

Underlying supplement no. 1-I
*To the prospectus dated April 15, 2016 and
the prospectus supplement dated April 15, 2016*

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JPMORGAN CHASE & CO.

Notes Linked to One or More Indices or Funds

JPMORGAN CHASE FINANCIAL COMPANY LLC

Notes, Fully and Unconditionally Guaranteed by JPMorgan Chase & Co., Linked to One or More Indices or Funds

Each of JPMorgan Chase & Co. and JPMorgan Chase Financial Company LLC may from time to time offer and sell notes that are linked to one or more indices (each, an “Index” and collectively, the “Indices”) or funds (each, a “Fund” and collectively, the “Funds”). This underlying supplement describes potential Indices and Funds to which the notes may be linked and other relevant information. The issuer of the notes, as specified in the relevant terms supplement, is referred to in this underlying supplement as the “Issuer.” The Issuer will be either JPMorgan Chase & Co. or JPMorgan Chase Financial Company LLC. For notes issued by JPMorgan Chase Financial Company LLC, JPMorgan Chase & Co., in its capacity as guarantor of those notes, is referred to in this product supplement as the “Guarantor.”

This underlying supplement supplements the terms described in the accompanying product supplement, the prospectus supplement and the prospectus. A separate term sheet or pricing supplement, as the case may be, will describe terms that apply to specific issuances of the notes, including any changes to description of any relevant Index or Fund specified below. These term sheets and pricing supplements are referred to generally in this underlying supplement as terms supplements. If the terms described in the relevant terms supplement are inconsistent with those described in this underlying supplement, any other accompanying underlying supplement, the accompanying product supplement, the prospectus supplement or the prospectus, the terms described in the relevant terms supplement will control. In addition, if this underlying supplement and the accompanying product supplement or another relevant underlying supplement contain information relating to the same Index or Fund to which the notes are linked, the information contained in the document with the most recent date will control.

Investing in the notes involves a number of risks. See “Risk Factors” in the accompanying product supplement and “Risk Factors” beginning on page US-1 of this underlying supplement.

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

The notes are not bank deposits, are not insured by the Federal Deposit Insurance Corporation or any other governmental agency, and are not obligations of, or guaranteed by, a bank.

J.P.Morgan

April 15, 2016

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The Issuer and the Guarantor (if applicable) have not authorized anyone to provide any information other than that contained or incorporated by reference in the relevant terms supplement, this underlying supplement, any other accompanying underlying supplement, the accompanying product supplement, the prospectus supplement or the prospectus with respect to the notes offered by the relevant terms supplement and with respect to the Issuer and the Guarantor (if applicable). The Issuer and Guarantor (if applicable) take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. The relevant terms supplement, together with this underlying supplement, any other accompanying underlying supplement, the accompanying product supplement, the prospectus supplement and the prospectus, will contain the terms of the notes and will supersede all other prior or contemporaneous oral statements as well as any other written materials, including preliminary or indicative pricing terms, correspondence, trade ideas, structures for implementation, sample structures, fact sheets, brochures or other educational materials of the Issuer. The information in each of the relevant terms supplement, this underlying supplement, any other accompanying underlying supplement, the accompanying product supplement, the prospectus supplement and the prospectus may be accurate only as of the date of that document.

The notes are not appropriate for all investors and involve a number of risks and important legal and tax consequences that should be discussed with your professional advisers. You should be aware that the regulations of Financial Industry Regulatory Authority, Inc., or FINRA, and the laws of certain jurisdictions (including regulations and laws that require brokers to ensure that investments are suitable for their customers) may limit the availability of the notes. The relevant terms supplement, this underlying supplement, any other accompanying underlying supplement, the accompanying product supplement, the prospectus supplement and the prospectus do not constitute an offer to sell or a solicitation of an offer to buy the notes under any circumstances in which that offer or solicitation is unlawful.

In this underlying supplement “JPMorgan Financial” refers to JPMorgan Chase Financial Company LLC.

SUPPLEMENTAL TERMS OF NOTES

The following supplemental terms of the notes supplement, and to the extent they are inconsistent, supersede, the description of the general terms of the debt securities set forth in the accompanying product supplement and under the headings “Description of Notes” in the prospectus supplement and “Description of Debt Securities” in the prospectus. Capitalized terms used but not defined in this underlying supplement have the meanings assigned in the relevant terms supplement, this underlying supplement, any other accompanying underlying supplement, the accompanying product supplement, the prospectus supplement and the prospectus.

General

Each of JPMorgan Chase & Co. and JPMorgan Financial may from time to time offer and sell notes that are linked to one or more Indices or Funds. This underlying supplement describes potential Indices and Funds to which the notes may be linked and other relevant information.

Notwithstanding anything to the contrary in the accompanying product supplement, the “**closing level**” of the Russell 2000[®] Index or any relevant successor index (as defined in the accompanying product supplement) on any relevant day will equal the closing level of the Russell 2000[®] Index or that successor index, as applicable, as published by Bloomberg Financial Markets with respect to that day. Currently, Bloomberg Financial Markets publishes the closing level of the Russell 2000[®] Index to three decimal places, whereas Russell publishes the official closing level of the Russell 2000[®] Index to six decimal places. As a result, the closing level of the Russell 2000[®] Index published by Bloomberg Financial Markets will likely be slightly different from the official closing level of the Russell 2000[®] Index published by Russell.

RISK FACTORS

Your investment in the notes will involve certain risks. Investing in the notes is not equivalent to investing in any of the Indices or Funds or any of their component securities, commodities, futures contracts or other assets or market measures. You should consider carefully the following discussion of risks as well as the discussion of risks included in the relevant terms supplement, in the accompanying product supplement and in any accompanying underlying supplement before you decide that an investment in the notes is suitable for you.

Risks Relating to Certain Equity Indices

JPMorgan Chase & Co. is currently one of the companies that makes up the Dow Jones Industrial Average™, the MSCI World IndexSM, the Russell 1000® Index, the Russell 3000® Index, the S&P 500® Index and the Financial Select Sector Index, but, to the Issuer's and the Guarantor's (if applicable) knowledge, unless otherwise specified in the relevant terms supplement, their securities are not currently included in any other Index.

As a general matter, none of the other issuers the securities of which are included in an Index will be involved in the offering of the notes in any way. As a result, the Issuer and the Guarantor (if applicable) will have no ability to control the actions of the other issuers of those securities, including actions that could affect the value of the securities underlying an Index or your notes. None of those issuers will have any obligation to consider your interests as a holder of the notes in taking any corporate actions that might affect the value of your notes. Unless otherwise specified in the relevant terms supplement, none of the money you pay for the notes will go to any of the other issuers of the securities included in any Index. See the relevant terms supplement for additional information about whether the Issuer or the Guarantor (if applicable) is one of the companies included in an Index.

In the event that the Issuer's or the Guarantor's (if applicable) securities are included in an Index, the Issuer and the Guarantor (if applicable) will have no obligation to consider your interests as a holder of the notes in taking any action that might affect the value of your notes.

For notes linked in whole or in part to S&P MidCap 400® Index, an investment in the notes will be subject to risks associated with mid-capitalization stocks.

The stocks that constitute the S&P MidCap 400® Index are issued by mid-capitalization companies. Mid-capitalization companies may be less able to withstand adverse economic, market, trade and competitive conditions relative to larger companies. Mid-capitalization companies are less likely to pay dividends on their stocks, and the presence of a dividend payment could be a factor that limits downward stock price pressure under adverse market conditions.

For notes linked in whole or in part to the Russell 2000® Index or the S&P SmallCap 600® Index, an investment in the notes will be subject to risks associated with small-capitalization stocks.

The stocks that constitute the Russell 2000® Index and the S&P SmallCap 600® Index are issued by companies with relatively small market capitalization. The stock prices of smaller companies may be more volatile than stock prices of large-capitalization companies. Small-capitalization companies may be less able to withstand adverse economic, market, trade and competitive conditions relative to larger companies. These companies tend to be less well-established than large market capitalization companies. Small-capitalization companies are less likely to pay dividends on their stocks, and the presence of a dividend payment could be a factor that limits downward stock price pressure under adverse market conditions.

Risks Relating to Certain Commodity Indices

The Issuer, the Guarantor (if applicable) and their affiliates have no affiliation with S&P Dow Jones Indices LLC (“S&P Dow Jones”), UBS Securities LLC (“UBS”) or Bloomberg Finance L.P. (“Bloomberg”) and are not responsible for their public disclosure of information.

The Issuer, the Guarantor (if applicable) and their affiliates are not affiliated with S&P Dow Jones, UBS or Bloomberg in any way (except for arrangements discussed below in “Commodity Index Descriptions — The S&P GSCI[®] Indices — License Agreement” and “Commodity Index Descriptions — The Bloomberg Commodity Indices — License Agreement”) and have no ability to control S&P Dow Jones, UBS or Bloomberg, including any errors in or discontinuation of disclosure regarding its methods or policies relating to the calculation of the Bloomberg Commodity Indices (as defined under “Commodity Index Descriptions — The Bloomberg Commodity Indices” in this underlying supplement) or the S&P GSCI[®] Indices (as defined under “Commodity Index Descriptions — The S&P GSCI[®] Indices” in this underlying supplement). None of S&P Dow Jones, UBS or Bloomberg is under any obligation to continue to calculate any of the S&P GSCI[®] Indices or Bloomberg Commodity Indices nor are they required to calculate any successor index. If any of S&P Dow Jones, UBS or Bloomberg discontinues or suspends the calculation of a relevant index, it may become difficult to determine the market value of the notes or the amount payable at maturity. The calculation agent may designate a successor index selected in its sole discretion. If the calculation agent determines in its sole discretion that no successor index comparable to such index exists, the amount you receive at maturity may be determined by the calculation agent in its sole discretion.

S&P Dow Jones or Bloomberg may be required to replace a contract underlying an S&P GSCI[®] Index or a Bloomberg Commodity Index if the existing futures contract is terminated or replaced.

A futures contract known as a “Designated Contract” has been selected as the reference contract for the underlying physical commodity included in each S&P GSCI[®] Index or Bloomberg Commodity Index. Data concerning this Designated Contract will be used to calculate each S&P GSCI[®] Index and Bloomberg Commodity Index. The termination or replacement of a futures contract on an established exchange occurs infrequently; however, if one or more Designated Contracts were to be terminated or replaced by an exchange, a comparable futures contract would be selected by the S&P GSCI[®] Index Committee or Bloomberg, as the case may be, if available, to replace each such Designated Contract. The termination or replacement of any Designated Contract may have an adverse impact on the level of the relevant S&P GSCI[®] Index or Bloomberg Commodity Index. Suspension or disruptions of market trading in the commodity and related futures markets may adversely affect the value of the notes.

For notes linked in whole or in part to a Bloomberg Commodity Index, you may in the future have exposure to contracts that are not traded on regulated futures exchanges.

At present, the Bloomberg Commodity Indices are composed exclusively of regulated futures contracts; however, the Bloomberg Commodity Indices may in the future include over-the-counter contracts (such as swaps and forward contracts) traded on trading facilities that are subject to lesser degrees of regulation or, in some cases, no substantive regulation. As a result, trading in such contracts, and the manner in which prices and volumes are reported by the relevant trading facilities, may not be subject to the same provisions of, and the protections afforded by, the Commodity Exchange Act, as amended, or other applicable statutes and related regulations that govern trading on regulated futures exchanges. In addition, many electronic trading facilities have only recently initiated trading and do not have significant trading histories. As a result, the trading of contracts on such facilities and the inclusion of such contracts in a Bloomberg Commodity Index may expose you to certain risks not presented by most exchange-traded futures contracts, including risks related to the liquidity and price histories of the relevant contracts.

For notes linked to a Bloomberg Commodity Index, risks associated with that Bloomberg Commodity Index may adversely affect the market price of the notes.

Because the Bloomberg Commodity IndexSM and the Bloomberg Commodity Index 3 Month ForwardSM reflect the return on exchange-traded futures contracts on 20 different physical commodities and because the single-commodity sub-indices and the forward-month single-commodity sub-indices of Bloomberg Commodity IndexSM each reflect the return on exchange-traded futures contract on a single physical commodity, notes linked to one or more of the Bloomberg Commodity Indices may be less diversified than other funds or investment portfolios investing in a broader range of products and, therefore, could experience greater volatility. Additionally, the annual composition of the Bloomberg Commodity Indices will be calculated in reliance upon historical price, liquidity and production data that are subject to potential errors in data sources or errors that may affect the weighting of components of the Bloomberg Commodity Indices. Any discrepancies that require revision are not applied retroactively but will be reflected in the weighting calculations of the Bloomberg Commodity Indices for the following year. However, Bloomberg may not discover every discrepancy. Furthermore, the annual weightings for the Bloomberg Commodity Indices are determined each year in the third or fourth quarter and announced as promptly as practicable following the calculation by Bloomberg under the supervision of the Bloomberg Commodity Index Oversight Committee, which has a significant degree of discretion in exercising its supervisory duties with respect to the Bloomberg Commodity Indices and has no obligation to take the needs of any parties to transactions involving the Bloomberg Commodity Indices into consideration when reweighting or making any other changes to the Bloomberg Commodity Indices. Finally, subject to the minimum/maximum diversification limits described in “Commodity Index Descriptions — The Bloomberg Commodity Indices — Diversification Rules,” the commodities underlying the exchange-traded futures contracts included in the Bloomberg Commodity IndexSM and the Bloomberg Commodity Index 3 Month ForwardSM from time to time are concentrated in a limited number of sectors, particularly energy and agriculture, and the single-commodity sub-indices and the forward-month single-commodity sub-indices of Bloomberg Commodity IndexSM are each limited to a single commodity. An investment in the notes may therefore carry risks similar to a concentrated securities investment in a limited number of industries or sectors or in a single commodity.

For notes linked to a Bloomberg Commodity Index, trading and other transactions by UBS and its affiliates in the futures contracts constituting the Bloomberg Commodity Indices and the underlying commodities may affect the level of the Bloomberg Commodity Indices.

UBS and its affiliates actively trade futures contracts and options on futures contracts on the commodities underlying the Bloomberg Commodity Indices. UBS and its affiliates also actively enter into or trade market securities, swaps, options, derivatives, and related instruments that are linked to the performance of the Bloomberg Commodity Indices, the futures contracts underlying the Bloomberg Commodity Indices or the commodities underlying these futures contracts. Certain of UBS’s affiliates may underwrite or issue other securities or financial instruments indexed to the Bloomberg Commodity Indices and related indices, and UBS and certain of its affiliates may license the Bloomberg Commodity Indices for publication or for use by unaffiliated third parties.

These activities could present conflicts of interest and could affect the levels of the Bloomberg Commodity Indices. For instance, a market maker in a financial instrument linked to the performance of a Bloomberg Commodity Index may expect to hedge some or all of its position in that financial instrument. Purchase (or selling) activity in the underlying components of a Bloomberg Commodity Index in order to hedge the market maker’s position in the financial instrument may affect the market price of the futures contracts included in such Bloomberg Commodity Index, which in turn may affect the level of such Bloomberg Commodity Index and the value of your notes. With respect to any of the activities described above, none of UBS or its respective affiliates has any obligation to take the needs of any buyers, sellers or holders of the notes into consideration at any time.

For notes linked to one or more S&P GSCI Component Indices, any such index may be more volatile and susceptible to price fluctuations of commodities than a broader commodities index.

