the Index Constituent Level at the Valuation Time on or for such day. 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.

Definitions of Disrupted Day, Scheduled Trading Day and Related Definitions

A "Disrupted Day" means, in respect of an Eligible Market Constituent, any Scheduled Trading Day for such Eligible Market Constituent on which any of the events set out below occurs:

(a) any relevant Exchange or any relevant Related Exchange fails to open for trading during its regular trading session; or

(b) 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 such Eligible Market Constituent; or (ii) any relevant Related Exchange of futures contracts or options contracts relating to such Eligible Market Constituent; or

(c) 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 (d) or sub-paragraph (e) 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 such Eligible Market Constituent; 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 Eligible Market Constituent; or

(d) the closure on any Exchange Business Day of any relevant Exchange 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 relevant Valuation Time on such Exchange Business Day); or

(e) the closure on any Exchange Business Day of any relevant Related Exchange in respect of futures contracts or options contracts relating to such Eligible Market Constituent 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 Valuation Time on such Exchange Business Day).

"Exchange" shall mean, in respect of an Eligible Market Constituent, the primary exchange, trading system or quotation system in respect of such Eligible Market Constituent 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 Eligible Market Constituent has temporarily relocated (provided that, in the determination of the Index Calculation Agent, there is comparable liquidity relative to such Eligible Market Constituent on such temporary substitute exchange, trading system or quotation system as on the original exchange, trading system or quotation system).

"Exchange Business Day" shall mean, in respect of an Eligible Market Constituent, any Scheduled Trading Day for such Eligible Market Constituent on which each relevant Exchange and each relevant Related Exchange 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.

"Related Exchange" shall mean, in respect of an Eligible Market Constituent, 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 Eligible Market Constituent.

"Scheduled Closing Time" shall mean, in respect of an Eligible Market Constituent, a Scheduled Trading Day and an Exchange or a Related Exchange (as relevant) for such Eligible Market Constituent, 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 an Eligible Market Constituent, any day on which each relevant Exchange and each relevant Related Exchange is scheduled to be open for trading for its regular trading session.

"Valuation Time" shall mean, in respect of an Eligible Market Constituent and a Scheduled Trading Day for such Eligible Market Constituent, the Scheduled Closing Time on the relevant Exchange on such Scheduled Trading Day.

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 that is implemented in order to comply with regulatory requirements 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, in each case, in respect of an Eligible Market Constituent; and/or (b) due to any applicable law or regulation that is implemented in order to comply with regulatory requirements, 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 Market 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 Market Constituent will be removed from the Index on the date (an "Additional Rebalancing Date") designated by the Index Calculation Agent or the Index Sponsor. Upon the designation of an

Additional Rebalancing Date, (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; and/or (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 replacement criteria in Table II below and 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; and/or (c) the Index Sponsor may discontinue and cancel the Index.

Consequences of Adjustment Events. If an Adjustment Event (as defined below) occurs in respect of any Eligible Market Constituent (the "Affected Adjustment Event Constituent"), then the Index Calculation Agent will effect as soon as reasonably practicable a Reweighting in respect of such Affected Adjustment Event Constituent. However, 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 Adjustment Event Constituent.

"Replacement" means that the Index Calculation Agent will remove the Affected Adjustment Event Constituent from the Index and either:

(a) replace the Affected Adjustment Event Constituent with an Eligible Market Constituent that has substantially similar characteristics to the Affected Adjustment Event Constituent and is selected in accordance with the replacement criteria specified in Table II below; or

(b) if no such replacement can be made or the Index Calculation Agent determines that no such replacement it can make will produce a commercially reasonable result, replace the Affected Adjustment Event Constituent with a replacement constituent which shall confer no investment exposure.

"Reweighting" means that the Index Calculation Agent will revise the weight attributed to the Affected Adjustment Event Constituent to account for the economic effect on the Index of the relevant Adjustment Event in a manner that is consistent with the commercial objective of the Index. For the avoidance of doubt, the weight attributed to the Affected Adjustment Event Constituent may be zero.

In the case of either a Replacement or a Reweighting, the Index Calculation Agent will, in a manner that is consistent with the commercial objective of the Index, (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.

Definition of Adjustment Event and Related Definitions.

"Adjustment Event" means, in respect of an Eligible Market Constituent, the occurrence of any of the following events: a Corporate Action, a Delisting, an Insolvency, a Merger Event, a Nationalization, a Tender Offer, a Cross-contamination, an Issuer Modification, a Regulatory Action, a Strategy Breach or a Failure by a Service Provider.

"Corporate Action" means, in respect of an Eligible Market Constituent, any of the following events (provided that, in each case, the relevant event has a diluting or concentrative effect on the theoretical value of shares of such Eligible Market Constituent and provided further that any such event for which an adjustment is described under "Index Level Calculation" above will be subject to adjustment as so described and will not be subject to adjustment as an Adjustment Event):

(i) a subdivision, consolidation or reclassification of shares of such Eligible Market Constituent, unless resulting in a Merger Event; or

(ii) a free distribution or dividend of shares of such Eligible Market Constituent to existing holders by way of bonus, capitalization or similar issue; or

(iii) a distribution, issue or dividend to existing holders of shares of such Eligible Market Constituent of (A) an additional amount of shares of such Eligible Market Constituent; or (B) other share capital or securities

granting the right to payment of dividends and/or the proceeds of the liquidation of the relevant Eligible Market Constituent equally or proportionately with such payments to holders of shares of such Eligible Market Constituent; or (C) share capital or other securities of another issuer acquired or owned (directly or indirectly) by such Eligible Market Constituent as a result of a spin-off or other similar transaction; or (D) any other type of securities, rights or warrants or other assets, in any case for payment (whether in cash or otherwise) at less than their prevailing market price; or

(iv) an Extraordinary Dividend; or

(v) any repurchase by the relevant Eligible Market Constituent whether:

(x) such repurchase is direct or indirect from an investor in such Eligible Market Constituent; or

(y) the consideration for such repurchase is cash, securities or otherwise,

other than in respect of a redemption of shares of such Eligible Market Constituent initiated by an investor in shares of such Eligible Market Constituent which is consistent with the relevant Offering Documents; or

(vi) any other similar event which may have a diluting or concentrative effect on the theoretical value of shares of such Eligible Market Constituent.

"Delisting" means, in respect of an Eligible Market Constituent, that any relevant Exchange announces that pursuant to the rules of such Exchange such Eligible Market Constituent ceases (or will cease) to be listed, traded or publicly quoted on such Exchange for any reason (other than a Merger Event or a Tender Offer) and are not (or will not be) immediately re-listed, re-traded or re-quoted on an exchange or quotation system located in the same country as such Exchange (or, where such Exchange is located within the European Union, in any member state of the European Union) or another exchange or quotation system (that is acceptable to the Index Calculation Agent) located in another country (that is acceptable to the Index Calculation Agent). In addition, it will also constitute a Delisting if the relevant Exchange is located in the United States and the relevant Eligible Market Constituent is not immediately re-listed, re-traded or re-quoted on any of the New York Stock Exchange, the NASDAQ Global Select Market and the NASDAQ Global Market (or their respective successors).

"Insolvency" means, in respect of an Eligible Market Constituent, that either (i) by reason of the voluntary or involuntary liquidation, bankruptcy, insolvency, dissolution or winding up of (or any analogous proceeding) affecting such Eligible Market Constituent (A) all shares of such Eligible Market Constituent are required to be transferred to an Insolvency Officer; or (B) holders of such shares become legally prohibited from transferring or redeeming such

shares; or (ii) an Insolvency Event occurs in respect of such Eligible Market Constituent or any of its Service Providers.

"Insolvency Officer" shall mean an administrator, provisional liquidator, conservator, receiver, trustee, custodian or other similar official.

"Insolvency Event" shall mean, in respect of an entity, that such entity (i) is dissolved or has a resolution passed for its dissolution, winding-up or official liquidation (other than pursuant to a consolidation, amalgamation or merger); (ii) makes a general assignment or arrangement with or for the benefit of its creditors; (iii) either (A) institutes, or has instituted against it by a Competent Official, a proceeding seeking an Insolvency Judgment, or a petition is presented for its winding-up or liquidation by it or by such Competent Official; or (B) has instituted against it a proceeding seeking an Insolvency Judgment, or a petition is presented for its winding-up or liquidation, and such proceeding or petition is instituted or presented by a person not described in (A) above and either (1) results in an Insolvency Judgment or the entry of an order for relief or the making of an order for its winding up or liquidation; or (2) is not dismissed, discharged, stayed or restrained, in each case within 15 days of the institution or presentation thereof; or (iv) seeks or becomes subject to the appointment of an Insolvency Officer of all or substantially all of its assets; or (v) has a secured party take possession of all or substantially all of its assets (and such secured party maintains possession for not less than 15 days thereafter); or (vi) has a distress, execution, attachment, sequestration or other legal process levied, enforced or sued on or against all or substantially all of its assets (and such process is not dismissed, discharged, stayed or restrained within 15 days thereafter); or (vii) the holders of securities issued by such entity become legally prohibited from transferring such securities; or (viii) causes or is subject to any event which, under the applicable laws of any jurisdiction, has an analogous effect to any of the events specified in (iv) to (vi) above. For these purposes, "Competent Official" shall mean, in respect of such

entity, a regulator, supervisor or other similar official with primary insolvency, rehabilitative or regulatory jurisdiction over it in the jurisdiction of its incorporation or organization or in the jurisdiction of its head office or home office; "Insolvency Law" shall mean any bankruptcy law, insolvency law or other similar law affecting creditors' rights; and "Insolvency Judgment" shall mean any judgment of insolvency or bankruptcy or any other relief under any Insolvency Law.

"Merger Event" means, in respect of an Eligible Market Constituent, any:

(i) reclassification or change of shares of such Eligible Market Constituent which results in a transfer of or an irrevocable commitment to transfer all such shares outstanding to another entity or person; or

(ii) consolidation, amalgamation, merger or binding share exchange of the relevant Eligible Market Constituent with or into another entity (other than a consolidation, amalgamation, merger or binding share exchange in which it is the continuing entity and which does not result in a reclassification of all such shares outstanding); or

(iii) takeover offer, tender offer, exchange offer, solicitation, proposal or other event by any entity or person to purchase or otherwise obtain 100 per cent. of the outstanding shares of the relevant Eligible Market Constituent, which results in a transfer of or an irrevocable commitment to transfer all such shares (other than those owned or controlled by such entity or person); or

(iv) consolidation, amalgamation, merger or binding share exchange of the relevant Eligible Market Constituent or its subsidiaries with or into another entity in which such Eligible Market Constituent is the continuing entity and which does not result in the reclassification or change of all such shares outstanding but results in the outstanding shares (other than those owned or controlled by such other entity) immediately prior to such event collectively representing less than 50 per cent. of the outstanding shares immediately following such event.

"Nationalization" means, in respect of an Eligible Market Constituent, that all the shares or all the assets or substantially all the assets of such Eligible Market Constituent are nationalized, expropriated or are otherwise required to be transferred to any governmental agency, authority, entity or instrumentality thereof.

"Tender Offer" means, in respect of an Eligible Market Constituent, a takeover offer, tender offer, exchange offer, solicitation, proposal or other event by any entity or person that results in such entity or person purchasing, or otherwise obtaining or having the right to obtain, by conversion or other means, greater than 10 per cent. and less than 100 per cent. of the outstanding voting shares of such Eligible Market Constituent, as assessed with reference to the filings made with governmental or self-regulatory agencies or such other reasonably relevant information.