Each of the S&P GSCI Component Indices (as defined under “Commodity Index Descriptions — The S&P GSCI® Indices” in this underlying supplement) may be more volatile and susceptible to price fluctuations than a broader commodities index, such as the S&P GSCI™ or the Bloomberg Commodity IndexSM. In contrast to the S&P GSCI™ and Bloomberg Commodity IndexSM, which include contracts on the principal physical commodities that are actively traded, each of the S&P GSCI Component Indices is composed of contracts covering only a single physical commodity or only physical commodities in a single sector. As a result, price volatility in the contracts included in the S&P GSCI™ or the Bloomberg Commodity IndexSM will likely have a greater impact on each S&P GSCI Component Index than it would on the broader S&P GSCI™ or Bloomberg Commodity IndexSM, and each S&P GSCI Component Index individually will be more susceptible to fluctuations and declines in value of the physical commodities included in such index. In addition, the S&P GSCI Component Indices may be less representative of the economy and commodity markets as a whole and might therefore not serve as a reliable benchmark for commodity market performance generally.

For notes linked to a S&P GSCI® Index, changes in the composition and valuation of the S&P GSCI™ may adversely affect the market value and/or the payment at maturity.

The composition of the S&P GSCI® Indices may change over time, as additional futures contracts satisfy the eligibility criteria of the S&P GSCI™ or futures contracts currently included in the S&P GSCI™ fail to satisfy such criteria. Those changes could impact the composition and valuation of the S&P GSCI® Indices. The weighting factors applied to each commodity included in the S&P GSCI™ change annually, based on changes in commodity production statistics. In addition, S&P Dow Jones may modify the methodology for determining the composition and weighting of the S&P GSCI™ and for calculating their value in order to assure that the S&P GSCI™ represents a measure of the performance over time of the markets for the underlying commodities represented by the S&P GSCI™ and its sub-indices. A number of modifications to the methodology for determining the contracts to be included in each S&P GSCI® Index, and for valuing each S&P GSCI® Index, have been made in the past several years and further modifications may be made in the future. Such changes could adversely affect the market value and/or the payment at maturity.

Risks Relating to Certain Funds

JPMorgan Chase & Co. is currently one of the issuers of equity securities held by the Financial Select Sector SPDR® Fund, the Financial Services Select Sector SPDR® Fund and the SPDR® S&P 500® ETF Trust, but, to the Issuer’s and the Guarantor’s (if applicable) knowledge, unless otherwise specified in the relevant terms supplement, their securities are not currently held by any other Fund.

As a general matter, none of the other issuers the securities of which are held by a Fund will be involved in the offering of the notes in any way. As a result, the Issuer and the Guarantor (if applicable) will have no ability to control the actions of the other issuers of those securities, including actions that could affect the value of the securities held by a Fund or your notes. None of those issuers will have any obligation to consider your interests as a holder of the notes in taking any corporate actions that might affect the value of your notes. Unless otherwise specified in the relevant terms supplement, none of the money you pay for the notes will go to the investment adviser of any Fund or any of the other issuers of the securities held by any Fund. See the relevant terms supplement for additional information about whether the Issuer or the Guarantor (if applicable) is one of the companies held by a Fund.

In the event that the Issuer’s or the Guarantor’s (if applicable) securities are held by a Fund, the Issuer and the Guarantor (if applicable) will have no obligation to consider your interests as a holder of the notes in taking any action that might affect the price of that Fund or the value of your notes.

For notes linked in whole or in part to the iShares[®] Russell 2000 ETF, an investment in the notes is subject to risks associated with small-capitalization stocks.

The stocks that are held by the iShares[®] Russell 2000 ETF are issued by companies with relatively small market capitalization. The stock prices of smaller companies may be more volatile than stock prices of large-capitalization companies. Small-capitalization companies may be less able to withstand adverse economic, market, trade and competitive conditions relative to larger companies. These companies tend to be less well-established than large market capitalization companies. Small-capitalization companies are less likely to pay dividends on their stocks, and the presence of a dividend payment could be a factor that limits downward stock price pressure under adverse market conditions.

For notes linked in whole or in part to the iShares[®] U.S. Real Estate ETF, risks associated with the real estate industry will affect the price of shares of the iShares[®] U.S. Real Estate ETF and the value of the notes.

The real estate industry is cyclical and has from time to time experienced significant difficulties. The prices of the securities included in the Dow Jones U.S. Real Estate Index and held by the iShares[®] U.S. Real Estate ETF and, in turn, the level of the Dow Jones U.S. Real Estate Index and the price of shares of the iShares[®] U.S. Real Estate ETF, as applicable, will be affected by a number of factors that may either offset or magnify each other, including:

- employment levels and job growth;
- the availability of financing for real estate;
- interest rates;
- consumer confidence;
- the availability of suitable undeveloped land;
- federal, state and local laws and regulations concerning the development of land, construction, home and commercial real estate sales, financing and environmental protection; and
- competition among companies that engage in the real estate business.

The factors described above could affect the real estate industry generally or regionally and could affect the value of the securities included in the Dow Jones U.S. Real Estate Index and held by the iShares[®] U.S. Real Estate ETF and the level of the Dow Jones U.S. Real Estate Index and the price of shares of the iShares[®] U.S. Real Estate ETF, as applicable, during the term of the notes.

For notes linked in whole or in part to the iShares[®] U.S. Real Estate ETF, risks associated with Real Estate Investment Trusts will affect the value of the notes.

The Dow Jones U.S. Real Estate Index and the iShares[®] U.S. Real Estate ETF are composed of a variety of real-estate-related stocks including real estate investment trusts (“REITs”). REITs invest primarily in income-producing real estate or real-estate-related loans or interests. Investments in REITs, though not direct investments in real estate, are still subject to the risks associated with investing in real estate. The following are some of the conditions that might impact the structure of and cash flow generated by REITs and, consequently, the value of REITs and, in turn, the Dow Jones U.S. Real Estate Index and the iShares[®] U.S. Real Estate ETF:

- a decline in the value of real estate properties;
- extended vacancies of properties;
- increases in property and operating taxes;

- increased competition or overbuilding;
- a lack of available mortgage funds or other limits on accessing capital;
- tenant bankruptcies and other credit problems;
- limitation on rents, including decreases in market rates for rents;
- changes in zoning laws and governmental regulations;
- costs resulting from the clean-up of, and legal liability to third parties for, damages resulting from environmental problems;
- investments in developments that are not completed or that are subject to delays in completion;
- risks associated with borrowing;
- changes in interest rates;
- casualty and condemnation losses; and
- uninsured damages from floods, earthquakes or other natural disasters.

The factors above may either offset or magnify each other. To the extent that any of these conditions occur, they may affect a REIT's cash flow and the share price of a REIT, and, consequently, the level of the Dow Jones U.S. Real Estate Index and the price of shares of the iShares[®] U.S. Real Estate ETF. 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 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. To the extent that such risks increase the volatility of the market price of securities issued by REITs, they may also, consequently, increase the volatility of the Dow Jones U.S. Real Estate Index and the iShares[®] U.S. Real Estate ETF.

For notes linked in whole or in part to the iShares[®] U.S. Real Estate ETF, there will be no direct correlation between the value of the notes or the price of the iShares[®] U.S. Real Estate ETF and residential housing prices.

There is no direct linkage between the price of shares of the iShares[®] U.S. Real Estate ETF and residential housing prices in specific regions or residential housing prices in general. While residential housing prices may be one factor that could affect the prices of the securities held by the Dow Jones U.S. Real Estate Index and consequently the price of shares of the iShares[®] U.S. Real Estate ETF, the price of shares of the iShares[®] U.S. Real Estate ETF and therefore the value of the notes are not directly linked to movements of residential housing prices and may be affected by factors unrelated to such movements.

For notes linked in whole or in part to the Market Vectors Gold Miners ETF, risks associated with the gold and silver mining industries will affect the value of the notes.

The equity securities included in and that are generally tracked by the Market Vectors Gold Miners ETF are common stocks and American depositary receipts (“**ADRs**”) of companies primarily engaged in mining for gold and silver. The shares of the Market Vectors Gold Miners ETF may be subject to increased price volatility as they are linked to a single industry, market or sector and may be more susceptible to adverse economic, market, political or regulatory occurrences affecting that industry, market or sector.

Because the Market Vectors Gold Miners ETF invests primarily in common stocks and ADRs of companies that are involved in the gold mining industries, the shares of the Market Vectors Gold Miners ETF are subject to certain risks associated with such companies. Competitive pressures may have a

significant effect on the financial condition of such companies in the gold mining industry. Also, gold mining companies are highly dependent on the price of gold. The price of gold is primarily affected by the global demand for and supply of gold. The market for gold bullion is global, and gold prices are subject to volatile price movements over short periods of time and are affected by numerous factors, including macroeconomic factors, such as the structure of and confidence in the global monetary system, expectations regarding the future rate of inflation, the relative strength of, and confidence in, the U.S. dollar (the currency in which the price of gold is usually quoted), interest rates, gold borrowing and lending rates and global or regional economic, financial, political, regulatory, judicial or other events. Gold prices may be affected by industry factors, such as industrial and jewelry demand as well as lending, sales and purchases of gold by the official sector, including central banks and other governmental agencies and multilateral institutions that hold gold. Additionally, gold prices may be affected by levels of gold production, production costs and short-term changes in supply and demand due to trading activities in the gold market. From time to time, above-ground inventories of gold may also influence the market. It is not possible to predict the aggregate effect of all or any combination of these factors. The price of gold has recently been, and may continue to be, extremely volatile.

The Market Vectors Gold Miners ETF invests to a lesser extent in common stocks and ADRs of companies involved in the silver mining industry. Silver mining companies are highly dependent on the price of silver. The price of silver is primarily affected by global demand for and supply of silver. Silver prices can fluctuate widely and may be affected by numerous factors. These include general economic trends, technical developments, substitution issues and regulation, as well as specific factors including industrial and jewelry demand, expectations with respect to the rate of inflation, the relative strength of the U.S. dollar (the currency in which the price of silver is generally quoted) and other currencies, interest rates, central bank sales, forward sales by producers, global or regional political or economic events and production costs and disruptions in major silver-producing countries, such as Mexico, China and Peru. The demand for and supply of silver affect silver prices, but not necessarily in the same manner as supply and demand affect the prices of other commodities. The supply of silver consists of a combination of new mine production and existing stocks of bullion and fabricated silver held by governments, public and private financial institutions, industrial organizations and private individuals. In addition, the price of silver has on occasion been subject to very rapid short-term changes due to speculative activities. From time to time, above-ground inventories of silver may also influence the market. The major end uses for silver include industrial applications, jewelry and silverware.

For notes linked in whole or in part to the Consumer Discretionary Select Sector SPDR® Fund, risks associated with the consumer discretionary sector will affect the value of the notes.

All or substantially all of the equity securities held by the Consumer Discretionary Select Sector SPDR® Fund are issued by companies whose primary line of business is directly associated with the consumer discretionary sector, including the following industries: media; retail (specialty, multiline, internet and catalog); hotels, restaurants and leisure; textiles, apparel and luxury goods; household durables; automobiles; auto components; distributors; leisure equipment and products; and diversified consumer services. The Consumer Discretionary Select Sector SPDR® Fund is concentrated in the consumer discretionary sector, which means the Consumer Discretionary Select Sector SPDR® Fund will be more affected by the performance of the consumer discretionary sector than a fund or index that was more diversified.

Market or economic factors impacting consumer discretionary companies and companies that rely heavily on Consumer Discretionary advances could have a major effect on the value of the Consumer Discretionary Select Sector SPDR® Fund. The success of consumer product manufacturers and retailers is tied closely to the performance of the overall domestic and international economy, interest rates, competition and consumer confidence. Success depends heavily on disposable household income and consumer spending. Changes in demographics and consumer tastes can also affect the demand for, and success of, consumer products and services in the marketplace.

The factors described above affect the consumer discretionary sector generally and could affect the value of the securities held by the Consumer Discretionary Select Sector SPDR® Fund and thus the value

of the Consumer Discretionary Select Sector SPDR[®] Fund during the term of the notes, which may adversely affect the value of your notes.

For notes linked in whole or in part to the Consumer Staples Select Sector SPDR[®] Fund, risks associated with the consumer staples sector will affect the value of the notes.

All or substantially all of the equity securities held by the Consumer Staples Select Sector SPDR[®] Fund are issued by companies whose primary line of business is directly associated with the consumer staples sector, including the following industries: food and staples retailing; household products; food products; beverages; tobacco; and personal products. The Consumer Staples Select Sector SPDR[®] Fund is concentrated in the consumer staples sector, which means the Consumer Staples Select Sector SPDR[®] Fund will be more affected by the performance of the consumer staples sector than a fund or index that was more diversified.

Consumer staples companies are subject to government regulation affecting their products, which may negatively impact such companies' performances. For instance, government regulations may affect the permissibility of using various food additives and production methods of companies that make food products, which could affect company profitability. Tobacco companies may be adversely affected by the adoption of proposed legislation and/or by litigation. Also, the success of food, beverage, household and personal products companies may be strongly affected by consumer interest, marketing campaigns and other factors affecting supply and demand, including performance of the overall domestic and international economy, interest rates, competition and consumer confidence and spending.

The factors described above affect the consumer staples sector generally and could affect the value of the securities held by the Consumer Staples Select Sector SPDR[®] Fund and thus the value of the Consumer Staples Select Sector SPDR[®] Fund during the term of the notes, which may adversely affect the value of your notes.

For notes linked in whole or in part to the Energy Select Sector SPDR[®] Fund, risks associated with the energy sector will affect the value of the notes.

All or substantially all of the equity securities held by the Energy Select Sector SPDR[®] Fund are issued by companies whose primary line of business is directly associated with the energy sector, including the following industries: oil, gas and consumable fuels; and energy equipment and services. The Energy Select Sector SPDR[®] Fund is concentrated in the energy sector, which means the Energy Select Sector SPDR[®] Fund will be more affected by the performance of the energy sector than a fund or index that was more diversified.

Issuers in energy-related industries can be significantly affected by fluctuations in energy prices and supply and demand of energy fuels. Markets for various energy-related commodities can have significant volatility, and are subject to control or manipulation by large producers or purchasers. Companies in the energy sector may need to make substantial expenditures, and to incur significant amounts of debt, in order to maintain or expand their reserves. Oil and gas exploration and production can be significantly affected by natural disasters as well as changes in exchange rates, interest rates, government regulation, world events and economic conditions. These companies may be at risk for environmental damage claims.

The factors described above affect the energy sector generally and could affect the value of the securities held by the Energy Select Sector SPDR[®] Fund and thus the value of the Energy Select Sector SPDR[®] Fund during the term of the notes, which may adversely affect the value of your notes.

For notes linked in whole or in part to the Financial Select Sector SPDR[®] Fund, risks associated with the financial sector will affect the value of the notes.

All or substantially all of the equity securities held by the Financial Select Sector SPDR[®] Fund are issued by companies whose primary line of business is directly associated with the financial sector, including the following industries: diversified financial services; insurance; banks; capital markets; real

estate investment trusts (“REITs”); consumer finance; thrifts and mortgage finance; and real estate management and development. The Financial Select Sector SPDR[®] Fund is concentrated in the financial sector, which means the Financial Select Sector SPDR[®] Fund will be more affected by the performance of the financial sector than a fund or index that was more diversified.

Financial services companies are subject to extensive government regulation which may limit both the amounts and types of loans and other financial commitments they can make, the interest rates and fees they can charge, the scope of their activities, the prices they can charge and the amount of capital they must maintain. Profitability is largely dependent on the availability and cost of capital funds, and can fluctuate significantly when interest rates change or due to increased competition. In addition, deterioration of the credit markets generally may cause an adverse impact in a broad range of markets, including U.S. and international credit and interbank money markets generally, thereby affecting a wide range of financial institutions and markets. Certain events in the financial sector may cause an unusually high degree of volatility in the financial markets, both domestic and foreign, and cause certain financial services companies to incur large losses. Securities of financial services companies may experience a dramatic decline in value when such companies experience substantial declines in the valuations of their assets, take action to raise capital (such as the issuance of debt or equity securities), or cease operations.

Credit losses resulting from financial difficulties of borrowers and financial losses associated with investment activities can negatively impact the sector. Insurance companies may be subject to severe price competition. Adverse economic, business or political developments affecting real estate could have a major effect on the value of real estate securities (which include REITs). Declining real estate values could adversely affect financial institutions engaging in mortgage finance or other lending or investing activities directly or indirectly connected with the value of real estate.

The factors described above affect the financial sector generally and could affect the value of the securities held by the Financial Select Sector SPDR[®] Fund and thus the value of the Financial Select Sector SPDR[®] Fund during the term of the notes, which may adversely affect the value of your notes.

For notes linked in whole or in part to the Financial Services Select Sector SPDR[®] Fund, risks associated with the financial services sector will affect the value of the notes.

All or substantially all of the equity securities held by the Financial Services Select Sector SPDR[®] Fund are issued by companies whose primary line of business is directly associated with the financial services sector, including the following industries: diversified financial services; insurance; banks; capital markets; consumer finance; thrifts and mortgage finance; and mortgage real estate investment trusts (“mortgage REITs”). The Financial Services Select Sector SPDR[®] Fund is concentrated in the financial services sector, which means the Financial Services Select Sector SPDR[®] Fund will be more affected by the performance of the financial services sector than a fund or index that was more diversified.

Financial services companies are subject to extensive governmental regulation which may limit both the amounts and types of loans and other financial commitments they can make, the interest rates and fees they can charge, the scope of their activities, the prices they can charge and the amount of capital they must maintain. Profitability is largely dependent on the availability and cost of capital funds and can fluctuate significantly when interest rates change or due to increased competition. In addition, deterioration of the credit markets generally may cause an adverse impact in a broad range of markets, including U.S. and international credit and interbank money markets generally, thereby affecting a wide range of financial institutions and markets. Certain events in the financial services sector may cause an unusually high degree of volatility in the financial markets, both domestic and foreign, and cause certain financial services companies to incur large losses. Securities of financial services companies may experience a dramatic decline in value when such companies experience substantial declines in the valuations of their assets, take action to raise capital (such as the issuance of debt or equity securities), or cease operations.

Credit losses resulting from financial difficulties of borrowers and financial losses associated with investment activities can negatively impact the sector. Insurance companies may be subject to severe

price competition. Adverse economic, business or political developments could adversely affect financial institutions engaged in mortgage finance or other lending or investing activities directly or indirectly connected to the value of real estate.

The factors described above affect the financial services sector generally and could affect the value of the securities held by the Financial Services Select Sector SPDR[®] Fund and thus the value of the Financial Services Select Sector SPDR[®] Fund during the term of the notes, which may adversely affect the value of your notes.

For notes linked in whole or in part to the Health Care Select Sector SPDR[®] Fund, risks associated with the health care sector will affect the value of the notes.

All or substantially all of the equity securities held by the Health Care Select Sector SPDR[®] Fund are issued by companies whose primary line of business is directly associated with the health care sector, including the following industries: pharmaceuticals; health care equipment and supplies; health care providers and services; biotechnology; life sciences tools and services; and health care technology. The Health Care Select Sector SPDR[®] Fund is concentrated in the health care sector, which means the Health Care Select Sector SPDR[®] Fund will be more affected by the performance of the health care sector than a fund or index that was more diversified.

Companies in the health care sector are subject to extensive government regulation and their profitability can be significantly affected by restrictions on government reimbursement for medical expenses, rising costs of medical products and services, pricing pressure (including price discounting), limited product lines and an increased emphasis on the delivery of healthcare through outpatient services. Companies in the health care sector are heavily dependent on obtaining and defending patents, which may be time consuming and costly, and the expiration of patents may adversely affect the profitability of these companies. Health care companies are also subject to extensive litigation based on product liability and similar claims. In addition, their products can become obsolete due to industry innovation, changes in technologies or other market developments. Many new products in the health care sector require significant research and development and may be subject to regulatory approvals, all of which may be time consuming and costly with no guarantee that any product will come to market.

The factors described above affect the health care sector generally and could affect the value of the securities held by the Health Care Select Sector SPDR[®] Fund and thus the value of the Health Care Select Sector SPDR[®] Fund during the term of the notes, which may adversely affect the value of your notes.

For notes linked in whole or in part to the Industrial Select Sector SPDR[®] Fund, risks associated with the industrial sector will affect the value of the notes.

All or substantially all of the equity securities held by the Industrial Select Sector SPDR[®] Fund are issued by companies whose primary line of business is directly associated with the industrial sector, including the following industries: aerospace and defense; industrial conglomerates; marine; transportation infrastructure; machinery; road and rail; air freight and logistics; commercial services and supplies; professional services; electrical equipment; construction and engineering; trading companies and distributors; airlines; and building products. The Industrial Select Sector SPDR[®] Fund is concentrated in the industrial sector, which means the Industrial Select Sector SPDR[®] Fund will be more affected by the performance of the industrial sector than a fund or index that was more diversified.

Market or economic factors impacting industrial companies and companies that rely heavily on industrial advances could have a major effect on the value of the Industrial Select Sector SPDR[®] Fund. Industrial companies are affected by supply and demand both for their specific product or service and for industrial sector products in general. Government regulation, world events, exchange rates and economic conditions, technological developments and liabilities for environmental damage and general civil liabilities will likewise affect the performance of these companies. Aerospace and defense companies, a component of the industrial sector, can be significantly affected by government spending policies because companies involved in this industry rely, to a significant extent, on U.S. and foreign

government demand for their products and services. Thus, the financial condition of, and investor interest in, aerospace and defense companies are heavily influenced by governmental defense spending policies which are typically under pressure from efforts to control the U.S. (and other) government budgets. Transportation securities, a component of the industrial sector, are cyclical and have occasional sharp price movements, which may result from changes in the economy, fuel prices, labor agreements and insurance costs.

The factors described above affect the industrial sector generally and could affect the value of the securities held by the Industrial Select Sector SPDR[®] Fund and thus the value of the Industrial Select Sector SPDR[®] Fund during the term of the notes, which may adversely affect the value of your notes.

For notes linked in whole or in part to the Materials Select Sector SPDR[®] Fund, risks associated with the materials sector will affect the value of the notes.

All or substantially all of the equity securities held by the Materials Select Sector SPDR[®] Fund are issued by companies whose primary line of business is directly associated with the materials sector, including the following industries: chemicals; metals and mining; paper and forest products; containers and packaging; and construction materials. The Materials Select Sector SPDR[®] Fund is concentrated in the materials sector, which means the Materials Select Sector SPDR[®] Fund will be more affected by the performance of the materials sector than a fund or index that was more diversified.

Market or economic factors impacting materials companies and companies that rely heavily on materials could have a major effect on the value of the Materials Select Sector SPDR[®] Fund. Many materials companies are significantly affected by the level and volatility of commodity prices, exchange rates, import controls, worldwide competition, environmental policies and consumer demand. At times, worldwide production of industrial materials has exceeded demand as a result of over-building or economic downturns, leading to poor investment returns or losses. Other risks may include liabilities for environmental damage and general civil liabilities, depletion of resources, and mandated expenditures for safety and pollution control. The materials sector may also be affected by economic cycles, technical progress, labor relations and government regulations.

The factors described above affect the materials sector generally and could affect the value of the securities held by the Materials Select Sector SPDR[®] Fund and thus the value of the Materials Select Sector SPDR[®] Fund during the term of the notes, which may adversely affect the value of your notes.

For notes linked in whole or in part to the Real Estate Select Sector SPDR[®] Fund, risks associated with the real estate sector will affect the value of the notes.

All or substantially all of the equity securities held by the Real Estate Select Sector SPDR[®] Fund are issued by companies whose primary line of business is directly associated with the real estate sector, including the following industries: real estate management and development and REITs, excluding mortgage REITs. The Real Estate Select Sector SPDR[®] Fund is concentrated in the real estate sector, which means the Real Estate Select Sector SPDR[®] Fund will be more affected by the performance of the real estate sector than a fund or index that was more diversified.

An investment in a real property company may be subject to risks similar to those associated with direct ownership of real estate, including, by way of example, the possibility of declines in the value of real estate, losses from casualty or condemnation, and changes in local and general economic conditions, supply and demand, interest rates, environmental liability, zoning laws, regulatory limitations on rents, property taxes and operating expenses. Some real property companies have limited diversification because they invest in a limited number of properties, a narrow geographic area, or a single type of property.

REITs are subject to the risks associated with investing in the securities of real property companies. In particular, REITs may be affected by changes in the values of the underlying properties that they own or operate. Further, REITs are dependent upon specialized management skills, and their investments may be concentrated in relatively few properties, or in a small geographic area or a single property type.

REITs are also subject to heavy cash flow dependency and, as a result, are particularly reliant on the proper functioning of capital markets. A variety of economic and other factors may adversely affect a lessee's ability to meet its obligations to a REIT. In the event of a default by a lessee, the REIT may experience delays in enforcing its rights as a lessor and may incur substantial costs associated in protecting its investments. In addition, a REIT could fail to qualify for favorable tax or regulatory treatment.

The factors described above affect the real estate sector generally and could affect the value of the securities held by the Real Estate Select Sector SPDR[®] Fund and thus the value of the Real Estate Select Sector SPDR[®] Fund during the term of the notes, which may adversely affect the value of your notes.

For notes linked in whole or in part to the Technology Select Sector SPDR[®] Fund, risks associated with the technology sector will affect the value of the notes.

All or substantially all of the equity securities held by the Technology Select Sector SPDR[®] Fund are issued by companies whose primary line of business is directly associated with the technology sector, including the following industries: technology hardware, storage, and peripherals; software; diversified telecommunication services; communications equipment; semiconductors and semiconductor equipment; internet software and services; information technology services; electronic equipment, instruments and components; and wireless telecommunication services. The Technology Select Sector SPDR[®] Fund is concentrated in the technology sector, which means the Technology Select Sector SPDR[®] Fund will be more affected by the performance of the technology sector than a fund or index that was more diversified.

Market or economic factors impacting technology companies and companies that rely heavily on technology advances could have a major effect on the value of the Technology Select Sector SPDR[®] Fund. The value of stocks of technology companies and companies that rely heavily on technology is particularly vulnerable to rapid changes in technology product cycles, rapid product obsolescence, government regulation and competition, both domestically and internationally, including competition from foreign competitors with lower production costs. Stocks of technology companies and companies that rely heavily on technology, especially those of smaller, less-seasoned companies, tend to be more volatile than the overall market. Technology companies are heavily dependent on patent and intellectual property rights, the loss or impairment of which may adversely affect profitability. Additionally, companies in the technology sector may face dramatic and often unpredictable changes in growth rates and competition for the services of qualified personnel.

The factors described above affect the technology sector generally and could affect the value of the securities held by the Technology Select Sector SPDR[®] Fund and thus the value of the Technology Select Sector SPDR[®] Fund during the term of the notes, which may adversely affect the value of your notes.

For notes linked in whole or in part to the Utilities Select Sector SPDR[®] Fund, risks associated with the utilities sector will affect the value of the notes.

All or substantially all of the equity securities held by the Utilities Select Sector SPDR[®] Fund are issued by companies whose primary line of business is directly associated with the utilities sector, including the following industries: electric utilities; water utilities; multi-utilities; independent power producers and energy traders; and gas utilities. The Utilities Select Sector SPDR[®] Fund is concentrated in the utilities sector, which means the Utilities Select Sector SPDR[®] Fund will be more affected by the performance of the utilities sector than a fund or index that was more diversified.

The performance of companies in the utilities sector is affected by supply and demand, operating costs, government regulation, environmental factors, liabilities for environmental damage and general civil liabilities, and rate caps or rate charges. Although rate changes of a utility usually fluctuate in approximate correlation with financing costs due to political and regulatory factors, rate changes ordinarily occur only following a delay after the changes in financing costs. This factor will tend to favorably affect a regulated utility company's earnings and dividends in times of decreasing costs, but conversely, will tend

to adversely affect earnings and dividends when costs are rising. The value of regulated utility equity securities may tend to have an inverse relationship to the movement of interest rates. Certain utility companies have experienced full or partial deregulation in recent years. These utility companies are frequently more similar to industrial companies in that they are subject to greater competition and have been permitted by regulators to diversify outside of their original geographic regions and their traditional lines of business. These opportunities may permit certain utility companies to earn more than their traditional regulated rates of return. Some companies, however, may be forced to defend their core business and may be less profitable. In addition, natural disasters, terrorist attacks, government intervention or other factors may render a utility company's equipment unusable or obsolete and negatively impact profitability.

Among the risks that may affect utility companies are the following: risks of increases in fuel and other operating costs; the high cost of borrowing to finance capital construction during inflationary periods; restrictions on operations and increased costs and delays associated with compliance with environmental and nuclear safety regulations; and the difficulties involved in obtaining natural gas for resale or fuel for generating electricity at reasonable prices. Other risks include those related to the construction and operation of nuclear power plants, the effects of energy conservation and the effects of regulatory changes

The factors described above affect the utilities sector generally and could affect the value of the securities held by the Utilities Select Sector SPDR[®] Fund and thus the value of the Utilities Select Sector SPDR[®] Fund during the term of the notes, which may adversely affect the value of your notes.

For notes linked in whole or in part to the SPDR[®] Gold Trust, the price of gold is volatile and is affected by numerous factors.

The value of the SPDR[®] Gold Trust is closely related to the price of gold. A decrease in the price of gold may have a material adverse effect on the value of the notes and your return on your investment in the notes. Gold is subject to the effect of numerous factors. The following describes some of the factors affecting gold.

The price of gold is primarily affected by the global demand for and supply of gold. The market for gold bullion is global, and gold prices are subject to volatile price movements over short periods of time and are affected by numerous factors, including macroeconomic factors, such as the structure of and confidence in the global monetary system, expectations regarding the future rate of inflation, the relative strength of, and confidence in, the U.S. dollar (the currency in which the price of gold is usually quoted), interest rates, gold borrowing and lending rates and global or regional economic, financial, political, regulatory, judicial or other events. Gold prices may be affected by industry factors, such as industrial and jewelry demand as well as lending, sales and purchases of gold by the official sector, including central banks and other governmental agencies and multilateral institutions that hold gold. Additionally, gold prices may be affected by levels of gold production, production costs and short-term changes in supply and demand due to trading activities in the gold market. From time to time, above-ground inventories of gold may also influence the market. It is not possible to predict the aggregate effect of all or any combination of these factors. The price of gold has recently been, and may continue to be, extremely volatile.