“Cross-contamination” means, in respect of an Eligible Market Constituent, the occurrence of a cross-contamination or other failure to segregate effectively assets between different classes, series, cells, compartments or equivalent of such Eligible Market Constituent, and such event continues for the foreseeable future.

“Issuer Modification” means, in respect of an Eligible Market Constituent, any change in or modification of the Offering Documents of such Eligible Market Constituent which could reasonably be expected to materially affect (i) the value of shares of such Eligible Market Constituent; or (ii) the rights and remedies of any holder of shares of such Eligible Market Constituent as compared with those rights and remedies prevailing on June 30, 2015.

“Regulatory Action” means, in respect of an Eligible Market Constituent, (i) the cancellation, suspension, or revocation of the registration or approval of such Eligible Market Constituent or its shares by any governmental, legal or regulatory entity with authority over such Eligible Market Constituent; (ii) any change in the legal, tax, accounting or regulatory treatment of such Eligible Market Constituent, its shares or its Adviser which is reasonably likely to have a material adverse impact on the value of such Eligible Market Constituent or its shares or on any investor in such Eligible Market Constituent; or (iii) such Eligible Market Constituent or any of its Service Providers becomes subject to any investigation, proceeding or litigation by any relevant governmental, legal or regulatory authority involving the alleged violation of applicable law or regulation for any activity relating to or resulting from the operation of such Eligible Market Constituent or Service Provider, as the case may be, which in each case is reasonably likely to have a material adverse impact on the value of such shares or on any investor in such Eligible Market Constituent.

"Strategy Breach" means, in respect of an Eligible Market Constituent, any breach or violation of any strategy or investment guidelines stated in the Offering Documents of the relevant Eligible Market Constituent which is reasonably likely to have a material adverse impact on: (i) the value of shares of such Eligible Market Constituent; or (ii) the rights and remedies of any holder of such shares as compared with those rights and remedies prevailing on June 30, 2015.

"Failure by a Service Provider" means, in respect of an Eligible Market Constituent, a failure by a Service Provider in respect of such Eligible Market Constituent to perform any of its obligations in respect of such Eligible Market Constituent in a manner which is reasonably likely to materially affect: (i) the value of shares of such Eligible Market Constituent; or (ii) the rights and remedies of any holder of such shares as compared with those rights and remedies prevailing on June 30, 2015.

"Administrator" shall mean, in respect of an Eligible Market Constituent, the administrator, manager, trustee or similar person with the primary administrative responsibilities for such Eligible Market Constituent, as described in the Offering Documents of such Eligible Market Constituent.

"Adviser" shall mean, in respect of an Eligible Market Constituent, any person appointed in the role of discretionary investment manager or non-discretionary investment adviser (including a non-discretionary investment adviser to a discretionary investment manager or to another non-discretionary investment adviser) to such Eligible Market Constituent.

"Offering Documents" shall mean, in respect of an Eligible Market Constituent, the constitutive and governing documents of such Eligible Market Constituent, including the prospectus or offering circular (howsoever described), together with the subscription agreements and other agreements, in each case relating to such Eligible Market Constituent and as amended from time to time.

"Service Provider" shall mean, in respect of an Eligible Market Constituent, any person who is appointed to provide services, directly or indirectly, for such Eligible Market Constituent, whether or not specified in the relevant Offering Documents, or any successor, including without limitation any Adviser, Administrator, operator, management company, depositary, custodian, sub-custodian, prime broker, trustee, registrar and transfer agent or domiciliary agent.

Replacement Criteria. 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 II

Eligible Market Constituents	**Replacement Criteria**
iShares Core S&P 500 ETF	Exposure to large cap US equities
Vanguard FTSE Europe ETF	Exposure to equities from Europe
iShares MSCI Japan ETF	Exposure to equities from Japan
Vanguard FTSE Emerging Markets ETF	Exposure to emerging market equities
iShares 20+ Year Treasury Bond ETF	Exposure to long term U.S. Treasury bonds
iShares TIPS Bond ETF	Exposure to U.S. Treasury inflation-protected securities
iShares iBoxx $ Investment Grade Corporate Bond ETF	Exposure to U.S. dollar denominated, investment-grade corporate bonds

SPDR Barclays High Yield Bond ETF	Exposure to U.S. dollar denominated, high yield corporate bonds
iShares U.S. Real Estate ETF	Exposure to U.S. real estate equities
iShares U.S. Preferred Stock ETF	Exposure to the U.S. preferred stock market
PowerShares DB Commodity Index Tracking Fund	Exposure to a basket of commodities that excludes livestock exposure
SPDR Gold Trust	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

If the Index Calculation Agent becomes aware that any information used by it in connection with any calculation under the Index Rules has subsequently been corrected or adjusted within the Correction Period and the Correction Period does not include a Rebalancing Date, then the Index Calculation Agent shall 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. If the Correction Period includes a Rebalancing Date, the Index Calculation Agent may, but shall not be obliged to, use such corrected or adjusted information, and in exercising such discretion, the Index Calculation Agent will act in good faith and in a commercially reasonable manner that is consistent with the commercial objective of the Index. The Correction Period is two Index Business Days after the date of original publication of the applicable information.

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 commercial objective of the Index.

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.

Hypothetical Back-Tested Index Performance Information

The Index Sponsor has calculated hypothetical back-tested performance information for the Index, which will be included in the applicable pricing supplement. All Index performance information prior to June 30, 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 prices of the Eligible Market Constituents and the published historical 3-month U.S. dollar LIBOR rate, applying the Index methodology substantially as described above, except that proxy data for six of the twelve Eligible Market Constituents has been used for certain periods prior to December 4, 2007 when such Eligible Market Constituents did not yet exist. Specifically:

· the SPDR Barclays High Yield Bond ETF commenced trading on December 4, 2007;

· the iShares U.S. Preferred Stock ETF commenced trading on March 30, 2007;

· the PowerShares DB Commodity Index Tracking Fund commenced trading on February 3, 2006;

· the Vanguard FTSE Europe ETF commenced trading on March 10, 2005;

- the Vanguard FTSE Emerging Markets ETF commenced trading on March 10, 2005; and
- the SPDR Gold Trust commenced trading on November 18, 2004.

For all time periods covered by the hypothetical back-tested performance information for the Index during which any Eligible Market Constituent (other than the SPDR Gold Trust) had not yet commenced trading, the total return version of the underlying index tracked by that Eligible Market Constituent as of June 30, 2015 has been used as a proxy for that Eligible Market Constituent for purposes of calculating the hypothetical back-tested performance information. The total return versions of the underlying indices reflect changes in the prices of the underlying assets and, in addition, reflect (i) in the case of an equity index, the hypothetical reinvestment of dividends, (ii) in the case of a bond index, the hypothetical reinvestment of interest payments and (iii) in the case of a commodity index, the yield on a hypothetical investment in 3-month U.S. Treasury bills. In the case of the SPDR Gold Trust, the proxy used is the afternoon gold fixing price published by the London Bullion Market Association.

The proxies used in the calculation of the hypothetical back-tested performance information differ from the corresponding Eligible Market Constituents in that they do not reflect fees and expenses of the Eligible Market Constituents that would have reduced the performance of the Eligible Market Constituents; they do not reflect any tracking error with respect to the relevant underlying index that would have been experienced by an Eligible Market Constituent; and they do not reflect the reinvestment of dividends or interest payments in the same manner as dividends or distributions are hypothetically reinvested in the Eligible Market Constituents by the Index.

Accordingly, the hypothetical back-tested Index performance information, to the extent that it utilizes proxy data, may not reflect how the Index would have performed had the relevant Eligible Market Constituents existed during the relevant time period.

In addition, certain of the Eligible Market Constituents have changed the underlying indices that they seek to track, and the underlying indices tracked by certain of the Eligible Market Constituents have made changes to their rules. For example:

- *Vanguard FTSE Emerging Markets ETF*. Prior to January 2013, the Vanguard FTSE Emerging Markets ETF tracked the MSCI Emerging Markets Index. In January 2013, the ETF began to transition from tracking the MSCI Emerging Markets Index to tracking the FTSE Emerging Index. In order to accomplish that transition, from January 10, 2013 to June 28, 2013 the Vanguard FTSE Emerging Markets ETF employed an indexing investment approach by investing substantially all of its assets (approximately 95%) in the common stocks included in the FTSE Emerging Transition Index. The FTSE Emerging Transition Index differed from FTSE's Emerging Index prior to March 18, 2013, in that it contained "P Chip" and South Korean companies, used actual free float in the calculation of the FTSE Emerging Index, and incorporated the indicative additions and deletions that were projected to be applied at the March 2013 index review. A "P Chip" company is one that is controlled by mainland China individuals, with the establishment and origin of the company in mainland China. The company must be incorporated outside of the People's Republic of China and traded on the Stock Exchange of Hong Kong, with a majority of its revenue or assets derived from mainland China.

At the March 2013 FTSE Emerging Index review, the majority of these differences were removed, and the primary difference was that the FTSE Emerging Transition Index contained South Korean companies. FTSE, the publisher of the FTSE Emerging Index and the FTSE Emerging Transition Index, classified South Korea as a Developed Market in September 2009 and since then it has not been a member of FTSE's emerging indices. As the MSCI Emerging Markets Index included South Korea in its portfolio, constituents of the FTSE Korea Index were initially included in the transition index universe and then over a 25-week time horizon weight of South Korea within the index was gradually reduced. The FTSE Emerging Transition Index was a "dynamic" index that represented the components of the FTSE Emerging Index plus South Korean equity exposure. The FTSE Emerging Transition Index was designed to gradually reduce South Korean equity exposure by approximately 4% each week over a period of 25 weeks while proportionately adding exposure to stocks of companies located in other countries based on their weightings in the FTSE Emerging Index. As of June 28, 2013, the ETF completed its transition and began tracking the performance of the FTSE Emerging Index.

Additionally, on June 2, 2015, The Vanguard Group, Inc. announced that the Vanguard FTSE Emerging Markets ETF will transition to track a new underlying index. According to The Vanguard Group, Inc., the transition to the new underlying index will take place over a period of approximately 12 months starting in the third or fourth quarter of 2015, with the Vanguard FTSE Emerging Markets ETF ceasing to track the FTSE Emerging Index and beginning to temporarily track the FTSE Emerging Markets All Cap China A Transition Index. By using this transition index, the ETF will gradually move from tracking the FTSE Emerging Index to tracking the FTSE Emerging Markets All Cap China A Inclusion Index. As part of the transition, China A-shares and small capitalization companies will gradually increase in weight by an equal amount after the third Friday of each month over the 12-month period, while the weights of the stocks already in the index will be proportionately reduced. The FTSE Emerging Markets All Cap

China A Inclusion Index is a market-capitalization weighted index representing the performance of large-, mid- and small-capitalization stocks in emerging markets, with market-capitalization adjustments in the case of China A-Shares to take into account the quota amount allocated to foreign investors by the Chinese regulator. The FTSE Emerging Markets All Cap China A Inclusion Index is comprised of approximately 3,350 securities from 21 countries, and is part of the FTSE China A Inclusion Indexes. The principal differences between the FTSE Emerging Index and the FTSE Emerging Markets All Cap China A Inclusion Index are that the former represents the performance of large- and mid-cap companies in emerging markets, excluding China A-Shares, whereas the latter also represents the performance of small-cap stocks in emerging markets and includes China A-Shares. As a result of this transition, the Vanguard FTSE Emerging Markets ETF will be exposed to risks associated with investing both in mainland China and in small-capitalization stocks.