For notes linked in whole or in part to the SPDR[®] Gold Trust, economic or political events or crises could result in large-scale purchases or sales of gold, which could affect the price of gold and may adversely affect the value of your notes.

Many investors, institutions, governments and others purchase and sell gold as a hedge against inflation, market turmoil or uncertainty or political events. Under such circumstances, significant large-scale purchases or sales of gold by market participants may affect the price of gold, which could adversely affect the value of your notes. Crises in the future may impair gold's price performance which would, in turn, adversely affect the shares of the SPDR[®] Gold Trust and your investment in the notes.

For notes linked in whole or in part to the SPDR[®] Gold Trust, gold is traded on the London Bullion Market Association, so an investment in the notes may be subject to risks associated with the London Bullion Market Association.

The SPDR[®] Gold Trust is closely related to its underlying commodity (e.g., gold), the price of which is determined by an independent service provider appointed by the London Bullion Market Association (the “LBMA”). Investments in securities indexed to the value of commodities the prices of which are determined by non-U.S. markets involve risks associated with the markets in those countries, including risks of volatility in those markets and governmental intervention in those markets.

The final price of gold will be determined by reference to fixing prices reported by an independent service provider appointed by the LBMA. The LBMA is a self-regulatory association of bullion market participants. Although all market-making members of the LBMA are supervised by the Bank of England and are required to satisfy a capital adequacy test, the LBMA itself is not a regulated entity. If the LBMA should cease operations, or if bullion trading should become subject to a value added tax or other tax or any other form of regulation currently not in place, the role of LBMA price fixings as a global benchmark for the value of gold may be adversely affected. The LBMA is a principals’ market which operates in a manner more closely analogous to an over-the-counter physical commodity market than regulated futures markets, and certain features of U.S. futures contracts are not present in the context of LBMA trading. For example, there are no daily price limits on the LBMA which would otherwise restrict fluctuations in the prices of LBMA contracts. In a declining or rising market, it is possible that prices would continue to decline or rise without limitation within a trading day or over a period of trading days.

For notes linked in whole or in part to the SPDR[®] Gold Trust, the relevant exchange for gold has no obligation to consider your interests.

The price of the SPDR[®] Gold Trust is closely related to the price of gold. The relevant exchange for gold is responsible for calculating the official settlement price or fixing level, as applicable, for gold. The relevant exchange may alter, discontinue or suspend calculation or dissemination of the official settlement price or fixing level, as applicable, for gold. Any of these actions could adversely affect the value of the notes. The relevant exchange has no obligation to consider your interests in calculating or revising the official settlement price or fixing level, as applicable, for gold.

For notes linked in whole or in part to the SPDR[®] Gold Trust, termination of the SPDR[®] Gold Trust could affect adversely the value of the notes.

The SPDR[®] Gold Trust may be required to terminate and liquidate at a time that is disadvantageous to you. If the SPDR[®] Gold Trust is required to terminate and liquidate, such termination and liquidation could occur at a time that is disadvantageous to you, such as when the price of gold is higher than the price of gold at the time when you purchased your notes.

The performance of the SPDR[®] Gold Trust may not correlate with the price of gold.

The performance of SPDR[®] Gold Trust may not fully replicate the performance of the price of gold due to the fees and expenses charged by the SPDR[®] Gold Trust or by restrictions on access to gold due to other circumstances. The SPDR[®] Gold Trust does not generate any income and as the SPDR[®] Gold Trust regularly sells gold to pay for its ongoing expenses, the amount of gold represented by each share gradually declines over time. The SPDR[®] Gold Trust sells gold to pay expenses on an ongoing basis irrespective of whether the trading price of the shares rises or falls in response to changes in the price of gold. The sale of SPDR[®] Gold Trust’s gold to pay expenses at a time of low gold prices (for notes that provide long exposure to the SPDR[®] Gold Trust) or at a time of high gold prices (for notes that provide short exposure to the SPDR[®] Gold Trust) could adversely affect the value of the notes. Additionally, there is a risk that part or all of the SPDR[®] Gold Trust’s gold could be lost, damaged or stolen due to war, terrorism, theft, natural disaster or otherwise.

The net asset value of the SPDR[®] Gold Trust will reflect the performance of gold. However, because the shares of the SPDR[®] Gold Trust are traded on NYSE Arca, Inc. and are subject to market supply and

investor demand, the market value of one Share of the SPDR[®] Gold Trust may differ from the net asset value per share of the SPDR[®] Gold Trust.

For all of the foregoing reasons, the performance of the SPDR[®] Gold Trust over the term of the notes may not correlate with the performance of the return on gold over the same period. Consequently, the return on the notes will not be the same as investing directly in the SPDR[®] Gold Trust, gold or other exchange-traded or over-the-counter instruments based on gold, and will not be the same as investing in a note or another financial product with payments linked in part to the performance of the SPDR[®] Gold Trust.

For notes linked in whole or in part to the SPDR[®] S&P[®] Homebuilders ETF, risks associated with the homebuilding industry will affect the value of the notes.

The homebuilding industry is significantly affected by factors in general and local economic conditions and real estate markets as well as by weather conditions, natural disasters and geopolitical events, any of which could affect the ability of the companies the equity securities of which are held by the SPDR[®] S&P[®] Homebuilders ETF to conduct their businesses profitably. The homebuilding industry is cyclical and has from time to time experienced significant difficulties. The prices of the equity securities held by the SPDR[®] S&P[®] Homebuilders ETF and, in turn, the price of the SPDR[®] S&P[®] Homebuilders ETF, will be affected by a number of factors that may either offset or magnify each other, including:

- a decline in the value of real estate properties;
- employment levels and job growth;
- the availability of financing for home buyers;
- interest rates;
- consumer confidence;
- housing demand;
- the availability of suitable undeveloped land;
- raw material and labor shortages and price fluctuations;
- federal, state and local laws and regulations concerning the development of land, homebuilding, home sales, consumer financing and environmental protection;
- competition among companies which engage in the homebuilding business; and
- the supply of homes and other housing alternatives.

In addition, weather conditions and natural disasters such as hurricanes, tornadoes, earthquakes, floods and fires can harm the homebuilding business. Geopolitical events, such as the aftermath of the war with Iraq and the terrorist attacks on September 11, 2001, and related market disruptions could also have a significant impact on the homebuilding business.

The factors described above could affect the homebuilding industry generally or regionally and could affect the value of the equity securities held by the SPDR[®] S&P[®] Homebuilders ETF and thus the price of the SPDR[®] S&P[®] Homebuilders ETF during the term of the notes.

For notes linked in whole or in part to the SPDR[®] S&P[®] Homebuilders ETF, there will be no direct correlation between the value of the notes or the price of the SPDR[®] S&P[®] Homebuilders ETF and residential housing prices.

There is no direct linkage between the price of the SPDR[®] S&P[®] Homebuilders ETF and residential housing prices in specific regions or residential housing prices in general. While residential housing prices may be one factor that could affect the prices of the equity securities held by the SPDR[®] S&P[®] Homebuilders ETF and consequently the price of the SPDR[®] S&P[®] Homebuilders ETF, the price of the SPDR[®] S&P[®] Homebuilders ETF and the notes are not directly linked to movements of residential housing prices and may be affected by factors unrelated to such movements.

For notes linked in whole or in part to the SPDR[®] S&P[®] Metals & Mining ETF, risks associated with the metals and mining industry will affect the value of the notes.

All or substantially all of the equity securities held by the SPDR[®] S&P[®] Metals & Mining ETF are issued by companies whose primary lines of business are directly associated with the metals and mining industry. As a result, the value of the notes may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting this industry than a different investment linked to securities of a more broadly diversified group of issuers. The metals and mining industry can be significantly affected by international political and economic developments, energy conservation, the success of exploration projects, commodity prices and tax and other government regulations. Companies involved in the metals and mining industry may benefit from government subsidies or certain trade protections. If those subsidies or trade protections are reduced or removed, the profits of such companies may be affected, potentially drastically. In addition, competitive pressures and the cyclical nature of the metal and mining industry may have a significant effect on the financial condition of these companies. These companies are also subject to risks of changes in exchange rates, terrorist attacks, depletion of resources and reduced demand as a result of increases in energy efficiency, substitution and energy conservation. Such companies are subject to extensive federal, state and local environmental laws and regulations regarding air emissions and the disposal of hazardous materials and may be at risk for environmental damage claims. These factors could affect the metals and mining industry and could affect the value of the equity securities held by the SPDR[®] S&P[®] Metals & Mining ETF and the price of the SPDR[®] S&P[®] Metals & Mining ETF during the term of the notes, which may adversely affect the value of your notes.

For notes linked in whole or in part to the SPDR[®] S&P[®] Oil & Gas Exploration & Production ETF, risks associated with the exploration of oil and gas will affect the value of the notes.

All or substantially all of the equity securities underlying the SPDR[®] S&P[®] Oil & Gas Exploration & Production ETF are issued by companies whose primary business is associated with the exploration and production of oil and gas. As a result, the value of the securities may be subject to greater volatility and may be more adversely affected by a single economic, political or regulatory occurrence affecting this industry than a different investment linked to securities of a more broadly diversified group of issuers or issuers in a less volatile industry. The oil and gas industry is significantly affected by a number of factors that influence worldwide economic conditions and oil and gas prices, such as natural disasters, supply disruptions, geopolitical events and other factors that may offset or magnify each other, including:

- worldwide and domestic supplies of, and demand for, crude oil and natural gas;
- the cost of exploring for, developing, producing, refining and marketing crude oil and natural gas;
- consumer confidence;
- changes in weather patterns and climatic changes;
- the ability of the members of Organization of Petroleum Exporting Countries (OPEC) and other producing nations to agree to and maintain production levels;

- the worldwide military and political environment, uncertainty or instability resulting from an escalation or additional outbreak of armed hostilities or further acts of terrorism in the United States, or elsewhere;
- the price and availability of alternative and competing fuels;
- domestic and foreign governmental regulations and taxes;
- employment levels and job growth; and
- general economic conditions worldwide.

These or other factors or the absence of such factors affect the oil and natural gas industries generally or regionally and could cause the value of some or all of the component stocks held by the SPDR[®] S&P[®] Oil & Gas Exploration & Production ETF to decline during the term of the notes. For example, the SPDR[®] S&P[®] Oil & Gas Exploration & Production ETF suffered significant negative performance in 2014 and 2015 while the broader U.S. equities markets achieved positive returns for the same period.

For notes linked in whole or in part to the SPDR[®] S&P[®] Regional Banking ETF, risks associated with the banking sector will affect the value of the notes.

An investment in the notes is subject to risks associated with investing in stocks in the banking sector. Because the SPDR[®] S&P[®] Regional Banking ETF is concentrated in the banking sector, it may be adversely affected by the performance of the banking sector versus a fund that was more diversified. The performance of bank stocks may be affected by extensive governmental regulation which may limit both the amounts and types of loans and other financial commitments they can make, and the interest rates and fees they can charge and the amount of capital they must maintain. Profitability is largely dependent on the availability and cost of capital funds, and can fluctuate significantly when interest rates change. Credit losses resulting from financial difficulties of borrowers can negatively impact the sector. Banks may also be subject to severe price competition. The regional banking industry is highly competitive and failure to maintain or increase market share may result in lost market share.

The performance of the United States Oil Fund, LP may not fully replicate the performance of the price of light, sweet crude oil.

United States Commodity Funds LLC, the general partner of the United States Oil Fund, LP, is responsible for investing the assets of the United States Oil Fund, LP in accordance with the objectives and policies of the United States Oil Fund, LP. The assets of the United States Oil Fund, LP consist primarily of investments in futures contracts for light, sweet crude oil, other types of crude oil, heating oil, gasoline, natural gas, and other petroleum-based fuels that are traded on the New York Mercantile Exchange, ICE Futures or other U.S. and foreign exchanges (collectively, “oil futures contracts”) and other oil interests such as cash-settled options on oil futures contracts, forward contracts for oil, and over-the-counter transactions that are based on the price of oil, other petroleum-based fuels, oil futures contracts and indices based on the foregoing (collectively, “other oil interests”) and together with oil futures contracts, “oil interests”). The United States Oil Fund, LP seeks to achieve its investment objective by investing in a mix of oil futures contracts and other oil interests such that changes in the net asset value of the United States Oil Fund, LP will closely track the changes in the price of a specified oil futures contract (the “benchmark oil futures contract”). The United States Oil Fund, LP’s general partner believes that the benchmark oil futures contract historically has exhibited a close correlation with the spot price of light, sweet crude oil.

There is no assurance that the general partner of the United States Oil Fund, LP will successfully implement its investment strategy and there is a risk that changes in the price of United States Oil Fund, LP units will not closely track changes in the spot price of light, sweet crude oil. The performance of the United States Oil Fund, LP may not exactly replicate the performance of the oil interests underlying the United States Oil Fund, LP because the United States Oil Fund, LP will reflect transaction costs and fees.

It is also possible that the United States Oil Fund, LP may not fully replicate or may in certain circumstances diverge significantly from the performance of the oil interests underlying the United States Oil Fund, LP due to the temporary unavailability of certain securities in the secondary market or the performance of any derivative instruments contained in the United States Oil Fund, LP. This could also happen if the price of the units does not correlate closely with the United States Oil Fund, LP's net asset value; changes in the United States Oil Fund, LP's net asset value do not closely correlate with changes in the price of the benchmark oil futures contract; or changes in the price of the benchmark oil futures contract do not closely correlate with changes in the cash or spot price of light, sweet crude oil. Light, sweet crude oil has also demonstrated a lack of correlation with world crude oil prices due to structural differences between the U.S. market for crude oil and the international market for crude oil. The prices of light, sweet crude oil may be more volatile than world crude oil prices generally.

For notes linked in whole or in part to the United States Oil Fund, LP, global energy commodity prices are primarily affected by the global demand for and supply of these commodities, but are also significantly influenced by speculative actions and by currency exchange rates.

Prices for energy commodities, which includes crude oil, are affected by governmental programs and policies, national and international political and economic events, changes in interest and exchange rates, trading activities in commodities and related contracts, trade, fiscal, monetary and exchange control policies and, with respect to oil specifically, drought, floods, weather, government intervention, environmental policies, embargoes and tariffs. Demand for refined petroleum products by consumers, as well as the agricultural, manufacturing and transportation industries, affects the price of energy commodities. Sudden disruptions in the supplies of energy commodities, such as those caused by war, natural events, accidents or acts of terrorism, may cause prices of energy commodities futures contracts to become extremely volatile and unpredictable. Also, sudden and dramatic changes in the futures market may occur, for example, upon a cessation of hostilities that may exist in countries producing energy commodities, the introduction of new or previously withheld supplies into the market or the introduction of substitute products or commodities. In particular, supplies of crude oil may increase or decrease depending on, among other factors, production decisions by the Organization of Oil and Petroleum Exporting Countries ("OPEC") and other crude oil producers. Crude oil prices are determined with significant influence by OPEC, which has the capacity to influence oil prices worldwide because its members possess a significant portion of the world's oil supply. Crude oil prices are generally more volatile and subject to dislocation than prices of other commodities. Demand for energy commodities such as crude oil is generally linked to economic activity, and will tend to reflect general economic conditions.

For notes linked in whole or in part to the United States Oil Fund, LP, the price of crude oil may change unpredictably and affect the price of the United States Oil Fund, LP and the value of the notes in unforeseen ways.