- *Vanguard FTSE Europe ETF*. On June 2, 2015, The Vanguard Group, Inc. announced that the Vanguard FTSE Europe ETF will transition to track a new underlying index. According to The Vanguard Group, Inc., the transition to the new underlying index will take place over a period of approximately 12 months starting in the third or fourth quarter of 2015, with the Vanguard FTSE Europe ETF ceasing to track the FTSE Developed Europe Index and beginning to track the FTSE Developed Europe All Cap Index. The FTSE Developed Europe Index is a market-capitalization weighted index representing the performance of large-, mid- and small-capitalization stocks in developed European markets. The principal difference between the FTSE Developed Europe Index and the FTSE Developed Europe All Cap Index is that the latter includes small-capitalization stocks.

- *SPDR Barclays High Yield Bond ETF*. On February 1, 2013, the sponsor of the underlying index of the SPDR Barclays High Yield Bond ETF began implementing the following changes to the index rules over a six-month transition period: (i) increasing the number of eligible bonds from the largest bond per issuer to the three largest bonds per issuer; (ii) lowering the minimum security amount outstanding threshold from $600 million to $500 million; (iii) lengthening the seasoning period from issuance for eligible bonds from three to five years; and (iv) capping the exposure of any index eligible issuer at two percent (there was previously no issuer cap in place).

As a result of these changes, the underlying indices to be tracked in the future by these Eligible Market Constituents differ in certain respects from the underlying indices tracked by the same Eligible Market Constituents during some or all of the back-tested period. The sponsor of any Eligible Market Constituent or its underlying index may make additional changes in the future. The hypothetical back-tested Index performance may not reflect how the Index would have performed had the relevant Eligible Market Constituents tracked the same underlying indices (with the same rules) during the full back-tested period that they will track in the future.

It is impossible to predict whether the Index will rise or fall. By providing hypothetical back-tested and historical Index performance information in connection with the Notes, we are not representing 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 or historical performance of the Index.

Benefit Plan Investor Considerations

A fiduciary of a pension, profit-sharing or other employee benefit plan subject to the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), including entities such as collective investment funds, partnerships and separate accounts whose underlying assets include the assets of such plans (collectively, "ERISA Plans"), should consider the fiduciary standards of ERISA in the context of the ERISA Plan's particular circumstances before authorizing an investment in the Notes. Among other factors, the fiduciary should consider whether the investment would satisfy the prudence and diversification requirements of ERISA and would be consistent with the documents and instruments governing the ERISA Plan.

Section 406 of ERISA and Section 4975 of the Internal Revenue Code of 1986, as amended, (the "Code") prohibit ERISA Plans, as well as plans (including individual retirement accounts and Keogh plans) subject to Section 4975 of the Code (together with ERISA Plans, "Plans"), from engaging in certain transactions involving the "plan assets" with persons who are "parties in interest" under ERISA or "disqualified persons" under Section 4975 of the Code (in either case, "Parties in Interest") with respect to such Plans. As a result of our business, we, and our current and future affiliates, may be Parties in Interest with respect to many Plans. Where we (or our affiliate) are a Party in Interest with respect to a Plan (either directly or by reason of our ownership interests in our directly or indirectly owned subsidiaries), the purchase and holding of the Notes by or on behalf of the Plan could be a prohibited transaction under Section 406 of ERISA and/or Section 4975 of the Code, unless exemptive relief were available under an applicable exemption (as described below).

Certain prohibited transaction class exemptions ("PTCEs") issued by the U.S. Department of Labor may provide exemptive relief for direct or indirect prohibited transactions resulting from the purchase or holding of the Notes. Those class exemptions are PTCE 96-23 (for certain transactions determined by in-house asset managers), PTCE 95-60 (for certain transactions involving insurance company general accounts), PTCE 91-38 (for certain transactions involving bank collective investment funds), PTCE 90-1 (for certain transactions involving insurance company separate accounts) and PTCE 84-14 (for certain transactions determined by independent qualified asset managers). In addition, ERISA Section 408(b)(17) and Section 4975(d)(20) of the Code may provide a limited exemption for the purchase and sale of the Notes and related lending transactions, *provided* that neither the issuer of the Notes nor any of its affiliates have or exercise any discretionary authority or control or render any investment advice with respect to the assets of the Plan involved in the transaction and *provided further* that the Plan pays no more, and receives no less, than adequate consideration in connection with the transaction (the so-called "service provider exemption"). There can be no assurance that any of these statutory or class exemptions will be available with respect to transactions involving the Notes.

Accordingly, the Notes may not be purchased or held by any Plan, any entity whose underlying assets include "plan assets" by reason of any Plan's investment in the entity (a "Plan Asset Entity") or any person investing "plan assets" of any Plan, unless such purchaser or holder is eligible for the exemptive relief available under PTCE 96-23, 95-60, 91-38, 90-1 or 84-14 or the service provider exemption or there is some other basis on which the purchase and holding of the Notes will not constitute a non-exempt prohibited transaction under ERISA or Section 4975 of the Code. Each purchaser or holder of the Notes or any interest therein will be deemed to have represented by its purchase or holding

of the Notes that (a) it is not a Plan and its purchase and holding of the Notes is not made on behalf of or with "plan assets" of any Plan or (b) its purchase and holding of the Notes will not result in a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code.

Certain governmental plans (as defined in Section 3(32) of ERISA), church plans (as defined in Section 3(33) of ERISA) and non-U.S. plans (as described in Section 4(b)(4) of ERISA) ("Non-ERISA Arrangements") are not subject to these "prohibited transaction" rules of ERISA or Section 4975 of the Code, but may be subject to similar rules under other applicable laws or regulations ("Similar Laws"). Accordingly, each such purchaser or holder of the Notes shall be required to represent (and deemed to have represented by its purchase of the Notes) that such purchase and holding is not prohibited under applicable Similar Laws.

Due to the complexity of these rules, it is particularly important that fiduciaries or other persons considering purchasing the Notes on behalf of or with "plan assets" of any Plan consult with their counsel regarding the relevant provisions of ERISA, the Code or any Similar Laws and the availability of exemptive relief under PTCE 96-23, 95-60, 91-38, 90-1, 84-14, the service provider exemption or some other basis on which the acquisition and holding will not constitute a non-exempt prohibited transaction under ERISA or Section 4975 of the Code or a violation of any applicable Similar Laws.

The Notes are contractual financial instruments. The financial exposure provided by the Notes is not a substitute or proxy for, and is not intended as a substitute or proxy for, individualized investment management or advice for the benefit of any purchaser or holder of the Notes. The Notes have not been designed and will not be administered in a manner intended to reflect the individualized needs and objectives of any purchaser or holder of the Notes.

Each purchaser and holder of the Notes has exclusive responsibility for ensuring that its purchase, holding and subsequent disposition of the Notes does not violate the fiduciary or prohibited transaction rules of ERISA, the Code or any applicable Similar Laws. The sale of any Notes to any Plan is in no respect a representation by us or any of our affiliates or representatives that such an investment meets all relevant legal requirements with respect to investments by Plans or Non-ERISA Arrangements generally or any particular Plan or Non-ERISA Arrangement, or that such an investment is appropriate for Plans or Non-ERISA Arrangements generally or any particular Plan or Non-ERISA Arrangement.

However, individual retirement accounts, individual retirement annuities and Keogh plans, as well as employee benefit plans that permit participants to direct the investment of their accounts, will not be permitted to purchase or hold the Notes if the account, plan or annuity is for the benefit of an employee of CGMI or a family member and the employee receives any compensation (such as, for example, an addition to bonus) based on the purchase of Notes by the account, plan or annuity.

UNITED STATES FEDERAL TAX CONSIDERATIONS

The following is a discussion of the material U.S. federal income and certain estate tax consequences of the ownership and disposition of the Notes. It applies to you only if you purchase a Note for cash in the initial offering at the "issue price," which is the first price at which a substantial amount of the Notes is sold to the public, and hold the Note as a capital asset within the meaning of Section 1221 of the Code. This discussion does not address all of the tax consequences that may be relevant to you in light of your particular circumstances or if you are a holder subject to special rules, such as:

- a financial institution;
- a "regulated investment company";
- a tax-exempt entity, including an "individual retirement account" or "Roth IRA";
- a dealer or trader subject to a mark-to-market method of tax accounting with respect to the Notes;
- a person holding a Note as part of a "straddle" or conversion transaction or one who enters into a "constructive sale" with respect to a Note;
- a person subject to the alternative minimum tax;
- a U.S. Holder (as defined below) whose functional currency is not the U.S. dollar; or
- an entity classified as a partnership for U.S. federal income tax purposes.

If an entity that is classified as a partnership for U.S. federal income tax purposes holds the Notes, the U.S. federal income tax treatment of a partner will generally depend on the status of the partner and the activities of the partnership. If you are a partnership holding the Notes or a partner in such a partnership, you should consult your tax adviser as to the particular U.S. federal tax consequences of holding and disposing of the Notes to you.

We will not attempt to ascertain whether any issuer of any Underlying Shares, or shares that underlie an Underlying Index, to which the Notes relate (collectively, the "Underlying Equity") should be treated as a "U.S. real property holding corporation" ("USRPHC") within the meaning of Section 897 of the Code. If any issuer of the Underlying Equity were so treated, certain adverse U.S. federal income tax consequences might apply to you if you are a Non-U.S. Holder (as

defined below) upon a sale, exchange or other disposition of the Notes. You should refer to information filed with the Securities and Exchange Commission or another governmental authority by the issuers of the Underlying Equity and consult your tax adviser regarding the possible consequences to you if any issuer of Underlying Equity is or becomes a USRPHC.

This discussion is based on the Code, administrative pronouncements, judicial decisions and final, temporary and proposed Treasury regulations, all as of the date of this index supplement, changes to any of which subsequent to the date of this index supplement may affect the tax consequences described herein, possibly with retroactive effect. This discussion does not address the effects of any applicable state, local or non-U.S. tax laws or the potential application of the Medicare contribution tax. You should consult your tax adviser about the application of the U.S. federal income and estate tax laws (including the possibility of alternative treatments of the Notes) to your particular situation, as well as any tax consequences arising under the laws of any state, local or non-U.S. jurisdiction.

This discussion may be supplemented, modified or superseded by disclosure regarding U.S. federal tax consequences set out in an applicable pricing supplement, which you should read before making a decision to invest in the relevant Notes.

Tax Treatment of the Notes

Unless otherwise indicated in the applicable pricing supplement, we intend to treat the Notes as debt instruments for U.S. federal income tax purposes, and the discussion herein is based on this treatment. With respect to Notes with a term of longer than one year (calculated as described below), the applicable pricing supplement will specify whether we intend to treat such Notes as “variable rate debt instruments” or as “contingent payment debt instruments,” each as discussed below.

The discussion below is subject to the discussion under "—Assumption by Citigroup Inc." and should be read in conjunction therewith.

Tax Consequences to U.S. Holders

This section applies only to U.S. Holders. You are a "U.S. Holder" if for U.S. federal income tax purposes you are a beneficial owner of a Note that is:

- a citizen or individual resident of the United States;
- a corporation created or organized in or under the laws of the United States, any state thereof or the District of Columbia; or
- an estate or trust the income of which is subject to U.S. federal income taxation regardless of its source.

Legislation enacted in 2017 modified the rules regarding the timing of income to be recognized by accrual method taxpayers. Under this legislation, if you are an accrual method taxpayer, notwithstanding the discussion below, you may be required to include income on a Note no later than when the relevant item is taken into account as revenue in an applicable financial statement. You should consult your tax adviser concerning the application of these rules in your particular situation.

Short-Term Notes

The following discussion applies only to Notes with a term of one year or less (from but excluding the issue date to and including the last possible date that the Notes could be outstanding pursuant to their terms) ("Short-Term Notes"). Generally, a Short-Term Note is treated as issued at a discount equal to the sum of all payments required on the Note minus its issue price.

If you are a cash-method U.S. Holder, you generally will not be required to recognize income with respect to a Short-Term Note prior to maturity, other than with respect to the receipt of interest payments, if any, or pursuant to a sale or other taxable disposition of the Note. If you are an accrual-method U.S. Holder (or a cash-method U.S. Holder who elects to accrue income on the Note currently), you will be subject to rules that generally require accrual of discount on Short-Term Notes on a straight-line basis, unless you elect a constant-yield method of accrual based on daily compounding. It is not clear whether or how any accrual should be determined prior to the relevant Valuation

Date(s) in respect of a payment. You should consult your tax adviser regarding the amount and timing of any accruals on such Notes.

Upon a sale, exchange or retirement (each, a "taxable disposition") of a Short-Term Note, you will generally recognize gain or loss equal to the difference between the amount realized on the sale or other taxable disposition and your tax basis in the Note. Your tax basis in the Note should equal the amount paid to acquire the Note increased, if you accrue income on the Notes currently, by any previously accrued but unpaid discount. The amount of any resulting loss generally will be treated as a short-term capital loss, the deductibility of which is subject to limitations. The excess of the amount received at maturity over your tax basis in the Note generally should be treated as ordinary income. If you sell a Short-Term Note providing for a contingent return at maturity prior to the time the contingent return has been fixed, it is not clear whether any gain you recognize should be treated as ordinary income, short-term capital gain, or a combination of ordinary income and short-term capital gain. You should consult your tax adviser regarding the treatment of Short-Term Notes providing for contingent payments.

If you are a cash-method U.S. Holder, unless you make the election to accrue income currently on a Short-Term Note, you will generally be required to defer deductions for interest paid on indebtedness incurred to purchase or carry the Note in an amount not exceeding the accrued discount that you have not included in income. As discussed above, it is unclear whether or how accrual of discount should be determined prior to the relevant Valuation Date(s) in respect of a payment. If you make the election to accrue income currently, that election will apply to all Short-Term Notes acquired by you on or after the first day of the first taxable year to which that election applies. You should consult your tax adviser regarding these rules.

Notes Treated as Variable Rate Debt Instruments

The following discussion applies only to Notes that are properly treated as variable rate debt instruments for U.S. federal income tax purposes ("VRDIs") and that provide for stated interest at a single variable rate. The treatment of other VRDIs will be addressed in the applicable pricing supplement.

Stated interest on a VRDI will be treated as "qualified stated interest" ("QSI") and will be taxable to you as ordinary interest income at the time it accrues or is received, in accordance with your method of tax accounting. If the stated principal amount of a VRDI exceeds its issue price by at least a specified de minimis amount, this excess will be treated as "original issue discount" ("OID") that you must include in income as it accrues in accordance with a constant-yield method based on compounding of interest before the receipt of cash payments attributable to this income.

Upon the sale or other taxable disposition of a VRDI, you generally will recognize capital gain or loss equal to the difference between the amount realized (other than amounts attributable to accrued QSI, which will be treated as described above) and your tax basis in the VRDI. Your tax basis in a VRDI will equal the amount you paid to purchase the VRDI, increased by the amounts of OID (if any) you previously included in income with respect to the VRDI and reduced by any payments other than QSI you received. Such gain or loss generally will be long-term capital gain or loss if you held the VRDI for more than one year at the time of disposition. The deductibility of capital losses is subject to limitations.

Notes Treated as Contingent Payment Debt Instruments

The following discussion applies only to Notes that are properly treated as contingent payment debt instruments for U.S. federal income tax purposes ("CPDIs").

We are required to determine a "comparable yield" for each issuance of CPDIs. The comparable yield is the yield at which we could issue a fixed-rate debt instrument with terms similar to those of the CPDIs, including the level of subordination, term, timing of payments and general market conditions, but excluding any adjustments for the riskiness of the contingencies or the liquidity of the CPDIs. Solely for purposes of determining the amount of interest income that you will be required to accrue, we are also required to construct a "projected payment schedule" in respect of the CPDIs representing a payment or a series of payments the amount and timing of which would produce a yield to maturity on the CPDIs equal to the comparable yield.

Neither the comparable yield nor the projected payment schedule constitutes a representation by us regarding the actual amounts that we will pay on the CPDIs.

For U.S. federal income tax purposes, you are required to use our determination of the comparable yield and projected payment schedule in determining interest accruals and adjustments in respect of the CPDIs, unless you timely disclose and justify the use of other estimates to the IRS. Regardless of your method of tax accounting for U.S. federal income tax purposes, you will be required to accrue, as interest income, OID on the CPDIs at the comparable yield, adjusted upward or downward to reflect the difference, if any, between the actual and the projected payments on the CPDIs during the year (as described below).

You will be required for U.S. federal income tax purposes to accrue an amount of OID, for each accrual period prior to and including the maturity (or earlier sale or other taxable disposition) of a CPDI, that equals the product of (i) the "adjusted issue price" of the CPDI (as defined below) as of the beginning of the accrual period, (ii) the comparable yield of the CPDI, adjusted for the length of the accrual period and (iii) the number of days during the accrual period that you held the CPDI divided by the number of days in the accrual period. The adjusted issue price of a CPDI is its issue price increased by any interest income you have previously accrued (determined without regard to adjustments due to differences between projected and actual payments) and decreased by the projected amounts of any payments previously made on the CPDI (without regard to actual amounts paid).

In addition to interest accrued based upon the comparable yield as described above, you will be required to recognize interest income equal to the amount of any net positive adjustment (*i.e.*, the excess of actual payments over projected payments) in respect of a CPDI for a taxable year. A net negative adjustment (*i.e.*, the excess of projected payments over actual payments) in respect of a CPDI for a taxable year:

- will first reduce the amount of interest in respect of the CPDI that you would otherwise be required to include in income in the taxable year; and

- to the extent of any excess, will give rise to an ordinary loss, but only to the extent that the amount of all previous interest inclusions under the CPDI exceeds the total amount of the net negative adjustments treated as ordinary loss on the CPDI in prior taxable years.

A net negative adjustment is not treated as a miscellaneous itemized deduction (for which deductions would be unavailable or, beginning in 2026, available only to a limited extent). Any net negative adjustment in excess of the amounts described above may be carried forward to offset future interest income in respect of the CPDI or to reduce the amount realized on a sale or other taxable disposition of the CPDI.

Upon a sale or other taxable disposition of a CPDI, you generally will recognize taxable income or loss equal to the difference between the amount received and your tax basis in the CPDI. Your tax basis in the CPDI will equal your purchase price for the CPDI increased by any interest income you have previously accrued (determined without regard to adjustments due to differences between projected and actual payments) and decreased by the projected amounts of any payments previously made on the CPDI (without regard to actual amounts paid). At maturity, you will be treated as receiving the projected amount for that date, and any difference between the amount actually received and that projected amount will be treated as a positive or negative adjustment governed by the rules described above. As described above, the amount you are treated as receiving upon a disposition of a CPDI, whether at or prior to maturity, will be reduced by any carryforward of a net negative adjustment. You generally must treat any income as interest income and any loss as ordinary loss to the extent of previous interest inclusions (reduced by the total amount of net negative adjustments previously taken into account as ordinary losses), and the balance as capital loss. These losses are not treated as miscellaneous itemized deductions. The deductibility of capital losses, however, is subject to limitations. Additionally, if you recognize a loss above certain thresholds, you may be required to file a disclosure statement with the IRS. You should consult your tax adviser regarding this reporting obligation.

Special rules may apply if all the remaining payments on a CPDI become fixed substantially contemporaneously. For this purpose, payments will be treated as fixed if the remaining contingencies with respect to them are remote or incidental. Under these rules, you would be required to account for the difference between the originally projected payments and the fixed payments in a reasonable manner over the period to which the difference relates. In addition, you would be required to make adjustments to, among other things, your accrual periods and your tax basis in the CPDI. The character of any gain or loss on a sale or other taxable disposition of your CPDI also might be affected. If one or more (but not all) contingent payments on a CPDI became fixed more than six months prior to the relevant payment date(s), you would be required to account for the difference between the originally projected payment(s) and the fixed payment(s) on a present value basis. You should consult your tax adviser regarding the application of these rules.

Tax Consequences to Non-U.S. Holders

This section applies only to Non-U.S. Holders. You are a "Non-U.S. Holder" if for U.S. federal income tax purposes you are a beneficial owner of a Note that is:

- an individual who is classified as a nonresident alien;
- a foreign corporation; or
- a foreign trust or estate.

You are not a Non-U.S. Holder for purposes of this discussion if you are (i) an individual who is present in the United States for 183 days or more in the taxable year of disposition or (ii) a former citizen or resident of the United States and certain conditions apply. If you are or may become such a person during the period in which you hold a Note, you should consult your tax adviser regarding the U.S. federal tax consequences of an investment in the Notes.

Subject to the possible application of Section 897 of the Code and the discussions below under "—Possible Withholding Under Section 871(m) of the Code" and "FATCA," you generally will not be subject to U.S. federal withholding or income tax in respect of payments on or amounts received on a sale or other taxable disposition of a Note, provided that (i) income in respect of the Notes is not effectively connected with your conduct of a trade or

business in the United States, and (ii) you provide an appropriate IRS Form W-8 certifying under penalties of perjury that you are not a United States person.

If you are engaged in a U.S. trade or business, and if income from the Notes is effectively connected with your conduct of that trade or business, you generally will be subject to regular U.S. federal income tax with respect to that income in the same manner as if you were a U.S. Holder, subject to the provisions of an applicable income tax treaty. In this event, if you are a corporation, you should also consider the potential application of a 30% (or lower treaty rate) branch profits tax.

Possible Withholding Under Section 871(m) of the Code

Section 871(m) of the Code and the Treasury regulations thereunder ("Section 871(m)") impose a 30% (or lower treaty rate) withholding tax on "dividend equivalents" paid or deemed paid to Non-U.S. Holders with respect to certain financial instruments linked to U.S. equities ("Underlying Securities"), as defined under the applicable Treasury regulations, or indices that include Underlying Securities. Section 871(m) generally applies to "specified equity-linked instruments" ("Specified ELIs"), which are financial instruments that substantially replicate the economic performance of one or more Underlying Securities, as determined based on tests set forth in the applicable Treasury regulations and discussed further below. Section 871(m) provides certain exceptions to this withholding regime, in particular for instruments linked to certain broad-based indices that meet requirements set forth in the applicable Treasury regulations ("Qualified Indices") as well as securities that track such indices ("Qualified Index Securities").

Although the Section 871(m) regime became effective in 2017, Treasury regulations, as modified by an IRS notice, phase in the application of Section 871(m) as follows:

- For financial instruments issued prior to 2021, Section 871(m) will generally apply only to financial instruments that have a "delta" of one.
- For financial instruments issued in 2021 and thereafter, Section 871(m) will apply if either (i) the "delta" of the relevant financial instrument is at least 0.80, if it is a "simple" contract, or (ii) the financial instrument meets a "substantial equivalence" test, if it is a "complex" contract.

Delta is generally defined as the ratio of the change in the fair market value of a financial instrument to a small change in the fair market value of the number of shares of the Underlying Security. The "substantial equivalence" test measures whether a complex contract tracks its "initial hedge" (shares of the Underlying Security that would fully hedge the contract) more closely than would a "benchmark" simple contract with a delta of 0.80.