The price of the United States Oil Fund, LP is linked closely to the price of light, sweet crude oil. The price of crude oil is subject to volatile price movements over short periods of time and is generally affected by numerous factors including:

- demand for refined petroleum products by consumers, as well as the agricultural, manufacturing and transportation industries;
- economic conditions that affect the end-use of crude oil as a refined product such as transport fuel, industrial fuel and in-home heating fuel;
- U.S. government regulations, such as environmental or consumption policies;
- geopolitical events, labor activity and, in particular, direct government intervention such as embargos;
- supply disruptions in major oil producing regions of the world, production decisions by OPEC and other crude oil producers and cessation of hostilities that may exist in countries producing oil;

- sudden disruptions in the supply of oil due to war, natural events, accidents or acts of terrorism; and
- the introduction of new or previously withheld supplies into the market or the introduction of substitute products or commodities.

For notes linked in whole or in part to the Vanguard FTSE Emerging Markets ETF, additional risks will affect the value of the notes.

On June 2, 2015, The Vanguard Group, Inc. announced that the Vanguard FTSE Emerging Markets ETF would soon transition to track a new underlying index. On November 2, 2015, the Vanguard FTSE Emerging Markets ETF ceased tracking the FTSE Emerging Index and began temporarily tracking the FTSE Emerging Markets All Cap China A Inclusion Transition Index. By using this transition index, over a period of approximately 12 months, the Vanguard FTSE Emerging Markets ETF will move gradually 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 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. 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-capitalization companies in emerging markets, excluding China A-shares, whereas the latter also represents the performance of small-capitalization companies 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.

The adjustments to the Vanguard FTSE Emerging Markets ETF's holdings are expected to result in temporary increases in the Vanguard FTSE Emerging Markets ETF's transaction costs and turnover rate. The Vanguard FTSE Emerging Markets ETF's actual transaction costs and turnover rate will be dependent upon a number of factors, including the market environment at the time of the portfolio adjustments. These factors could reduce the Vanguard FTSE Emerging Markets ETF's performance and the return on the notes.

Because the Vanguard FTSE Emerging Markets ETF has begun tracking an index that includes China A-shares, the notes are subject to increased risk exposure to Chinese incorporated companies that trade on either the Shanghai or Shenzhen stock exchange. Furthermore, in order to trade in China A-shares, a foreign investor must have access to a quota through a qualified foreign institutional investor ("QFII") or Renminbi QFII license holder. In order to trade in China A-shares, the Vanguard FTSE Emerging Markets ETF must obtain a quota from the Chinese regulator prior to investing and then must continue to apply for additional quotas to meet its investment needs. There is no guarantee that the Chinese regulator will continue to give the Vanguard FTSE Emerging Markets ETF any or all of its requested quotas. If the Vanguard FTSE Emerging Markets ETF were to be denied any or all of a requested trade quota, the Vanguard FTSE Emerging Markets ETF would likely have difficulty trading and valuing its China A-shares. Such circumstance would likely cause the Vanguard FTSE Emerging Markets ETF to have difficulty tracking the FTSE Emerging Markets All Cap China A Inclusion Transition Index or FTSE Emerging Markets All Cap China A Inclusion Index, as applicable, and may adversely affect the price of the Vanguard FTSE Emerging Markets ETF.

During both the transition and final benchmark phases, the Vanguard FTSE Emerging Markets ETF will invest by sampling the relevant index, meaning that it will hold a broadly diversified collection of securities that, in the aggregate, approximates the full index in terms of key characteristics. In addition, the addition of small-capitalization stocks and China A-Shares may adversely affect the performance of the Vanguard FTSE Emerging Markets ETF. Moreover, the historical performance of the Vanguard FTSE Emerging Markets ETF prior to November 2, 2015 will not reflect the contribution of small-capitalization stocks and China A-shares and investors in the notes should bear this difference in mind when evaluating the historical data.

EQUITY INDEX DESCRIPTIONS

THE DOW JONES INDUSTRIAL AVERAGE™

All information contained in this underlying supplement regarding the Dow Jones Industrial Average™, including, without limitation, its make-up, method of calculation and changes in its components, has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, S&P Dow Jones Indices LLC (“S&P Dow Jones”). The Dow Jones Industrial Average™ is calculated, published and disseminated by S&P Dow Jones. S&P Dow Jones has no obligation to continue to publish, and may discontinue publication of, the Dow Jones Industrial Average™.

The Dow Jones Industrial Average™ is reported by Bloomberg L.P. under the ticker symbol “INDU.”

The Dow Jones Industrial Average™ consists of 30 common stocks chosen as representative of the broad market of U.S. industry. Many of the companies represented in the Dow Jones Industrial Average™ are household names and leaders in their respective industries, and their stocks are widely held by both individual and institutional investors. Because the Dow Jones Industrial Average™ is so well known and its performance is generally perceived to reflect that of the overall domestic equity market, it is often used as a benchmark for investments in equities, mutual funds and other asset classes. The Dow Jones Industrial average does not include the transportation and utilities sectors.

The Dow Jones Industrial Average™ is a price-weighted index rather than market capitalization-weighted index. In essence, the Dow Jones Industrial Average™ consists of one share of each of the 30 stocks included in the Dow Jones Industrial Average™. Thus, the weightings of the components of the Dow Jones Industrial Average™ are affected only by changes in their prices, while the weightings of stocks in other indices generally are affected by price changes and changes in shares outstanding. This distinction stems from the fact that, when initially created, the Dow Jones Industrial Average™ was a simple average (hence the name), and was computed merely by adding up the prices of the stocks in the Dow Jones Industrial Average™ and dividing that sum by the total number of stocks in the Dow Jones Industrial Average™. However, it eventually became clear that a method was needed to smooth out the effects of stock splits and other composition changes to prevent these events from distorting the level of the Dow Jones Industrial Average™. Therefore, a divisor was created that has been periodically adjusted over time. This divisor, when divided into the sum of the prices of the stocks in the Dow Jones Industrial Average™, generates the number that is reported every day in newspapers, on television and radio, and over the internet. With the incorporation of the divisor, the Dow Jones Industrial Average™ can no longer be considered an average.

The Dow Jones Industrial Average™ is maintained by the Dow Jones Averages Index Committee (the “Averages Committee”), which is currently composed of three representatives of S&P Dow Jones and two representatives of *The Wall Street Journal*. The Averages Committee meets at least semi-annually to review and make changes to the composition of the Dow Jones Industrial Average™. While component selection is not governed by quantitative rules, a stock typically is added only if it has an excellent reputation, demonstrates sustained growth, is of interest to a large number of investors and accurately represents the sectors covered by the Dow Jones Industrial Average™. The inclusion of any particular company in the Dow Jones Industrial Average™ does not constitute a prediction as to the company’s future results of operations or stock market performance. For the sake of continuity, composition changes are rare, and generally have occurred only after corporate acquisitions or other dramatic shifts in a component company’s core business. When such an event necessitates that one component be replaced, the entire index is reviewed. As a result, multiple component changes are often implemented simultaneously.

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THE EURO STOXX 50[®] INDEX

All information contained in this underlying supplement regarding the EURO STOXX 50[®] Index, including, without limitation, its make-up, method of calculation and changes in its components, has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, STOXX Limited. The EURO STOXX 50[®] Index is calculated, maintained and published by STOXX Limited. STOXX Limited has no obligation to continue to publish, and may discontinue publication of, the EURO STOXX 50[®] Index.

The EURO STOXX 50[®] Index is reported by Bloomberg L.P. under the ticker symbol "SX5E."

The EURO STOXX 50[®] Index was created by STOXX Limited, a wholly owned subsidiary of Deutsche Börse AG. Publication of the EURO STOXX 50[®] Index began on February 26, 1998, based on an initial EURO STOXX 50[®] Index value of 1,000 at December 31, 1991. The EURO STOXX 50[®] Index is disseminated on the STOXX Limited website: <http://www.stoxx.com>, which sets forth, among other things, the country and industrial sector weightings of the securities included in the EURO STOXX 50[®] Index. Information contained in the STOXX Limited website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

EURO STOXX 50[®] Index Composition and Maintenance

The EURO STOXX 50[®] Index is composed of 50 component stocks of market sector leaders in terms of free-float market capitalization from within the 19 EURO STOXX[®] Supersector indices, which represent the Eurozone portion of the STOXX Europe 600[®] Supersector indices. The STOXX Europe 600[®] Supersector indices contain the 600 largest stocks traded on the major exchanges of 18 European countries.

The composition of the EURO STOXX 50[®] Index is reviewed annually, based on the closing stock data on the last trading day in August. The component stocks are announced on the first trading day in September. Changes to the component stocks are implemented on the third Friday in September and are effective the following trading day. The composition of the EURO STOXX 50[®] Index is also reviewed monthly to ensure that component stocks still remain eligible for inclusion. Any resulting changes from the monthly review are implemented on the close of the fifth trading day following the monthly review and are effective the next trading day. Changes in the composition of the EURO STOXX 50[®] Index are made to ensure that the EURO STOXX 50[®] Index includes the 50 market sector leaders from within the EURO STOXX[®] Index.

The free float factors for each component stock used to calculate the EURO STOXX 50[®] Index, as described below, are reviewed, calculated and implemented on a quarterly basis and are fixed until the next quarterly review. Each component's weight is capped at 10% of the EURO STOXX 50[®] Index's total free-float market capitalization.

The EURO STOXX 50[®] Index is also reviewed on an ongoing basis. Corporate actions (including initial public offerings, mergers and takeovers, spin-offs, delistings and bankruptcy) that affect the EURO STOXX 50[®] Index composition are immediately reviewed. Any changes are announced, implemented and effective in line with the type of corporate action and the magnitude of the effect.

EURO STOXX 50[®] Index Calculation

The EURO STOXX 50[®] Index is calculated with the "Laspeyres formula," which measures the aggregate price changes in the component stocks against a fixed base quantity weight. The formula for calculating the EURO STOXX 50[®] Index value at any time can be expressed as follows:

$$\text{Index} = \frac{\text{free float market capitalization of the EURO STOXX 50}^{\text{®}} \text{ Index}}{\text{Divisor}}$$

The “free float market capitalization of the EURO STOXX 50[®] Index” is equal to the sum of the products of the price, number of shares, free float factor and weighting cap factor for each component stock as of the time the EURO STOXX 50[®] Index is being calculated. Each component’s weight is capped at 10% of the free float market capitalization of the EURO STOXX 50[®] Index.

The divisor for the EURO STOXX 50[®] Index is adjusted to maintain the continuity of EURO STOXX 50[®] Index values despite changes due to corporate actions. The following is a summary of the adjustments to any component stock made for corporate actions and the effect of such adjustment on the divisor, where shareholders of the component stock will receive “B” number of shares for every “A” share held (where applicable).

<p>(1) <i>Special cash dividend:</i></p> <p>Cash distributions that are outside the scope of the regular dividend policy or that the company defines as an extraordinary distribution</p> <p>Adjusted price = closing price – dividend announced by the company × (1 – withholding tax if applicable)</p> <p>Divisor: decreases</p>	
<p>(2) <i>Split and reverse split:</i></p> <p>Adjusted price = closing price × A / B</p> <p>New number of shares = old number of shares × B / A</p> <p>Divisor: unchanged</p>	
<p>(3) <i>Rights offering:</i></p> <p>If the subscription price is not available or if the subscription price is equal to or greater than the closing price on the day before the effective date, then no adjustment is made.</p> <p>In case the share increase is greater than or equal to 100% ($B / A \geq 1$), the adjustment of the shares and weight factors are delayed until the new shares are listed.</p> <p>Adjusted price = (closing price × A + subscription price × B) / (A + B)</p> <p>New number of shares = old number of shares × (A + B) / A</p> <p>Divisor: increases</p>	
<p>(4) <i>Stock dividend:</i></p> <p>Adjusted price = closing price × A / (A + B)</p> <p>New number of shares = old number of shares × (A + B) / A</p> <p>Divisor: unchanged</p>	<p>(5) <i>Stock dividend (from treasury stock):</i></p> <p>Adjusted only if treated as extraordinary dividend.</p> <p>Adjusted close = close – close × B / (A + B)</p> <p>Divisor: decreases</p>
<p>(6) <i>Stock dividend of another company:</i></p> <p>Adjusted price = (closing price × A – price of other company × B) / A</p>	<p>(7) <i>Return of capital and share consolidation:</i></p> <p>Adjusted price = (closing price – capital return announced by company × (1-</p>

<p>Divisor: decreases</p>	<p>withholding tax)) $\times A / B$</p> <p>New number of shares = old number of shares $\times B / A$</p> <p>Divisor: decreases</p>
<p><i>(8) Repurchase of shares / self-tender:</i></p> <p>Adjusted price = ((price before tender \times old number of shares) – (tender price \times number of tendered shares)) / (old number of shares – number of tendered shares)</p> <p>New number of shares = old number of shares – number of tendered shares</p> <p>Divisor: decreases</p>	<p><i>(9) Spin-off:</i></p> <p>Adjusted price = (closing price $\times A$ – price of spun-off shares $\times B$) / A</p> <p>Divisor: decreases</p>
<p><i>(10) Combination stock distribution (dividend or split) and rights offering:</i></p> <p>For this corporate action, the following additional assumptions apply:</p> <p>Shareholders receive B new shares from the distribution and C new shares from the rights offering for every A share held.</p> <p>If A is not equal to one share, all the following “new number of shares” formulae need to be divided by A:</p>	
<p><i>- If rights are applicable after stock distribution (one action applicable to other):</i></p> <p>Adjusted price = (closing price $\times A$ + subscription price $\times C \times (1 + B / A)$) / ((A + B) $\times (1 + C / A)$)</p> <p>New number of shares = old number of shares $\times ((A + B) \times (1 + C / A)) / A$</p> <p>Divisor: increases</p>	<p><i>- If stock distribution is applicable after rights (one action applicable to other):</i></p> <p>Adjusted price = (closing price $\times A$ + subscription price $\times C$) / ((A + C) $\times (1 + B / A)$)</p> <p>New number of shares = old number of shares $\times ((A + C) \times (1 + B / A))$</p> <p>Divisor: increases</p>
<p><i>- Stock distribution and rights (neither action is applicable to the other):</i></p> <p>Adjusted price = (closing price $\times A$ + subscription price $\times C$) / (A + B + C)</p> <p>New number of shares = old number of shares $\times (A + B + C) / A$</p> <p>Divisor: increases</p>	
<p><i>(11) Addition / deletion of a company:</i></p> <p>No price adjustments are made. The net change in market capitalization determines the divisor adjustment.</p>	<p><i>(12) Free float and shares changes:</i></p> <p>No price adjustments are made. The net change in market capitalization determines the divisor adjustment.</p>

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THE EURO STOXX[®] BANKS INDEX

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The EURO STOXX[®] Banks Index is calculated in euros and is reported by Bloomberg L.P. under the ticker symbol "SX7E."

The EURO STOXX[®] Banks Index was created by STOXX Limited, a wholly owned subsidiary of Deutsche Börse AG. Publication of the EURO STOXX[®] Banks Index began on June 15, 1998, based on an initial EURO STOXX[®] Banks Index value of 100 at December 31, 1991. The EURO STOXX[®] Banks Index is disseminated on the STOXX Limited website: <http://www.stoxx.com>, which sets forth, among other things, the country and industrial sector weightings of the securities included in the EURO STOXX[®] Banks Index. Information contained in the STOXX Limited website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

Index Composition

The EURO STOXX[®] Banks Index is one of 19 EURO STOXX[®] Supersector indices that compose the STOXX[®] Europe 600 Index. The STOXX[®] Europe 600 Index contains the 600 largest European stocks by free float market capitalization. Each of the 19 EURO STOXX[®] Supersector indices contain the companies within the Eurozone subset of the STOXX[®] Europe 600 Index that fall within the relevant supersector, determined by reference to the Industry Classification Benchmark ("ICB"), an international system for categorizing companies that is maintained by FTSE International Limited. The EURO STOXX[®] Banks Index includes companies in the banks supersector, which tracks companies providing a broad range of financial services, including retail banking, loans and money transmissions. The EURO STOXX[®] Banks Index currently includes 30 stocks of banks market sector leaders mainly from the ten largest Eurozone countries: Austria, Belgium, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal and Spain.

The composition of each of the EURO STOXX[®] Supersector indices is reviewed quarterly, based on the closing stock data on the last trading day of the month following the implementation of the last quarterly index review. The component stocks are announced on the fourth Tuesday of the month immediately prior to the review implementation month. Changes to the component stocks are implemented on the third Friday in each of March, June, September and December and are effective the following trading day.

The STOXX[®] Europe 600 Index is also reviewed on an ongoing basis, and any changes affecting the STOXX[®] Europe 600 Index are also applied to the relevant EURO STOXX[®] Supersector index. Corporate actions (including initial public offerings, mergers and takeovers, spin-offs, delistings and bankruptcy) that affect the STOXX[®] Europe 600 Index composition are immediately reviewed. Any changes are announced, implemented and effective in line with the type of corporate action and the magnitude of the effect.

The free float factors and weighting cap factors for each component stock used to calculate the EURO STOXX[®] Supersector indices, as described below, are reviewed, calculated and implemented on a quarterly basis and are fixed until the next quarterly review. All components of the EURO STOXX[®] Banks Index are subject to a 30% cap for the largest company and a 15% cap for the second-largest company.

Index Calculation

The EURO STOXX[®] Banks Index is calculated with the “Laspeyres formula,” which measures the aggregate price changes in the component stocks against a fixed base quantity weight. The formula for calculating the EURO STOXX[®] Banks Index value at any time can be expressed as follows:

$$\text{Index} = \frac{\text{free float market capitalization of the EURO STOXX}^{\text{®}} \text{ Banks Index}}{\text{Divisor}}$$

The “free float market capitalization of the EURO STOXX[®] Banks Index” is equal to the sum of the products of the price, number of shares, free float factor and weighting cap factor for each component stock as of the time the EURO STOXX[®] Banks Index is being calculated.

The divisor for the EURO STOXX[®] Banks Index is adjusted to maintain the continuity of the EURO STOXX[®] Banks Index values despite changes due to corporate actions. The following is a summary of the adjustments to any component stock made for corporate actions and the effect of such adjustment on the divisor, where shareholders of the component stock will receive “B” number of shares for every “A” share held (where applicable).

<p>(1) <i>Special cash dividend:</i></p> <p>Cash distributions that are outside the scope of the regular dividend policy or that the company defines as an extraordinary distribution</p> <p>Adjusted price = closing price – dividend announced by the company × (1 – withholding tax if applicable)</p> <p>Divisor: decreases</p>	
<p>(2) <i>Split and reverse split:</i></p> <p>Adjusted price = closing price × A / B</p> <p>New number of shares = old number of shares × B / A</p> <p>Divisor: unchanged</p>	
<p>(3) <i>Rights offering:</i></p> <p>If the subscription price is not available or if the subscription price is equal to or greater than the closing price on the day before the effective date, then no adjustment is made.</p> <p>In case the share increase is greater than or equal to 100% (B / A ≥ 1), the adjustment of the shares and weight factors are delayed until the new shares are listed.</p> <p>Adjusted price = (closing price × A + subscription price × B) / (A + B)</p> <p>New number of shares = old number of shares × (A + B) / A</p> <p>Divisor: increases</p>	
<p>(4) <i>Stock dividend:</i></p> <p>Adjusted price = closing price × A / (A + B)</p> <p>New number of shares = old number of</p>	<p>(5) <i>Stock dividend (from treasury stock):</i></p> <p>Adjusted only if treated as extraordinary dividend.</p> <p>Adjusted close = close – close × B / (A + B)</p>

<p>shares $\times (A + B) / A$</p> <p>Divisor: unchanged</p>	<p>Divisor: decreases</p>
<p><i>(6) Stock dividend of another company:</i></p> <p>Adjusted price = (closing price $\times A$ – price of other company $\times B$) / A</p> <p>Divisor: decreases</p>	<p><i>(7) Return of capital and share consolidation:</i></p> <p>Adjusted price = (closing price – capital return announced by company $\times (1$- withholding tax)) $\times A / B$</p> <p>New number of shares = old number of shares $\times B / A$</p> <p>Divisor: decreases</p>
<p><i>(8) Repurchase of shares / self-tender:</i></p> <p>Adjusted price = ((price before tender \times old number of shares) – (tender price \times number of tendered shares)) / (old number of shares – number of tendered shares)</p> <p>New number of shares = old number of shares – number of tendered shares</p> <p>Divisor: decreases</p>	<p><i>(9) Spin-off:</i></p> <p>Adjusted price = (closing price $\times A$ – price of spun-off shares $\times B$) / A</p> <p>Divisor: decreases</p>
<p><i>(10) Combination stock distribution (dividend or split) and rights offering:</i></p> <p>For this corporate action, the following additional assumptions apply:</p> <p>Shareholders receive B new shares from the distribution and C new shares from the rights offering for every A share held.</p> <p>If A is not equal to one share, all the following “new number of shares” formulae need to be divided by A:</p>	
<p><i>- If rights are applicable after stock distribution (one action applicable to other):</i></p> <p>Adjusted price = (closing price $\times A$ + subscription price $\times C \times (1 + B / A)$) / ((A + B) $\times (1 + C / A)$)</p> <p>New number of shares = old number of shares $\times ((A + B) \times (1 + C / A)) / A$</p> <p>Divisor: increases</p>	<p><i>- If stock distribution is applicable after rights (one action applicable to other):</i></p> <p>Adjusted price = (closing price $\times A$ + subscription price $\times C$) / ((A + C) $\times (1 + B / A)$)</p> <p>New number of shares = old number of shares $\times ((A + C) \times (1 + B / A))$</p> <p>Divisor: increases</p>
<p><i>- Stock distribution and rights (neither action is applicable to the other):</i></p> <p>Adjusted price = (closing price $\times A$ + subscription price $\times C$) / (A + B + C)</p> <p>New number of shares = old number of shares $\times (A + B + C) / A$</p>	

Divisor: increases	
(11) <i>Addition / deletion of a company:</i> No price adjustments are made. The net change in market capitalization determines the divisor adjustment.	(12) <i>Free float and shares changes:</i> No price adjustments are made. The net change in market capitalization determines the divisor adjustment.

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The FTSE[®] 100 Index is reported by Bloomberg L.P. under the ticker symbol “UKX.”

The FTSE[®] 100 Index is an index calculated, published and disseminated by FTSE Russell, a company owned wholly by London Stock Exchange Group plc (the “LSEG”). The FTSE[®] 100 Index measures the composite price performance of stocks of the largest 100 companies (determined on the basis of market capitalization) traded on the London Stock Exchange (the “LSE”). Publication of the FTSE[®] 100 Index began in January 1984.

Composition of the FTSE[®] 100 Index

The 100 stocks included in the FTSE[®] 100 Index (the “FTSE Underlying Stocks”) were selected from a reference group of stocks trading on the LSE that were selected by excluding certain stocks that have low liquidity based on public float, accuracy and reliability of prices, size and number of trading days. The FTSE Underlying Stocks were selected from this reference group by selecting 100 stocks with the largest market value. 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 satisfies the eligibility rules and screens in its own right in all respects. A list of the issuers of the FTSE Underlying Stocks is available from FTSE Russell.

The FTSE[®] 100 Index is overseen and reviewed quarterly by the FTSE Russell Europe, Middle East & Africa Regional Equity Advisory Committee (the “Index Steering Committee”) in order to maintain continuity in the level. The Index Steering Committee undertakes the reviews of the FTSE[®] 100 Index and ensures that constituent changes and index calculations are made in accordance with the ground rules of the FTSE[®] 100 Index. The meetings to review the constituents are held on the Wednesday before the first Friday in March, June, September and December. Each review is based on data from the close of business on the Tuesday before the first Friday of the review month. Any constituent changes are implemented after the close of business on the third Friday of the review month (*i.e.* effective Monday), following the expiry of the ICE Futures Europe futures and options contracts.

The FTSE Underlying Stocks may be replaced, if necessary, in accordance with deletion/addition rules that provide generally for the removal and replacement of a stock from the FTSE[®] 100 Index if such stock is delisted or its issuer is subject to a takeover offer that has been declared unconditional or it has ceased, in the opinion of the Index Steering Committee, to be a viable component of the FTSE[®] 100 Index. To maintain continuity, a stock will be added at the quarterly review if it has risen to 90th place or above and a stock will be deleted if at the quarterly review it has fallen to 111th place or below, in each case ranked on the basis of market capitalization. A constant number of constituents will be maintained for the FTSE[®] 100 Index. Where a greater number of companies qualify to be inserted in the index than those qualifying to be deleted, the lowest ranking constituents presently included in the index will be deleted to ensure that an equal number of companies are inserted and deleted at the periodic review. Likewise, where a greater number of companies qualify to be deleted than those qualifying to be inserted, the securities of the highest ranking companies which are presently not included in the index will be inserted to match the number of companies being deleted at the periodic review.

Companies that are large enough to be constituents of the FTSE[®] 100 Index but do not pass the liquidity test are excluded. At the next annual review, the companies are re-tested against all eligibility screens.

Calculation of the FTSE[®] 100 Index

The FTSE[®] 100 Index is calculated by (i) multiplying the per share price of each stock included in the FTSE[®] 100 Index by the number of outstanding shares, (ii) calculating the sum of all these products (such sum being hereinafter the “FTSE Aggregate Market Value”) as of the starting date of the FTSE[®] 100 Index, (iii) dividing the FTSE Aggregate Market Value by a divisor which represents the FTSE Aggregate Market Value on the base date of the FTSE[®] 100 Index and which can be adjusted to allow changes in the issued share capital of individual underlying stocks including the deletion and addition of stocks, the substitution of stocks, stock dividends and stock splits to be made without distorting the FTSE[®] 100 Index and (iv) multiplying the result by 1,000. Because of such capitalization weighting, movements in share prices of companies with relatively larger market capitalization will have a greater effect on the level of the entire FTSE[®] 100 Index than will movements in share prices of companies with relatively smaller market capitalization.

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The JPX-Nikkei Index 400 is reported by Bloomberg L.P. under the ticker symbol “JPNK400.”

The JPX-Nikkei Index 400 is composed of 400 Japanese common stocks listed on the TSE First Section, Second Section, Mothers (Market Of The High-growth and EmeRging Stocks) or JASDAQ market. Publication of the JPX-Nikkei Index 400 began on January 6, 2014, based on an initial Index value of 10,000 on August 30, 2013. The JPX-Nikkei Index 400 index value is computed and published daily at market close via TSE’s Market Information System and is reported to securities companies across Japan and available worldwide through computerized information networks.

The Index components are reviewed annually on the last business day of August with the last business day of June as the selection base date. The results of the constituent reviews will be announced on the fifth business day of August. The selection process and criteria are as follows:

(1) 1,000 stocks are selected based on their trading value over the past three years and the market value on the base selection date. Stocks are excluded from selection if they fall under any of the following criteria:

- listed for less than three years (excluding companies that underwent technical listing and were listed for 3 or more years prior to the delisting);
- the company’s liabilities exceed its assets during any of the past three fiscal years;
- the company has an operating loss in each of the past three fiscal years;
- the company has a net loss in each of the past three fiscal years;
- the company’s financials have disclosed doubt regarding its ability to continue as a going concern;
- disclosure of insufficient internal controls;
- the stock has been designated as a security to be delisted or security on alert; or
- certain listing violations have occurred over the past year.

(2) Each stock is scored by (a) three-year average return on equity (weighted 40%), (b) three-year cumulative operating profit (weighted 40%) and (c) market capitalization on the selection base date (weighted 20%). Each stock is ranked from 1st to 1,000th with respect to each of these three factors, with first place assigned 1,000 points and 1,000th place assigned 1 point. Then, the overall score for each stock is derived by aggregating the product of each factor’s assigned score multiplied by its applicable weight.

(3) 400 stocks are selected by the final ranking with the scores calculated above in (2) and qualitative factors from the perspectives of corporate governance and disclosure. These factors are applied as of the selection base date and include the appointment of at least two independent outside directors, releasing the most recent earnings report according to international financial reporting standards and the release of English language earnings information via TDnet. The final score for each stock equals the sum of the score calculated above in (2) plus the score from the qualitative factors. Stocks are ranked from highest to lowest based on their final scores, with the exception that stocks with negative three-year average return on equity and whose most recent return on equity are negative or that have negative three-year cumulative operating profit are moved to the bottom of the ranking. In the event of a tie in final

scores, the stock with the higher market capitalization is ranked higher. The top 400 stocks based on their rankings are selected for inclusion in the JPX-Nikkei Index 400.

The JPX-Nikkei Index 400 is calculated using free-float adjusted market value weighting and is denominated in points (as a decimal figure) rounded to the second decimal place. The JPX-Nikkei Index 400 Index is calculated by dividing the current free-float adjusted market value (the “Current Market Value”) by the market value on the base date (the “Base Market Value”) and multiplied by the Index value on the base date (the “Base Point”). The market value is the sum of the number of shares of each constituent multiplied by that constituent’s stock price.

The calculation of the JPX-Nikkei Index 400 Index can be represented by the following formula:

$$\text{Index} = \frac{\text{Current Market Value}}{\text{Base Market Value}} \times \text{Base Point}$$

The number of shares of each constituent is determined by multiplying the total number of listed shares by the free-float weight ratio following cap-adjustment. The weight of each constituent is capped at 1.5%, and if any constituent exceeds that weight, it is adjusted downwards at the time of the annual review. The free-float weight is determined by excluding the estimated number of listed shares that are deemed not to be available for trading in the market, using publicly available documents. Among the shares that are treated as non-free-float shares are, among others, shares held by specified types of major shareholders and shares held by board members and other representatives. The free-float weights are reviewed annually for each index constituent, with the announcement and effective date for each index constituent occurring on a quarterly basis, depending upon the relevant company’s earnings release schedule. In addition to this annual review, the JPNK400 Index Provider may also adjust a company’s free-float weight to reflect extraordinary events.

In order to maintain continuity, the Base Market Value is adjusted from time to time as a result of an increase or decrease in constituent issues, capital raising or similar events other than market fluctuations. Such events include, but are not limited to: new listings, delistings, new share issues either through public offerings or through rights offerings to shareholders, issuance of shares as a consequence of exercise of convertible bonds or warrants or mergers, acquisitions, consolidations, company splits or other similar changes in corporate structure. Adjustments to the JPX-Nikkei Index 400 to reflect dividends are made in two stages: (1) adjustment using estimated dividends and (2) minor adjustments made to reflect differences between estimated dividends and the dividend amount announced in the earnings report. The estimated dividend amount is derived from announcements in timely disclosure documents or by using the dividend amount for the previous period if the dividend for the current period is not fixed.