The calculations are generally made at the "calculation date," which is the earlier of (i) the time of pricing of the Note, i.e., when all material terms have been agreed on, and (ii) the issuance of the Note. However, if the time of pricing is more than 14 calendar days before the issuance of the Note, the calculation date is the date of the issuance of the Note. In those circumstances, information regarding our final determinations for purposes of Section 871(m) may be available only after the time of pricing of the Note. As a result, you should acquire such a Note only if you are willing to accept the risk that the Note is treated as a Specified ELI subject to withholding under Section 871(m).

If the terms of a Note are subject to a "significant modification," (for example, upon an event discussed below under "Assumption by Citigroup Inc."), the Note generally will be treated as reissued for this purpose at the time of the significant modification, in which case the Notes could become Specified ELIs at that time.

If a Note is a Specified ELI, withholding in respect of dividend equivalents will, depending on the applicable withholding agent's circumstances, generally be required either (i) on the underlying dividend payment date or (ii) when cash payments are made on the Note or upon the date of maturity, lapse or other disposition of the Note by you, or possibly upon certain other events. Depending on the circumstances, the applicable withholding agent may withhold the required amounts from coupon or other payments on the Note, from proceeds of the retirement or other disposition of the Note, or from your other cash or property held by the withholding agent.

The dividend equivalent amount will include the amount of any actual or, under certain circumstances, estimated dividend. If the dividend equivalent amount is based on the actual dividend, it will be equal to the product of: (i) in the case of a "simple" contract, the per-share dividend amount, the number of shares of an Underlying Security and the delta; or (ii) in the case of a "complex" contract, the per-share dividend amount and the initial

hedge. The dividend equivalent amount for Specified ELIs issued prior to 2021 that have a "delta" of one will be calculated in the same manner as (i) above, using a "delta" of one. The per-share dividend amount will be the actual dividend (including any special dividends) paid with respect to a share of the Underlying Security. If the dividend equivalent amount is based on an estimated dividend, the pricing supplement will generally state the estimated amounts.

Depending on the terms of a Note and whether or not it is issued prior to 2021, the pricing supplement may contain additional information relevant to Section 871(m), such as whether the Note references a Qualified Index or Qualified Index Security; whether it is a "simple" contract; the "delta" and the number of shares multiplied by delta (for a simple contract); and whether the "substantial equivalence test" is met and the initial hedge (for a complex contract).

Prospective purchasers of the Notes should consult their tax advisers regarding the potential application of Section 871(m) to a particular Note. Our determination is binding on Non-U.S. Holders, but it is not binding on the IRS. The Section 871(m) regulations require complex calculations to be made with respect to Notes linked to U.S. equities and their application to a specific issue of Notes may be uncertain. Accordingly, even if we determine that certain Notes are not Specified ELIs, the IRS could challenge our determination and assert that withholding is required in respect of those Notes. Moreover, your consequences under Section 871(m) may depend on your particular circumstances. For example, if you enter into other transactions relating to an Underlying Security, you could be subject to withholding tax or income tax liability under Section 871(m) even if the Notes are not Specified ELIs subject to Section 871(m) as a general matter. Non-U.S. Holders should consult their tax advisers regarding the application of Section 871(m) in their particular circumstances.

U.S. Federal Estate Tax

If you are an individual Non-U.S. Holder or an entity the property of which is potentially includible in such an individual's gross estate for U.S. federal estate tax purposes (for example, a trust funded by such an individual and with respect to which the individual has retained certain interests or powers), you should note that, absent an applicable treaty exemption, a Note that is treated as a debt obligation for U.S. federal estate tax purposes generally will be treated as U.S.-situs property subject to U.S. federal estate tax if payments on the Note, if received by the decedent at the time of death, would have been subject to U.S. federal withholding or income tax (even if the IRS Form W-8 certification requirement described above were satisfied and not taking into account the elimination of such U.S. federal withholding tax due to the application of an income tax treaty). If you are such an individual or entity, you should consult your tax adviser regarding the U.S. federal estate tax consequences of an investment in the Notes.

Information Reporting and Backup Withholding

Payments on the Notes, and the proceeds of a sale, exchange or other disposition of the Notes, may be subject to information reporting and, if you fail to provide certain identifying information (such as an accurate taxpayer identification number if you are a U.S. Holder) or meet certain other conditions, may also be subject to backup withholding at the rate specified in the Code. If you are a Non-U.S. Holder that provides an appropriate IRS Form W-8, you will generally establish an exemption from backup withholding. Amounts withheld under the backup withholding rules are not additional taxes and may be refunded or credited against your U.S. federal income tax liability, provided the relevant information is timely furnished to the IRS.

Assumption by Citigroup Inc.

As provided in the accompanying prospectus, our obligations under the Notes may be assumed by Citigroup Inc. We intend that Citigroup Inc. will assume our obligations under the Notes pursuant to this provision only in circumstances in which we expect to treat such an assumption as not giving rise to a "significant modification" of the Notes and have been advised by our counsel that such treatment is reasonable under the circumstances and the law in effect at the time of such assumption. However, in light of the lack of clear authority regarding the treatment of such an assumption, there may be uncertainty regarding the correctness of this treatment. As a result, it is possible that the IRS may treat an assumption of the Notes as a significant modification, in which case the timing and character of income recognized with respect to the Notes, including the withholding tax consequences to a Non-U.S. Holder, after the assumption could be affected significantly, depending on circumstances at the time of the assumption. Moreover, a U.S. Holder would generally be required to recognize gain (if any) with respect to the

Notes at the time of the assumption in the same manner as described above in respect of a sale or other taxable disposition of the Notes. You should consult your tax adviser regarding the consequences of an assumption of the Notes.

FATCA

Legislation commonly referred to as "FATCA" generally imposes a withholding tax of 30% on payments to certain non-U.S. entities (including financial intermediaries) with respect to certain financial instruments, unless various U.S. information reporting and due diligence requirements (that are in addition to, and potentially significantly more onerous than, the requirement to deliver an IRS Form W-8) have been satisfied. An intergovernmental agreement between the United States and the non-U.S. entity's jurisdiction may modify these requirements. This legislation generally applies to interest on the Notes and certain dividend equivalents (as defined above) under Section 871(m). While existing Treasury regulations would also require withholding on payments of gross proceeds of the disposition (including upon retirement) of the Notes, the U.S. Treasury Department has indicated in subsequent proposed regulations its intent to eliminate this requirement. The U.S. Treasury Department has stated that taxpayers may rely on these proposed regulations pending their finalization. If withholding applies to the Notes, we will not be required to pay any additional amounts with respect to amounts withheld. If you are a Non-U.S. Holder, or a U.S. Holder holding Notes through a non-U.S. intermediary, you should consult your tax adviser regarding the potential application of FATCA to the Notes, including the availability of certain refunds or credits.

DESCRIPTIONS OF THE ELIGIBLE CONSTITUENTS

THE ISHARES® CORE S&P 500 ETF

General

The following information regarding the iShares® Core S&P 500 ETF (the "S&P 500 Fund"), 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, iShares® Trust, BlackRock Institutional Trust Company, N.A. ("BTC") and BlackRock Fund Advisors ("**BFA**"). The S&P 500 Fund is an investment portfolio maintained and managed by iShares® Trust. BFA is currently the investment adviser to the S&P 500 Fund. The S&P 500 Fund is an exchange-traded fund that trades on the NYSE Arca under the ticker symbol "IVV."

iShares® Trust. is a registered investment company that consists of numerous separate investment portfolios, including the S&P 500 Fund. Information provided to or filed with the SEC by iShares® Trust. pursuant to the Securities Act of 1933 and the Investment Company Act of 1940 can be located by reference to SEC file numbers 333-92935 and 811-09729, respectively, through the SEC's website at http://www.sec.gov. For additional information regarding iShares® Trust, BFA and the S&P 500 Fund, please see the S&P 500 Fund's prospectus. In addition, information about iShares® Trust and the S&P 500 Fund may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the iShares® website at www.ishares.com. We make no representation or warranty as to the accuracy or completeness of information contained on the iShares® website. Information contained on the iShares® website is not incorporated by reference in, and should not be considered a part of, this Index Supplement.

Investment Objective and Strategy

The S&P 500 Fund seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the S&P 500® Index. The fund's investment objective and the underlying index may be changed without shareholder approval.

The investment adviser to the S&P 500 Fund uses a representative sampling indexing strategy (as described below under "Representative Sampling") to manage the fund. This means that the investment adviser invests in a representative sample of securities that, in the view of the investment adviser, has an investment profile similar to the S&P 500® Index. Thus, at any time, the S&P 500 Fund may not hold all of the securities in the S&P 500® Index. Funds that

employ a representative sampling strategy may incur tracking error to a greater extent than a fund that seeks to replicate an index by holding all of the securities in the index. The S&P 500 Fund generally invests at least 90% of its assets in the securities included in the S&P 500® Index and in depositary receipts representing such securities. The S&P 500 Fund may invest the remainder of its assets in securities not included in the S&P 500® Index, derivative contracts and cash and cash equivalents.

Representative Sampling

BFA uses a "representative sampling" indexing strategy to manage the S&P 500 Fund. "Representative sampling" is an indexing strategy that involves investing in a representative sample of securities that collectively has an investment profile similar to the S&P 500® Index. Securities selected are expected to have, in the aggregate, investment characteristics (based on factors such as market capitalization and industry weightings), fundamental characteristics (such as return variability and yield) and liquidity measures similar to those of the S&P 500® Index. The S&P 500 Fund may or may not hold all of the securities in the S&P 500® Index.

Correlation

The S&P 500® Index is a theoretical financial calculation, while the S&P 500 Fund is an actual investment portfolio. The performance of the S&P 500 Fund and the S&P 500® Index may vary due to transaction costs, non-U.S. currency valuation, asset valuations, corporate actions (such as mergers and spin-offs), timing variances and differences between the S&P 500 Fund's portfolio and the S&P 500® Index resulting from legal restrictions (such as diversification requirements) that apply to the S&P 500 Fund but not to the S&P 500® Index or the use of representative sampling. "Tracking error" is the difference between the performance (return) of a fund's portfolio and that of its underlying index. BFA expects that, over time, the S&P 500 Fund's tracking error will not exceed

5%. The S&P 500 Fund, using a representative sampling strategy, can be expected to have a greater tracking error than a fund using a replication strategy. Replication is a strategy in which a fund invests in substantially all of the securities in its underlying index in approximately the same proportions as in the underlying index.

Industry Concentration Policy

The S&P 500 Fund will concentrate its investments (*i.e.*, hold 25% or more of its total assets) in a particular industry or group of industries to approximately the same extent that the S&P 500® Index is concentrated. For purposes of this limitation, securities of the U.S. government (including its agencies and instrumentalities) and repurchase agreements collateralized by U.S. government securities are not considered to be issued by members of any industry.

Disclaimer

The Notes are not sponsored, endorsed, sold or promoted by BTC. BTC makes no representations or warranties to the owners of the Notes or any member of the public regarding the advisability of investing in the Notes. BTC has no obligation or liability in connection with the operation, marketing, trading or sale of the Notes.

The S&P 500® Index

The following information regarding the S&P 500® 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® 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® Index.

The S&P 500® Index is reported by Bloomberg L.P. under the ticker symbol "SPX."

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;

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- 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.e.*, 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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THE VANGUARD FTSE EUROPE ETF

General

The following information regarding the Vanguard FTSE Europe ETF 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 Vanguard Index Funds (the "Vanguard Trust") and The Vanguard Group, Inc. ("Vanguard"). The Vanguard FTSE Europe ETF is an investment portfolio of the Vanguard Trust. Vanguard is the investment adviser to the Vanguard FTSE Europe ETF. The Vanguard FTSE Europe ETF is an exchange-traded fund that trades on the NYSE Arca, Inc. ("NYSE Arca") under the ticker symbol "VGK."