The formula for the adjustment is as follows:

$$\text{New Base Market Value} = \frac{\text{Old Base Market Value} \times (\text{Previous Business Day Market Value} \pm \text{Adjustment Amount})}{\text{Previous Business Day Market Value}}$$

Where Adjustment Amount = Increase (decrease) in the number of shares used for the Index calculation × stock price used for adjustment

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The MSCI Brazil Index

The MSCI Brazil Index is a free float-adjusted, capitalization-weighted index that is designed to measure the performance of the large- and mid-cap segments of the Brazilian equity market. The MSCI Brazil Index covers approximately 85% of the Brazilian equity universe. The U.S. dollar price return version of the MSCI Brazil Index is reported by Bloomberg L.P. under the ticker symbol “MXBR.”

The MSCI Canada Index

The MSCI Canada Index is a free float-adjusted, capitalization-weighted index that is designed to measure the performance of the large- and mid-cap segments of the Canadian equity market. The MSCI Canada Index covers approximately 85% of the free float-adjusted market capitalization in Canada. The U.S. dollar price return version of the MSCI Canada Index is reported by Bloomberg, L.P. under the ticker symbol “MXCA.”

The MSCI EAFE[®] Index

The MSCI EAFE[®] Index is a free float-adjusted market capitalization index intended to measure the equity market performance of certain developed markets excluding the United States and Canada. The MSCI EAFE[®] Index currently consists of the following 21 developed market country indices: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland and the United Kingdom. The MSCI EAFE[®] Index covers approximately 85% of the free float-adjusted market capitalization in each country. The U.S. dollar price return version of the MSCI EAFE[®] Index is reported by Bloomberg L.P. under the ticker symbol “MXEA.”

The MSCI Emerging Markets Index

The MSCI Emerging Markets Index is a free float-adjusted market capitalization index that is designed to measure equity market performance of global emerging markets. The MSCI Emerging Markets Index currently consists of the following 23 emerging market country indices: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey and the United Arab Emirates. The MSCI Emerging Markets Index covers approximately 85% of the free float-adjusted market capitalization in each country. The U.S. dollar price return version of the MSCI Emerging Markets Index is reported by Bloomberg L.P. under the ticker symbol “MXEF.”

The MSCI Europe Index

The MSCI Europe Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of the developed markets in Europe. The MSCI Europe Index currently consists of the following 15 developed market country indices: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland

and the United Kingdom. The MSCI Europe Index covers approximately 85% of the free float-adjusted market capitalization across the European developed markets equity universe. The U.S. dollar price return version of the MSCI Europe Index is reported by Bloomberg L.P. under ticker symbol “MXEU.”

The MSCI Italy SMID Cap Index

The MSCI Italy SMID Cap Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of mid- and small-cap companies in Italy. The MSCI Italy SMID Cap Index covers approximately 28% of the free float-adjusted market capitalization in Italy. The U.S. dollar price return version of the MSCI Italy SMID Cap Index is reported by Bloomberg Financial Markets under the ticker symbol “MXITSM.”

The MSCI Japan Index

The MSCI Japan Index is a free float-adjusted, market capitalization-weighted index that is designed to measure the large- and mid-cap segments of the Japanese equity market. The MSCI Japan Index covers approximately 85% of the free float-adjusted market capitalization in Japan. The U.S. dollar price return version of the MSCI Japan Index is reported by Bloomberg L.P. under the ticker symbol “MXJP.”

The MSCI Korea Index

The MSCI Korea Index is a free float-adjusted market capitalization index designed to measure the performance of the large- and mid-cap segments of the South Korean equity market securities listed on the Korea Exchange. The MSCI Korea Index covers about 85% of the Korean equity universe. The U.S. dollar price return version of the MSCI Korea Index is reported by Bloomberg L.P. under the ticker symbol “MXKR.”

The MSCI Malaysia Index

The MSCI Malaysia Index is a free float-adjusted market capitalization index that is designed to measure the large- and mid-cap segments of the Malaysian equity market. The MSCI Malaysia Index covers about 85% of the Malaysian equity universe. The U.S. dollar price return version of the MSCI Malaysia Index is reported by Bloomberg L.P. under the ticker symbol “MXMY.”

The MSCI Mexico Investable Market Index

The MSCI Mexico Investable Market Index is a free float-adjusted market capitalization index of large-, mid- and small-cap segments of the Mexican equity market. The MSCI Mexico Index covers approximately 99% of the free float-adjusted market capitalization in Mexico. The U.S. dollar price return version of the MSCI Mexico Investable Market Index is reported by Bloomberg L.P. under the ticker symbol “MXMX”.

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The MSCI Pacific Ex-Japan Index is a free float-adjusted market capitalization index that is designed to measure equity market performance of certain developed markets in the Pacific region, excluding Japan. The MSCI Pacific Ex-Japan Index currently consists of the following 4 developed country indices: Australia, Hong Kong, New Zealand and Singapore. The MSCI Pacific Ex-Japan Index covers approximately 85% of the free float-adjusted market capitalization in each country. The U.S. dollar price return version of the MSCI Pacific Ex-Japan Index is reported by Bloomberg L.P. under the ticker symbol “MXAPJ.”

The MSCI Singapore Index

The MSCI Singapore Index is a free float-adjusted market capitalization index that is designed to measure the large- and mid-cap segments of the Singaporean equity market. The MSCI Singapore Index covers about 85% of the Singapore equity universe. The U.S. dollar price return version of the MSCI Singapore Index is reported by Bloomberg L.P. under the ticker symbol “SIMSCI.”

The MSCI South Africa Index

The MSCI South Africa Index is a free float-adjusted market capitalization index that is designed to measure the large- and mid-cap segments of the South African equity market. The MSCI South Africa Index covers about 85% of the South African equity universe. The U.S. dollar price return version of the MSCI South Africa Index is reported by Bloomberg L.P. under the ticker symbol “MXZA.”

The MSCI Spain SMID Cap Index

The MSCI Spain SMID Cap Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of mid- and small-cap companies in Spain. The MSCI Spain SMID Cap Index covers approximately 28% of the free float-adjusted market capitalization in Spain. The U.S. dollar price return version of the MSCI Spain SMID Cap Index is reported by Bloomberg Financial Markets under the ticker symbol “MXESSM.”

The MSCI Taiwan Index

The MSCI Taiwan Index is a free float-adjusted market capitalization index that is designed to measure the performance of the large- and mid-cap segments of the Taiwanese equity market. The MSCI Taiwan Index covers approximately 85% of the free float-adjusted market capitalization in Taiwan. The U.S. dollar price return version of the MSCI Taiwan Index is reported by Bloomberg L.P. under the ticker symbol “TAMSCI.”

The MSCI Turkey Investable Market Index

The MSCI Turkey Investable Market Index is a free float-adjusted market capitalization index that is designed to measure the performance of the large-, mid- and small-cap segments of the Turkish equity market. The MSCI Turkey Investable Market Index covers approximately 99% of the free float-adjusted market capitalization in Turkey. The U.S. dollar price return version of the MSCI Turkey Investable Market Index is reported by Bloomberg L.P. under the ticker symbol “MXTR.”

The MSCI World IndexSM

The MSCI World IndexSM is a free float-adjusted market capitalization index intended to measure the equity market performance of certain developed equity markets. The MSCI World IndexSM currently consists of the following 23 developed market country indices: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States. The MSCI World IndexSM covers approximately 85% of the free float-adjusted market capitalization in each country. The U.S. dollar price return version of the MSCI World IndexSM is reported by Bloomberg L.P. under the ticker symbol “MXWO.”

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 (the “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, including Real Estate Investment Trusts (“REITs”) and certain income trusts listed in Canada are eligible for inclusion in the Equity Universe. Only one listing per security may be included in the Market Investable Equity Universe. If a security has two or more eligible listings that meet the liquidity criteria, MSCI will apply a set of priority rules to determine which listing will be included.

(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. Limited partnerships, limited liability companies and business trusts, which are listed in the United States and are not structured to be taxed as limited partnerships, are likewise eligible for inclusion in the Equity Universe. Conversely, mutual funds, ETFs, equity derivatives and most investment trusts are not eligible for inclusion in the Equity Universe. Preferred shares that exhibit characteristics of equity securities are eligible.

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 three months before the implementation of a semi-annual index review. This requirement is applicable to small new issues in all markets. Large IPOs and large primary / secondary offerings of non-index-constituents 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.
- (vi) **The Minimum Foreign Room Requirement:** This investability screen is applied at the individual security level. For a security that is subject to a Foreign Ownership Limit (FOL) to be eligible for inclusion in a Market Investable Equity Universe, the proportion of shares still available to foreign investors relative to the maximum allowed (referred to as "foreign room") must be at least 15%.

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:

- (i) Investable Market Index (Large + Mid + Small)
- (ii) Standard Index (Large + Mid)
- (iii) Large Cap Index
- (iv) Mid Cap Index
- (v) 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) defining the Global Minimum Size Reference; (iv) determining the Segment Number of Companies and associated Market Size-Segment Cutoffs; (v) assigning companies to the size segments; and (vi) 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 among the securities included in the Market Investable Equity Universe 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 after the application of the index maintenance methodology a Standard Index contains less than five securities in a Developed Market or three securities in an Emerging Market, then the remaining securities are selected for inclusion by multiplying market capitalization of such securities by a factor of 1.5.

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 S&P Dow Jones Indices LLC, the Global Industry Classification Standard (“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. QIRs may also result in additions of significant new investable companies to the Standard Index or deletion of companies from the Investable Market Indices due to low liquidity. 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.

Any index constructed on the basis of the Global Investable Market Indexes methodology may be subject to other limitations resulting from changes in the underlying markets. Any such potential limitations of an existing methodology may be assessed as part of the SAIR/QIR process.

- (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 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., U.S. 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 events, such as bankruptcy, 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.

Index Market Capitalization

$$IndexAdjustedMarketCapUSD_t =$$

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

$$IndexAdjustedMarketCapForLocal_t =$$

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

$$IndexInitialMarketCapUSD_t =$$

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

Where:

- $EndOfDayNumberOfShares_{s,t-1}$ is the number of shares of security s at the end of day t-1.
- $PricePerShare_t$ is the price per share of security s at time t.
- $PricePerShare_{t-1}$ is the price per share of security s at time t-1.
- $InclusionFactor_t$ is the inclusion factor of security s at time t. The inclusion factor can be one or the combination of the following factors: Foreign Inclusion Factor, Domestic Inclusion Factor, Growth Inclusion Factor, Value Inclusion Factor, Index Inclusion Factor.
- PAF_t is the Price Adjustment Factor of security s at time t.
- $FXrate_t$ is the FX rate of the price currency of security s vs USD at time t. It is the value of 1 USD in foreign currency.

- $FXrate_{t-1}$ is the FX rate of the price currency of security s vs USD at time $t-1$. It is the value of 1 USD in foreign currency.
- ICI_t is the Internal Currency Index of price currency at time t . The ICI is different than 1 when a country changes the internal value of its currency (e.g., from Turkish Lira to New Turkish Lira – $ICI = 1,000,000$).
- ICI_{t-1} is the Internal Currency Index of price currency at time $t-1$.

Corporate Events

Mergers and Acquisitions

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 determines the most appropriate implementation method and announces it prior to the changes becoming effective in the indices.

Tender Offers

In tender offers, the acquired or merging security is 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 decreased below 0.15 (except for Standard Index constituents), 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 and legal actions, the market perception of the transaction, official preliminary results if any, and other additional conditions for the offer.

In certain cases, securities are deleted earlier or using a different date 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.

Changes to a security resulting from large acquisition of non-listed companies or assets are implemented at the next regularly scheduled index review following completion of the event and listing of the newly issued shares.

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 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 is not 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 will 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 PAF is applied to the price of the parent entity and a "detached" security is created to avoid a drop in the free float-adjusted market capitalization of the parent entity, regardless of whether the spun-off security is added or not. The detached security is included in the MSCI Indices as of the close of the ex-date and is maintained until the spun-off security begins trading. The value of the detached security is equal to the difference between the cumulative price and the ex-price of the parent security.

Corporate Actions

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

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

Share Placements and Offerings

Changes in number of shares and FIF resulting from primary equity offerings representing at least 5% of the security's number of shares are implemented as of the close of the first trading day of the new shares, if all necessary information is available at that time. Otherwise, the event is implemented as soon as practicable after the relevant information is made available. Pending NOS and/or float changes, if any, are implemented simultaneously with the event. Changes in number of shares and FIF resulting from

primary equity offerings 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. In the case of secondary offerings representing at least 5% of the security's number of shares for existing constituents, these changes are 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 the implementation) is made as soon as the results are available. Block sales and secondary offerings (outside the United States) that were not captured at the time of completion will be reflected at a following regularly scheduled Index Review. Due to the nature of secondary offerings, being usually pre-announced by the company or company shareholders, MSCI generally announces changes due to secondary offerings (outside the United States) with an undetermined or expected status and sends the confirmed only after the event is completed.

Debt-to-Equity Swaps

Large debt-to-equity swaps involve the conversion of debt into equity originally not convertible at the time of issue. In this case, changes in numbers of shares and subsequent FIF and/or DIF changes are implemented as of the close of the first trading day of the newly issued shares, or shortly thereafter if all necessary information is available at the time of the swap. Pending NOS and/or float changes, if any, are implemented simultaneously with the event. Shares issued in debt-to-equity swaps are assumed to be issued to strategic investors, unless stated otherwise. As such, the post event free float is calculated on a pro forma basis assuming that all these shares are non-free float. Changes in numbers of shares and subsequent FIF and/or DIF changes due to conversions of convertible bonds or other convertible instruments, including periodical conversions of preferred stocks and small debt-to-equity swaps are implemented at the next regularly scheduled index review.

Suspensions and Bankruptcies

MSCI removes from the MSCI Indices as soon as possible companies that file for bankruptcy or protection from their creditors and/or are suspended and for which a return to normal business activity is unlikely in the near future. MSCI treats in the same way companies that fail stock exchange listing requirements with announcements of delisting from stock exchanges. In cases where the company is still trading, MSCI deletes the company on the same day at its last trading price, if feasible, and sends an intraday announcement. When the primary exchange price is not available, MSCI deletes securities at an over the counter or equivalent market price when such a price is available and deemed relevant. If no such price is available, the security will be deleted at the lowest system price. If MSCI decides to delete a company at the lowest system price with more than one full business day advance notice, the company may be maintained in the MSCI Indices at the lowest system price, instead of carrying forward its last trading price, until its deletion.

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THE MSCI 25/50 INDICES

All information contained in this underlying supplement regarding the MSCI Brazil 25/50 Index and the MSCI Mexico Investable Market (IMI) 25/50 Index (each, an “MSCI 25/50 Index” and together, the “MSCI 25/50 Indices”), including, without limitation, their make-up, method of calculation and changes in their components, has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, MSCI Inc. (“MSCI”). The MSCI 25/50 Indices are calculated, maintained and published by MSCI. MSCI has no obligation to continue to publish, and may discontinue publication of, any of the MSCI 25/50 Indices.