The Vanguard Trust is a registered investment company that consists of numerous separate investment portfolios, including the Vanguard FTSE Europe ETF. Information provided to or filed with the SEC by Vanguard pursuant to the Securities Act of 1933, as amended, and the Investment Company Act of 1940, as amended, can be located by reference to SEC file numbers 033-32548 and 811-05972, respectively, through the SEC's website at http://www.sec.gov. For additional information regarding the Vanguard Trust, Vanguard and the Vanguard FTSE Europe ETF, please see the Vanguard FTSE Europe ETF's prospectus. In addition, information about Vanguard and the Vanguard FTSE Europe ETF may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the Vanguard website at www.vanguard.com. Information contained in the Vanguard website is not incorporated by reference in, and should not be considered a part of, this Index Supplement.

Investment Objective and Strategy

The Vanguard FTSE Europe ETF seeks to track the performance of a benchmark index that measures the investment return of stocks issued by companies located in major markets of Europe, which is currently the FTSE Developed Europe Index. For more information about the FTSE Developed Europe Index, please see "Descriptions of the Eligible Constituents – The Vanguard FTSE Emerging Markets ETF – The FTSE GEIS Indices" below.

On June 2, 2015, Vanguard announced that the Vanguard FTSE Europe ETF will soon transition to track a new underlying index. According to Vanguard, the transition to the new underlying index will take place over a period of several months beginning in the third or fourth quarter of 2015, with the Vanguard FTSE Europe ETF ceasing to track the FTSE Developed Europe Index and beginning to track the FTSE Developed Europe All Cap Index. The FTSE Developed Europe All Cap Index is a market-capitalization weighted index representing the performance of large-, mid- and small-cap companies in developed European markets, including the United Kingdom. The FTSE Developed Europe All Cap Index is comprised of approximately 1,250 securities from 16 countries, and is derived from the FTSE Global Equity Index Series. The principal difference between the FTSE Developed Europe Index and the FTSE

Developed Europe All Cap Index is that the former represents the performance of large- and mid-cap companies in developed European markets, whereas the latter also represents the performance of small-cap companies in developed European markets. As a result of this transition, the Vanguard FTSE Europe ETF will be exposed to risks associated with investing in small-capitalization stocks.

Indexing Investment Approach

The Vanguard FTSE Europe ETF employs an indexing investment approach by investing substantially all (approximately 95%) of its assets in the common stocks included in the FTSE Developed Europe Index, while employing a form of sampling to reduce risk. The Vanguard FTSE Europe ETF is subject to index sampling risk, which is the chance that the securities selected for the Vanguard FTSE Europe ETF, in the aggregate, will not provide investment performance matching that of the FTSE Developed Europe Index.

To track the FTSE Developed Europe Index as closely as possible, the Vanguard FTSE Europe ETF attempts to remain fully invested in stocks. To help stay fully invested and to reduce transaction costs, the Vanguard FTSE Europe ETF may invest, to a limited extent, in derivatives, including stock futures. The Vanguard FTSE Europe ETF may also use derivatives, such as total return swaps, to obtain exposure to a stock, a basket of stocks or an index. The Vanguard FTSE Europe ETF will not use derivatives for speculation or for the purpose of leveraging (magnifying) investment returns. The Vanguard FTSE Europe ETF's daily cash balance may be invested in one or more money-market funds sponsored by Vanguard. The Vanguard FTSE Europe ETF may temporarily depart from

its normal investment policies and strategies when the advisor believes that doing so is in the Vanguard FTSE Europe ETF's best interest, so long as the alternative is consistent with the Vanguard FTSE Europe ETF's investment objective. The Vanguard FTSE Europe ETF may substitute a different index for the index it currently tracks if the current index is discontinued, if the Vanguard FTSE Europe ETF's agreement with the sponsor of its target index is terminated, or for any other reason determined in good faith by the Vanguard FTSE Europe ETF's board of trustees. In any such instance, the substitute index would measure the same market segment as the current index.

THE VANGUARD FTSE EMERGING MARKETS ETF

General

The following information regarding the Vanguard FTSE Emerging Markets ETF 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 the Vanguard Trust and Vanguard. The Vanguard FTSE Emerging Markets ETF is an investment portfolio of the Vanguard Trust. Vanguard is the investment adviser to the Vanguard FTSE Emerging Markets ETF. The Vanguard FTSE Emerging Markets ETF is an exchange-traded fund that trades on the NYSE Arca under the ticker symbol "VWO."

The Vanguard Trust is a registered investment company that consists of numerous separate investment portfolios, including the Vanguard FTSE Emerging Markets ETF. Information provided to or filed with the SEC by Vanguard pursuant to the Securities Act of 1933, as amended, and the Investment Company Act of 1940, as amended, can be located by reference to SEC file numbers 033-32548 and 811-05972, respectively, through the SEC's website at http://www.sec.gov. For additional information regarding the Vanguard Trust, Vanguard and the Vanguard FTSE Emerging Markets ETF, please see the Vanguard FTSE Emerging Markets ETF's prospectus. In addition, information about Vanguard and the Vanguard FTSE Emerging Markets ETF may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the Vanguard website at www.vanguard.com. Information contained in the Vanguard website is not incorporated by reference in, and should not be considered a part of, this Index Supplement.

Investment Objective and Strategy

The Vanguard FTSE Emerging Markets ETF seeks to track the performance of a benchmark index that measures the investment return of stocks issued by companies located in emerging market countries, which is currently the FTSE Emerging Index. For more information about the FTSE Emerging Index, please see "— The FTSE GEIS Indices" below.

Prior to January 2013, the Vanguard FTSE Emerging Markets ETF tracked the MSCI Emerging Markets Index. In January 2013, the Vanguard FTSE Emerging Markets ETF began to transition from tracking the MSCI Emerging Markets Index to tracking the FTSE Emerging Index. In order to accomplish that transition, from January 10, 2013 to June 28, 2013 the Vanguard FTSE Emerging Markets ETF employed an indexing investment approach by investing substantially all of its assets (approximately 95%) in the common stocks included in the FTSE Emerging Transition Index. The FTSE Emerging Transition Index differed from FTSE's Emerging Index prior to March 18, 2013, in that it contained "P Chip" and South Korean companies, used actual free float in the calculation of the FTSE Emerging Index, and incorporated the indicative additions and deletions that were projected to be applied at the March 2013 index review. A "P Chip" company is one that is controlled by mainland China individuals, with the establishment and origin

of the company in mainland China. The company must be incorporated outside of the People's Republic of China and traded on the Stock Exchange of Hong Kong, with a majority of its revenue or assets derived from mainland China.

At the March 2013 FTSE Emerging Index review, the majority of these differences were removed, and the primary difference was that the FTSE Emerging Transition Index contained South Korean companies. FTSE, the publisher of the FTSE Emerging Index and the FTSE Emerging Transition Index, classified South Korea as a Developed Market in September 2009 and since then it has not been a member of FTSE's emerging indices. As the MSCI Emerging Markets Index included South Korea in its portfolio, constituents of the FTSE Korea Index were initially included in the transition index universe and then over a 25-week time horizon weight of South Korea within the index was gradually reduced. The FTSE Emerging Transition Index was a "dynamic" index that represented the components of the FTSE Emerging Index plus South Korean equity exposure. The FTSE Emerging Transition Index was designed to gradually reduce South Korean equity exposure by approximately 4% each week over a period of 25 weeks while proportionately adding exposure to stocks of companies located in other countries based on their weightings in the FTSE Emerging Index. As of June 28, 2013, the Vanguard FTSE Emerging Markets ETF completed its transition and began tracking the performance of the FTSE Emerging Index.

Additionally, on June 2, 2015, The Vanguard Group, Inc. announced that the Vanguard FTSE Emerging Markets ETF will soon transition to track a new underlying index. According to The Vanguard Group, Inc., the transition to the new underlying index will take place over a period of approximately 12 months starting in the third or fourth quarter of 2015, with the Vanguard FTSE Emerging Markets ETF ceasing to track the FTSE Emerging Index and beginning to temporarily track the FTSE Emerging Markets All Cap China A Transition Index. By using this transition index, the Vanguard FTSE Emerging Markets ETF will gradually move from tracking the FTSE Emerging Index to tracking the FTSE Emerging Markets All Cap China A Inclusion Index. As part of the transition, China A-shares and small capitalization companies will gradually increase in weight by an equal amount after the third Friday of each month over the 12-month period, while the weights of the stocks already in the index will be proportionately reduced. The FTSE Emerging Markets All Cap China A Inclusion Index is a market-capitalization weighted index representing the performance of large-, mid- and small-capitalization stocks in emerging markets, with market-capitalization adjustments in the case of China A-Shares to take into account the quota amount allocated to foreign investors by the Chinese regulator. The FTSE Emerging Markets All Cap China A Inclusion Index is comprised of approximately 3,350 securities from 21 countries, and is part of the FTSE China A Inclusion Indexes. The principal differences between the FTSE Emerging Index and the FTSE Emerging Markets All Cap China A Inclusion Index are that the former represents the performance of large- and mid-cap companies in emerging markets, excluding China A-Shares, whereas the latter also represents the performance of small-cap stocks in emerging markets and includes China A-Shares. As a result of this transition, the Vanguard FTSE Emerging Markets ETF will be exposed to risks associated with investing both in mainland China and in small-capitalization stocks.

Indexing Investment Approach

The Vanguard FTSE Emerging Markets ETF employs an indexing investment approach by investing substantially all of its assets (approximately 95 %) in the common stocks included in the FTSE Emerging Index, while employing a form of sampling to reduce risk. The Vanguard FTSE Emerging Markets ETF is subject to index sampling risk, which is the chance that the securities selected for the Vanguard FTSE Emerging Markets ETF, in the aggregate, will not provide investment performance matching that of the FTSE Emerging Index.

To track the FTSE Emerging Index as closely as possible, the Vanguard FTSE Emerging Markets ETF attempts to remain fully invested in stocks. To help stay fully invested and to reduce transaction costs, the Vanguard FTSE Emerging Markets ETF may invest, to a limited extent, in derivatives, including stock futures. The Vanguard FTSE Emerging Markets ETF may also use derivatives, such as total return swaps, to obtain exposure to a stock, a basket of stocks or an index. The Vanguard FTSE Emerging Markets ETF will not use derivatives for speculation or for the purpose of leveraging (magnifying) investment returns. The Vanguard FTSE Emerging Markets ETF's daily cash balance may be invested in one or more money-market funds sponsored by Vanguard. The Vanguard FTSE Emerging Markets ETF may temporarily depart from its normal investment policies and strategies when the adviser believes that doing so is in the Vanguard FTSE Emerging Markets ETF's best interest, so long as the alternative is consistent with the Vanguard FTSE Emerging Markets ETF's investment objective. The Vanguard FTSE Emerging Markets ETF may substitute a different index for the index it currently tracks if the current index is discontinued, if the Vanguard FTSE Emerging Markets ETF's agreement with the sponsor of its target index is terminated, or for any other reason determined in good faith by the Vanguard FTSE Emerging Markets ETF's board of trustees. In any such instance, the substitute index would measure the same market segment as the current index.

The FTSE GEIS Indices

The following information regarding the FTSE Emerging Index and the FTSE Developed Europe Index (each, a "FTSE GEIS Index" and together, the "FTSE GEIS Indices") 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 FTSE International Limited ("FTSE"). FTSE has no obligation to continue to publish, and may discontinue publication of, the FTSE GEIS Indices.

The FTSE Global Equity Index Series draws from a universe of over 7,400 securities in 47 different countries. It attempts to represent every equity and sector relevant to international investors' needs and has a modular structure. The universe is divided into Developed, Advanced Emerging and Secondary Emerging segments, with indexes calculated at regional, national and sector level.

The FTSE Emerging Index

The FTSE Emerging Index is included in the FTSE Global Equity Index Series. The FTSE Emerging Index is the aggregate of the Advanced Emerging and Secondary Emerging segments of the FTSE Global Equity Index Series universe.

The FTSE Developed Europe Index

The FTSE Developed Europe Index is derived from the FTSE Global Equity Index Series. The FTSE Developed Europe Index is a market-capitalization weighted index representing the performance of around 500 large and mid cap companies in 16 Developed European markets, including the UK. It is made up of approximately 500 common stocks of companies located in 16 European countries—mostly companies in the United Kingdom, Switzerland, France and Germany. Other countries represented in the FTSE Developed Europe Index include Austria, Belgium and Luxembourg, Denmark, Finland, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, and Sweden.

Country Selection Criteria

The following criteria must be met before a country can be included:

· Permission for direct equity investment by non-nationals

· Availability of accurate and timely data

· Non-existence of any significant exchange controls which would prevent the timely repatriation of capital or dividends

· The demonstration of significant international investor interest in the local equity market

· Existence of adequate liquidity in the market

A country's classification as Developed, Advanced Emerging or Secondary Emerging is largely dependent on the following factors:

- Wealth (Gross National Income per capita)
- Total stock market capitalization
- Breadth and depth of market
- Any restrictions on foreign investment
- Free flow of foreign exchange
- Reliable and transparent price discovery
- Efficient market infrastructure (trading, reporting and settlement systems, derivatives market etc.)
- Oversight by independent regulator

The FTSE Regional Committees will review the classification of countries between Developed, Advanced Emerging and Secondary Emerging on a regular basis. The FTSE Policy Group will publish a watch list of countries being monitored for promotion or demotion and will normally give at least six months' notice before changing the classification of any country.

New countries, which in the view of the FTSE Policy Group and FTSE Regional Committees comply with these rules, may be added at any time after a prior announcement. Once a country has met the criteria, it will be eligible for inclusion in the FTSE Global Equity Index Series. However, for the country index to be constructed and included in the FTSE Global Equity Index Series, it must have a minimum of 3 companies which pass all the

eligibility criteria. An existing country index will remain in the FTSE Global Equity Index Series while any eligible constituents representing the country remain within the index. On the deletion of the last eligible constituent, the country will continue to be eligible, but the country index will be immediately removed from the FTSE Global Equity Index Series and will only be reconsidered for inclusion if it meets the minimum requirement of 3 eligible companies.

Determining Nationality

A company will be allocated to a single country. If a company is incorporated in one country and has its sole listing in the same country, FTSE will allocate the company to that country. In all other circumstances, FTSE will refer the company to the FTSE Nationality Committee who will decide the appropriate nationality for the company. The FTSE Nationality Committee will base its decision according to its assessment of various factors including, but not necessarily limited to, the following:

- The investor protection regulations present in the country of incorporation;
- The country in which the company is domiciled for tax purposes;
- The location of its factors of production;
- The location of its headquarters;
- The location of company meetings;
- The composition of its shareholder base;
- The membership of its board of directors;
- The currency denomination of the company’s shares;
- The perception of investors.

If a company is incorporated in a country, has a listing in that country and listings in other countries, the FTSE Nationality Committee will normally assign the company to the country of incorporation. If the company fails FTSE’s liquidity test in the country of incorporation, the FTSE Nationality Committee may assign the company to the country

which exhibits the greatest liquidity. However, save for certain exceptions, a company incorporated in a country other than a developed country (as classified in the FTSE Global Equity Index Series) may not be assigned to a developed country. If a company is incorporated in a country, and is listed only in countries other than the country of incorporation, the FTSE Nationality Committee will normally allocate the company to the country with the greatest liquidity. If a company is incorporated in a country other than a developed country, has no listing in that country and is listed only in one or more developed countries, that company will only be eligible for FTSE Global Equity Index Series inclusion if the country of incorporation is internationally recognised as having a low taxation status that has been approved by the FTSE Nationality Committee. For companies incorporated in approved low taxation countries, the FTSE Nationality Committee will normally assign the company to the developed country with the greatest liquidity. The country allocation of any FTSE index constituents may be reassessed at any time at the FTSE Nationality Committee's discretion.

Eligible Securities

Most equities are eligible for inclusion in the FTSE GEIS Indices. Ineligible securities include those whose business is that of holding equity and other investments, those of Limited Liability Partnerships and Limited Liability Companies, and where a unit comprises equity and non-equity, convertible preference shares and loan stocks until converted, and where a company does not list all its shares in an eligible class, or does not list an entire class, such unlisted shares (but they may be included in the Review Universe for the purpose of ranking companies by their full market capitalization).

Algorithm and Calculation Method

The FTSE Global Equity Index Series uses actual closing mid-market or last trade prices, where available, for securities with local bourse quotations. Reuters real time exchange rates are used in the index calculations which are disseminated in real-time. Exchange rates used in the End of Day calculations are WM/Reuters Closing Spot Rates™, collected at 16:00 hrs London time.

For the purposes of computing the FTSE Global Equity Index Series, the number of outstanding shares for each constituent security is expressed to the nearest share and, to prevent a large number of insignificant weighting changes, the number of outstanding shares for each constituent security is amended only when the total outstanding shares held within the index system changes by more than 1% on a cumulative basis. Changes will be made quarterly after the close of business on the third Friday of March, June, September and December. If a corporate action is applied to an index constituent which involves a change in the number of outstanding shares, the change in shares will be applied simultaneously with the corporate action. If accumulated changes in the number of outstanding shares add up to 10% or more, or when an accumulated share change represents USD 2 billion of a company's total market capitalization, they are implemented between quarters. WM/Reuters Spot Rates will be used to convert the market capitalization into USD. The USD 2 billion threshold may be adjusted annually in December, by the FTSE Policy Group. If an adjustment is made, it will be applied for the first time at the next review in March of the following year.

The FTSE GEIS Indices are calculated using the chained Paasche methodology. The performance of a FTSE GEIS Index on a given day is determined by calculating the percentage difference between:

- the FTSE GEIS Index's market capitalization as at the close of that day and
- the market capitalization at the start of that day

'Start of the day' is defined as the previous day's close adjusted for capital changes, investability weight changes, additions and deletions.

Adjustments are applied whenever capital changes take place, so that the performance of the FTSE Global Equity Index Series reflects the experience of investors. Eligible companies may be subject to adjustment for free float and multiple lines.

Free Float and Multiple Lines Adjustments

Free Float: The FTSE Global Equity Index Series is adjusted for free float and foreign ownership limits. Free float restrictions include:

- Shares directly owned by State, Regional, Municipal and Local governments (excluding shares held by independently managed pension schemes for governments).

- Shares held by Sovereign Wealth Funds where each holding is 10% or greater. If the holding subsequently decreases below 10%, the shares will remain restricted until the holding falls below 7%.

- Shares held by directors, senior executives and managers of the company, and by their family and direct relations, and by companies with which they are affiliated.

- Shares held within employee share plans.

- Shares held by public companies or by non-listed subsidiaries of public companies.

- Shares held by founders, promoters, former directors, founding venture capital and private equity firms, private companies and individuals (including employees) where the holding is 10% or greater. If the holding subsequently decreases below 10%, the shares will remain restricted until the holding falls below 7%.

- All shares where the holder is subject to a lock-in clause (for the duration of that clause)*.

- Shares held for publicly announced strategic reasons, including shares held by several holders acting in concert.

- Shares that are subject to on-going contractual agreements (such as swaps) where they would ordinarily be treated as restricted.

* Free Float changes resulting from the expiry of a lock-in will be implemented at the next quarterly review subsequent to there being a minimum of 20 business days between the lockin expiry date and the FTSE GEIS Index review date.

Holdings that are not considered as restricted free float include portfolio holdings, nominee holdings, holdings by investment companies and ETFs. If in addition to the above restricted holdings, the company's shareholders are subject to legal restrictions, including foreign ownership restrictions, that are more restrictive, the legal restriction will be considered a free float restriction.

Free float restrictions will be calculated using available published information. For Equity Shares of companies which have been admitted to the FTSE GEIS Index that have a free float greater than 5%, the actual free float will be rounded up to the next highest whole percentage number. Companies with a free float of 5% or below are not eligible for inclusion in the FTSE GEIS Index.

The FTSE Global Equity Index Series will be periodically reviewed for changes in free float.

Market Lines:

Where there are multiple lines of equity capital in a company, all are included and priced separately, provided that:

- The secondary line's full market capitalization (i.e. before the application of any investability weightings) is greater than 25% of the full market capitalization of the company's principal line and the secondary line is eligible in its own right in all respects. Should the full market capitalization of a secondary line that is already a constituent of the FTSE All-World Index or the FTSE Global Small Cap Index fall below 20% of the full market capitalization of the company's principal line at an annual review, the secondary line will be deleted from the FTSE All-World Index or the FTSE Global Small Cap Index unless its full market capitalization remains above the qualification level for continued inclusion as a constituent in the relevant regional index at that review.

- All partly-paid classes of equity are priced on a fully-paid basis if the calls are fixed and are payable at known future dates. Those where future calls are uncertain in either respect are priced on a partly-paid basis.

Liquidity

Each security will be tested for liquidity by calculation of its median daily trading per month. The median trade is calculated by ranking each daily trade total and selecting the middle ranking day. Daily totals with zero trades are included in the ranking, therefore a security that fails to trade for more than half of the days in a month will have a zero median trade.

- A non-constituent which does not turnover at least 0.05% of its outstanding shares (after the application of any free float weightings) based on its median daily trade per month for at least ten of the twelve months prior to a full market review will not be eligible for inclusion in the FTSE Global Equity Index Series.

- An existing constituent which does not turnover at least 0.04% of its outstanding shares (after the application of any free float weightings) based on its median daily trade per month for at least eight of the twelve months prior to a full market review will be removed.

- New issues which do not have a twelve month trading record must have a minimum three month trading record when reviewed. They must turnover at least 0.05% of their outstanding shares (after the application of any free float weightings) based on their median daily trade per month in each month since their listing, unless added under fast entry rule provisions.

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- In the event that the a company fails the liquidly test based on its underlying shares, the Depositary Receipt (DR) may be considered for inclusion in the FTSE GEIS Index if it passes the liquidity test in its own right and is traded on an exchange within the same regional timezone to where the underlying shares are listed. Where a company has both DR and underlying shares listed, both lines will be tested separately for liquidity. The underlying share will be included as long as it passes the liquidity test in its own right. The DR will only be eligible for inclusion if the underlying share fails the liquidity test and the DR passes in its own right. Where the DR has been included it will remain in the FTSE GEIS Index until it either fails the liquidity test or the underlying share passes a future liquidity test with greater liquidity than the DR. In the event that the underlying share fails the liquidity test and the DR trades in a different time-zone, but passes the test in its own right, the underlying share will be included as long as the DR is fully fungible (i.e. the DR can be converted into underlying shares and the underlying shares can be converted into DRs).

- At the sole discretion of a FTSE Regional Committee, the above percentage figures may be adjusted by up to 0.01% at a market review so that, in the Committee's opinion, the FTSE GEIS Index better reflects the liquid investable market of the region. This discretion may only be exercised across the whole of a region and may not be applied to individual securities or countries.

Periodic Review of Index Constituents

In order to determine which companies are included in a FTSE GEIS Index, first the 100% regional universe is defined, and companies are valued by full market capitalization. Companies are then ranked by full market capitalization in descending order, and the top 98% of the regional universe is selected as the Index Universe. Investability weights are assigned to all companies in accordance with the free float rules, the multiple lines rule is applied, all secondary lines which fail are eliminated, and the liquidity rule is applied to all remaining eligible lines of stock. From there, each company is evaluated for inclusion in a FTSE GEIS Index:

For companies not currently in the FTSE All-World Index Series or the FTSE Global Small Cap Index Series:

- Companies at or above 68% of the Index Universe by full market capitalization with a weight greater than 0.04% of the current respective regional All-World Index by full market capitalization, and with a weight greater than the inclusion percentage for the respective region by investable market capitalization, will be included in the Large Cap Index for the region under review.

- Companies ranked below 68%, but within the top 86% of the Index Universe by full market capitalization with a weight greater than 0.04% of the current respective regional All-World Index by full market capitalization, and with a weight greater than the inclusion percentage levels for the respective region by investable market capitalization, will be included in the Mid Cap Index for the region under review.

-

Companies ranked below the top 86%, but within the top 98% of the Index Universe by full market capitalization or have a weight less than 0.04% of the current respective regional All-World Index by full market capitalization, and with a weight greater than the inclusion percentage levels for the respective region by investable market capitalization will be included in the Small Cap Index for the region under review.

For existing FTSE All-World Index Series or the FTSE Global Small Cap Index Series constituents:

- Existing Large Cap constituents will remain in the Large Cap Index if they fall within the top 72% of the ranking described above. If they are ranked between 72% and 92% of the Index Universe they will move to the Mid Cap. If they are ranked below 92% of the Index Universe but within the top 101% of the Index Universe, they will move to the Small Cap. If they are ranked below 101% of the Index Universe by full market capitalization or have a weight less than the exclusion percentage levels for the respective region by investable market capitalization, they will be excluded from the FTSE GEIS Index.

- Existing Mid Cap constituents will move to the Large Cap if they fall within the top 68% of the ranking described above. If they are ranked between 68% and 92% of the Index Universe they will

remain in the Mid Cap. If they are ranked below 92% of the Index Universe but within the top 101% of the Index Universe, they will move to the Small Cap. If they are ranked below 101% of the Index Universe by full market capitalization or have a weight less than the exclusion percentage levels for the respective region by investable market capitalization, they will be excluded from the FTSE GEIS Index.

- Existing Small Cap constituents will move to the Large Cap if they fall within the top 68% of the ranking described above. If they are ranked between 68% and 86% of the Index Universe by full market capitalization and have a weight greater than 0.04% of the current respective regional All-World Index by full market capitalization they will move to the Mid Cap. If they are ranked below 86% of the Index Universe or have a weight less than 0.04% of the current respective regional All-World Index by full market capitalization, but within the top 101% of the Index Universe, they will remain in the Small Cap. If they are ranked below 101% of the Index Universe by full market capitalization or have a weight less than the exclusion percentage levels for the respective region by investable market capitalization, they will be excluded from the FTSE GEIS Index.

Inclusion and exclusion percentage levels by investable market capitalization for all the regions in the FTSE Global Equity Index Series to determine additions and deletions and other changes in the FTSE GEIS Index are shown below. These percentages are based from the respective regional Small Cap Index. Companies will be tested as a whole by taking the aggregate of each eligible line.

Region	**For Inclusion (New Stocks)**	**For Inclusion (Current Stocks)**
Developed Europe North America	0.02%	0.005%
Asia Pacific ex Japan Japan	0.05%	0.01%
Latin America	0.50%	0.20%
Emerging Europe Middle East & Africa	1.00%	0.20%

Fast Exit Rule

Existing constituents of all regions not undergoing a full review will be tested on a quarterly basis to identify any constituent meeting either of the following:

- The constituent has fallen below 101% of the Index Universe by full market capitalization for two consecutive quarters. This level is set at the time of the last review of the relevant region and is index adjusted using data as at February 11, May 11, August 11 or November 11, as appropriate, to reflect the change in performance of the regional

index since its previous review. The previous trading day's data will be taken if any of the dates above are on a non trading day.

- The constituent is valued at less than the relevant exclusion percentage levels for the respective Small Cap Index by investable market capitalization for two consecutive quarters. This is assessed using data as at February 11, May 11, August 11 or November 11. The previous trading day data will be taken if any of the dates above are on a non trading day.

Constituents whose market capitalization falls below either of the parameters will be considered to be ineligible and will be removed from the FTSE GEIS Index. The deletion will be applied on the next trading day following the third Friday in March, June, September and December.

Changes to Constituent Companies

Under certain circumstances, companies can be added to the list of constituent stocks outside of a review when meeting certain market capitalization thresholds. Stocks can be deleted from the list of constituents if their market capitalization or weight falls below certain levels, there exists evidence of a change in circumstance regarding investability, or the constituent stock becomes delisted or becomes bankrupt, insolvent or is liquidated. Constituents can also be deleted under certain circumstances involving delisting, suspension, or relisting.

If an existing constituent is acquired for eligible shares (or a combination of eligible shares and cash) by another constituent in its own or another country, then the existing constituent is deleted on the effective date of the acquisition. The enlarged company remains a constituent of the same benchmarks within the FTSE Global Equity Index Series as the acquired company.

Mergers between a constituent and non-constituent:

- Within one country: If an existing constituent is acquired for eligible shares (or a combination of eligible shares and cash) by a quoted non-constituent in the same country, then the purchasing company is added to the same benchmarks within the FTSE Global Equity Index Series as the acquired company on the effective date of the acquisition, if eligible in all other respects. The existing constituent is deleted on the same date.

- Cross border: If an existing constituent is acquired for eligible shares (or a combination of eligible shares and cash) by a quoted non-constituent in another country, the acquiring company will be included in its own country index on the effective date of acquisition, providing it is eligible in all other respects. The existing constituent will be deleted on the same date.

FTSE

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THE ISHARES® MSCI JAPAN ETF

General

The following information regarding the iShares® MSCI Japan ETF (the "EWJ Fund"), including, without limitation, its make-up, method of calculation and changes in its components, is based on publicly available information. The Index Sponsor not independently verified such information. Such information reflects the policies of, and is subject to change by, iShares® Trust, BTC and BFA. The EWJ Fund is an investment portfolio maintained and managed by iShares® Trust. BFA is currently the investment adviser to the EWJ Fund. The EWJ Fund is an exchange-traded fund that trades on the NYSE Arca under the ticker symbol "EWJ."

iShares® Trust. is a registered investment company that consists of numerous separate investment portfolios, including the EWJ Fund. Information provided to or filed with the SEC by iShares® Trust. pursuant to the Securities Act of 1933 and the Investment Company Act of 1940 can be located by reference to SEC file numbers 333-92935 and 811-09729, respectively, through the SEC's website at http://www.sec.gov. For additional information regarding iShares® Trust, BFA and the EWJ Fund, please see the EWJ Fund's prospectus. In addition, information about iShares® Trust and the EWJ Fund may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the iShares® website at www.ishares.com. We make no representation or warranty as to the accuracy or completeness of information contained on the iShares® website. Information contained on the iShares® website is not incorporated by reference in, and should not be considered a part of, this Index Supplement.

Investment Objective and Strategy

The EWJ Fund seeks to provide investment results that correspond generally to the price and yield performance, before fees and expenses, of publicly traded securities in the Japanese market, as measured by the MSCI Japan Index. The EWJ Fund holds equity securities traded primarily in Japan. The MSCI Japan Index was developed by MSCI Inc. ("MSCI") as an equity benchmark for Japanese stock performance, and is designed to measure equity market performance in Japan.

The EWJ Fund uses a representative sampling indexing strategy (as described below under "Representative Sampling") to try to track the MSCI Japan Index. The EWJ Fund will at all times invest at least 90% of its assets in the securities of the MSCI Japan Index or in depositary receipts representing securities included in the MSCI Japan Index. The EWJ Fund may invest the remainder of its assets in other securities, including securities not in the MSCI Japan Index, but which BFA believes will help the EWJ Fund track the MSCI Japan Index, futures contracts, options on futures contracts, other types of options and swaps related to the MSCI Japan Index, as well as cash and cash equivalents, including shares of money market funds affiliated with BFA or its affiliates.

Representative Sampling

BFA uses a "representative sampling" indexing strategy to manage the EWJ Fund. "Representative sampling" is an indexing strategy that involves investing in a representative sample of securities that collectively has an investment profile similar to the MSCI Japan Index. Securities selected are expected to have, in the aggregate, investment characteristics (based on factors such as market capitalization and industry weightings), fundamental characteristics (such as return variability and yield) and liquidity measures similar to those of the MSCI Japan Index. The EWJ Fund may or may not hold all of the securities in the MSCI Japan Index.

Correlation

The MSCI Japan Index is a theoretical financial calculation, while the EWJ Fund is an actual investment portfolio. The performance of the EWJ Fund and the MSCI Japan Index may vary due to transaction costs, non-U.S. currency valuation, asset valuations, corporate actions (such as mergers and spin-offs), timing variances and differences between the EWJ Fund's portfolio and the MSCI Japan Index resulting from legal restrictions (such as diversification requirements) that apply to the EWJ Fund but not to the MSCI Japan Index or the use of representative sampling. "Tracking error" is the difference between the performance (return) of a fund's portfolio and that of its underlying index. BFA expects that, over time, the EWJ Fund's tracking error will not exceed 5%. The EWJ Fund, using a representative sampling strategy, can be expected to have a greater tracking error than a

fund using a replication strategy. Replication is a strategy in which a fund invests in substantially all of the securities in its underlying index in approximately the same proportions as in the underlying index.

Industry Concentration Policy

The EWJ Fund will concentrate its investments (*i.e.*, hold 25% or more of its total assets) in a particular industry or group of industries to approximately the same extent that the MSCI Japan Index is concentrated. For purposes of this limitation, securities of the U.S. government (including its agencies and instrumentalities) and repurchase agreements collateralized by U.S. government securities are not considered to be issued by members of any industry.

Disclaimer

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The MSCI Japan Index

The following information regarding the MSCI Japan 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, MSCI. The MSCI Japan Index is calculated, maintained and published by MSCI. MSCI has no obligation to continue to publish, and may discontinue publication of, the MSCI Japan Index.

The MSCI Japan Index is a free-float adjusted market capitalization weighted index that is designed to track the equity market performance of Japanese securities listed on Tokyo Stock Exchange, Osaka Stock Exchange, JASDAQ and Nagoya Stock Exchange. The MSCI Japan Index is constructed based on the MSCI Global Investable Market Indices Methodology, targeting a free-float market capitalization coverage of 85%. The index has a base date of December 31, 1987. The MSCI Japan Index is calculated in Japanese yen on a real time basis and disseminated every 60 seconds during market trading hours. The MSCI Japan Index is reported by Bloomberg Financial Markets under ticker symbol "MXJP."

Constructing 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 Indices 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

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.

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- $SecurityInitialMarketCapUSD_t$ 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

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.

- $PricePerShare_{t\text{-}1}$ 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 M&As 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.

Increases in a security's number of shares resulting from acquisition of non-listed companies and conversion of unlisted shares are implemented at the next regularly scheduled index review following completion of the event.

Increases in a security's number of shares resulting from acquisition of listed non-index constituent securities representing at least 5% of the security's number of shares are generally implemented as of the close of the last trading day of the acquired entity if all necessary information is available prior to the completion of the event or if such information is not available prior to the completion of the event, as soon as practicable following the completion of the event. Changes representing less than 5% of the security's number of shares are implemented at the next regularly scheduled index review following the completion of the event.

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