The MSCI Brazil 25/50 Index

The MSCI Brazil 25/50 Index is designed to measure the performance of the large- and mid-cap segments of the Brazilian market. It applies certain investment limits that are imposed on regulated investment companies (“RICs”) under the current U.S. Internal Revenue Code. The MSCI Brazil 25/50 Index covers approximately 85% of the free float-adjusted market capitalization in Brazil. The MSCI Brazil 25/50 Index is an index created by applying the weight constraints described below to the MSCI Brazil Index. For more information about the MSCI Brazil Index, please see “— The MSCI Indices” in this underlying supplement. The U.S. dollar price return version of the MSCI Brazil 25/50 Index is reported by Bloomberg L.P. under the ticker symbol “MXBR2550.”

The MSCI Mexico IMI 25/50 Index

The MSCI Mexico IMI 25/50 Index is designed to measure the performance of the large-, mid- and small-cap segments of the Mexican equity market. It applies certain investment limits that are imposed on RICs under the current U.S. Internal Revenue Code. The MSCI Mexico IMI 25/50 Index covers approximately 99% of the free float-adjusted market capitalization in Mexico. The MSCI Mexico IMI 25/50 Index is an index created by applying the weight constraints described below to the MSCI Mexico Investable Market Index. For more information about the MSCI Index, please see “— The MSCI Indices” in this underlying supplement. The U.S. dollar price return version of the MSCI Mexico IMI 25/50 Index is reported by Bloomberg L.P. under the ticker symbol “MXMX5IM.”

Objectives and Guiding Principles Underlying the MSCI 25/50 Indices

Under current regulations, a fund needs to satisfy certain tests, such as those relating to asset diversification and sources of income, for qualification as a RIC. More specifically, one requirement of a RIC is that, at the end of each quarter of a RIC’s tax year, no more than 25% of the value of the RIC’s assets may be invested in a single issuer and the sum of the weights of all issuers representing more than 5% of the fund should not exceed 50% of the fund’s total assets. The MSCI 25/50 Indices take into account these investment limits, offering a benchmarking alternative for RIC-compliant funds.

The following principles have guided MSCI in designing a methodology for constructing the MSCI 25/50 Indices from underlying non-constrained indices.

Reflecting the 25% and 50% concentration constraints. Reflecting the 25% and 50% concentration constraints is the primary consideration in terms of both index construction and index maintenance. Ensuring timely and on-going reflection of the constraints requires an MSCI 25/50 Index to be rebalanced periodically. The MSCI 25/50 Indices are rebalanced in February, May, August and November.

Minimizing tracking error to the parent index. Minimizing the tracking error between an MSCI 25/50 Index and the relevant parent index, while keeping the index turnover to a reasonable level, is another important objective. MSCI seeks to achieve this by rebalancing an MSCI 25/50 Index using an optimization process that aims to minimize the constituent weight differences between that MSCI 25/50 Index and the relevant parent index.

Index Construction and Maintenance Methodology

Constructing and Rebalancing the MSCI 25/50 Indices

The MSCI 25/50 Index methodology follows a portfolio optimization framework. The Barra Optimizer is utilized to perform the optimization function, which is aimed at minimizing index turnover, tracking error and extreme deviation from the relevant parent index. The Barra Optimizer is an algorithm designed to facilitate the portfolio construction process.

Constraint targets. Each MSCI 25/50 Index is subject to the following constraints:

- no issuer may exceed 25% of index weight; and
- all issuers with weight above 5% may not exceed 50% of the index weight.

Minimizing weight distance from the relevant parent index. The MSCI 25/50 Index methodology aims at minimizing the weight distance from the relevant parent index. The active risk or the tracking error of an MSCI 25/50 Index versus the relevant parent index is measured as the distance between the constituent weights of that MSCI 25/50 Index and the relevant parent index.

Minimizing transaction cost. A transaction cost is applied as a proxy for index turnover on rebalancing from each MSCI 25/50 Index.

Minimum weight of constituents. The minimum weight of any MSCI 25/50 Index constituent is equal to the weight of the smallest constituent in the relevant parent index.

Buffer Rules

A buffer of 10% of the value of each constraint is used in order to reduce the risk of non-compliance due to short term market movements between two quarterly rebalancing. As a result, at the point of constructing or rebalancing the MSCI 25/50 Indices, the weight of any single issuer cannot exceed 22.5% of the index weight and all issuers with weight above 4.5% cannot exceed 45% of the index weight.

Maintenance Rules

Quarterly index reviews. The MSCI 25/50 Indices are rebalanced quarterly and the changes resulting from the rebalancing are made as of the close of the last business day of each February, May, August and November, to coincide with the quarterly index reviews of their parent indices.

The MSCI 25/50 Indices are in general rebalanced five business days before the effective date. The changes resulting from the rebalancing are announced on the same day.

In case a pro forma MSCI 25/50 Index violates the 25/50 constraints between the announcement date and the effective date, the previously announced results will be discarded and a newly rebalanced MSCI 25/50 Index will be announced.

There is no index rebalancing due to non-compliance between quarterly index reviews.

At each rebalancing, a constraint factor is calculated for each constituent of each MSCI 25/50 Index. The constraint factor is defined as the weight in the applicable MSCI 25/50 Index at the time of the rebalancing *divided* by the weight in the relevant parent index. The constraint factor as well as the constituents of each MSCI 25/50 Index remains constant between index reviews except in case of corporate events.

Ongoing Event Related Changes. A security added to a parent index following a corporate event is added to the relevant MSCI 25/50 Index with an estimated capped weight, without rebalancing of the MSCI 25/50 index.

In the event of a merger or an acquisition where an index constituent acquires another index constituent or merges with another index constituent, the remaining company is maintained in the relevant MSCI 25/50 Index with a constraint factor calculated as the weighted average of the constraint factors before the corporate event.

If a spun-off security of an index constituent is added to a parent index, it will be added to the relevant MSCI 25/50 Index with the same constraint factor as the parent security.

The deletion of a constituent from a parent index following a corporate event triggers its deletion from the relevant MSCI 25/50 Index without rebalancing of that MSCI 25/50 Index.

The addition of a newly eligible security in a parent index — for example, an early inclusion of a large initial public offering, or a security migrating to that parent index from another size segment — will result in the inclusion of that security in the relevant MSCI 25/50 Index and consequently trigger the full rebalancing of that MSCI 25/50 Index.

Issuer Concentration Issues

A minimum of 15 issuers in the relevant parent index is required at any point in time for an MSCI 25/50 Index to be rebalanced as described above. In the event the number of issuers drops below 15 but remains above 11 following a corporate event or a regular index review, MSCI will apply the following adjustments:

- Number of issuers drops to 14: the buffer mentioned above will be reduced from 10% to 9%. Thus, the weight of any single issuer cannot exceed 22.75% of the index weight and all issuers with weight above 4.55% cannot exceed 45.5% of the index weight.
- Number of issuers drops to 13: the buffer mentioned above will be reduced from 10% to 4%. Thus, the weight of any single issuer cannot exceed 24% of the index weight and all issuers with weight above 4.8% cannot exceed 48% of the index weight.
- Number of issuers drops to 12: the buffer mentioned above will be reduced from 10% to 0%. Thus, the weight of any single issuer cannot exceed 25% of the index weight and all issuers with weight above 5% cannot exceed 50% of the index weight.

An MSCI 25/50 Index will need to be discontinued if the number of issuers drops below 12 as mathematically no solution can satisfy the 25% and 50% constraints. MSCI will however temporarily maintain the MSCI 25/50 Index for a minimum of two months before discontinuation by adding the necessary number of securities to that MSCI 25/50 Index. The index discontinuation will coincide with one of the subsequent regular index reviews. The securities to be added will be chosen in the following order of priority:

- Securities deleted from the relevant MSCI 25/50 Index, *provided* they exhibit required liquidity and were not deleted due to financial difficulties, etc.
- Eligible securities of relevant size not included in the relevant parent index, *e.g.*, largest small cap size-segment securities.

In the event that no securities are eligible for temporary addition to the relevant MSCI 25/50 Index, MSCI will provide an index, as close as possible to the 25/50 constraints, for a minimum of two months before discontinuation. The index discontinuation will coincide with one of the subsequent regular index reviews.

Index Calculation and Corporate Events

Please refer to “—The MSCI Indices” in this underlying supplement for information relating to the calculation of the MSCI 25/50 Indices and the treatment of corporate events. For these purposes, the

MSCI 25/50 Indices are deemed to be included in the MSCI Indices described in “— The MSCI Indices” in this underlying supplement.

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THE NASDAQ-100 INDEX[®]

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The NASDAQ-100 Index[®] is reported by Bloomberg L.P. under the ticker symbol “NDX.”

The NASDAQ-100 Index[®] is a modified market capitalization-weighted index of stocks of the 100 largest non-financial companies listed on The NASDAQ Stock Market. The NASDAQ-100 Index[®], which includes companies across a variety of major industry groups, was launched on January 31, 1985, with a base index value of 125.00, as adjusted. Current information regarding the market value of the NASDAQ-100 Index[®] is available from Nasdaq as well as numerous market information services.

The NASDAQ-100 Index[®] share weights of the component securities of the NASDAQ-100 Index[®] at any time are based upon the total shares outstanding in each of those securities and are additionally subject, in certain cases, to rebalancing. Accordingly, each underlying stock’s influence on the level of the NASDAQ-100 Index[®] is directly proportional to the value of its NASDAQ-100 Index[®] share weight.

Calculation of the NASDAQ-100 Index[®]

At any moment in time, the value of the NASDAQ-100 Index[®] equals the aggregate value of the then-current NASDAQ-100 Index[®] share weights of each of the NASDAQ-100 Index[®] component securities, which are based on the total shares outstanding of each such NASDAQ-100 Index[®] component security, multiplied by each such security’s respective last sale price on The NASDAQ Stock Market (which may be the official closing price published by The NASDAQ Stock Market), and divided by a scaling factor (the “divisor”), which becomes the basis for the reported NASDAQ-100 Index[®] value. The divisor serves the purpose of scaling such aggregate value to a lower order of magnitude which is more desirable for NASDAQ-100 Index[®] reporting purposes.

Underlying Stock Eligibility Criteria

Initial Eligibility Criteria

To be eligible for initial inclusion in the NASDAQ-100 Index[®], a security must meet the following criteria:

- the issuer of the security’s U.S. listing must be exclusively on the NASDAQ Global Select Market or the NASDAQ Global Market (unless the security was dually listed on another U.S. market prior to January 1, 2004 and has continuously maintained such listing);
- a security must be issued by a non-financial company;
- a security may not be issued by an issuer currently in bankruptcy proceedings;
- a security must have an average daily trading volume of at least 200,000 shares (measured annually during the ranking review process described below);
- if the issuer of the security is organized under the laws of a jurisdiction outside the United States, then that security must have listed options on a recognized options market in the United States or be eligible for listed-options trading on a recognized options market in the United States (measured annually during the ranking review process);

- the issuer of the security may not have entered into a definitive agreement or other arrangement which would likely result in the security no longer being NASDAQ-100 Index[®] eligible;
- the issuer of the security may not have annual financial statements with an audit opinion that is currently withdrawn; and
- the security must have “seasoned” on the NASDAQ, NYSE or NYSE MKT. Generally, a company is considered to be seasoned if it has been listed on a market for at least three full months (excluding the first month of initial listing).

Continued Eligibility Criteria

In addition, to be eligible for continued inclusion in the NASDAQ-100 Index[®], the security must meet the following criteria:

- the issuer of the security’s primary U.S. listing must be exclusively listed on the NASDAQ Global Select Market or the NASDAQ Global Market;
- the security must be issued by a non-financial company;
- the security may not be issued by an issuer currently in bankruptcy proceedings;
- the security must have an average daily trading volume of at least 200,000 shares in the previous three month trading period (measured annually during the ranking review process);
- if the issuer of the security is organized under the laws of a jurisdiction outside the United States, then that security must have listed options on a recognized options market in the United States or be eligible for listed-options trading on a recognized options market in the United States;
- the issuer must have an adjusted market capitalization equal to or exceeding 0.10% of the aggregate adjusted market capitalization of the NASDAQ-100 Index[®] at each month-end. In the event a company does not meet this criterion for two consecutive month-ends, it will be removed from the NASDAQ-100 Index[®] effective after the close of trading on the third Friday of the following month; and
- the issuer of the security may not have annual financial statements with an audit opinion that is currently withdrawn.

For the purposes of NASDAQ-100 Index[®] eligibility criteria, if the security is a depositary receipt representing a security of a non-U.S. issuer, then references to the “issuer” are references to the issuer of the underlying security.

These NASDAQ-100 Index[®] eligibility criteria may be revised from time to time by Nasdaq without regard to the notes.

Annual Ranking Review

The composition of the NASDAQ-100 Index[®] is evaluated on an annual basis, except under extraordinary circumstances that may result in an interim evaluation, as follows (this evaluation is referred to herein as the “Ranking Review”). Securities listed on The NASDAQ Stock Market that meet the applicable eligibility criteria are ranked by market value. NASDAQ-100 Index[®]-eligible securities that are already in the NASDAQ-100 Index[®] and whose issuer is ranked in the top 100 eligible companies (based on market capitalization) are retained in the NASDAQ-100 Index[®]. A NASDAQ-100 Index[®] issuer that is ranked 101 to 125 is also retained, *provided* that such issuer was ranked in the top 100 eligible issuers as of the previous Ranking Review or was added to the NASDAQ-100 Index[®] subsequent to the previous

Ranking Review. NASDAQ-100 Index[®] issuers not meeting such criteria are replaced. The replacement securities chosen are those NASDAQ-100 Index[®]-eligible securities not currently in the NASDAQ-100 Index[®] whose issuers have the largest market capitalization. The data used in the ranking includes end of October market data and is updated for total shares outstanding submitted in a publicly filed SEC document via EDGAR through the end of November.

Generally, the list of annual additions and deletions as a result of the annual evaluation is publicly announced via a press release in the early part of December. Replacements are made effective after the close of trading on the third Friday in December. Moreover, if at any time during the year other than the Ranking Review, a NASDAQ-100 Index[®] issuer no longer meets the continued eligibility criteria or is otherwise determined by Nasdaq to become ineligible for continued inclusion in the NASDAQ-100 Index[®], the issuer security will be replaced with the largest market capitalization security not currently in the NASDAQ-100 Index[®] and meeting the NASDAQ-100 Index[®] initial eligibility criteria listed above. Ordinarily, a security will be removed from the NASDAQ-100 Index[®] at its last sale price. If, however, at the time of its removal the security is halted from trading on its primary listing market and an official closing price cannot readily be determined, the security may, in Nasdaq's discretion, be removed at a zero price. The zero price will be applied to the security after the close of the market but prior to the time the official closing value of the NASDAQ-100 Index[®] is disseminated, which is ordinarily 5:16:00 p.m. EST.

Index Maintenance

Changes in the price and/or the aggregate value of the then-current NASDAQ-100 Index[®] share weights of each of the NASDAQ-100 Index[®] component securities driven by corporate events such as stock dividends, stock splits and certain spin-offs and rights issuances are adjusted on the ex-date. If the change in total shares outstanding arising from other corporate actions is greater than or equal to 10.0%, the change will be made to the NASDAQ-100 Index[®] as soon as practicable. Otherwise, if the change in total shares outstanding is less than 10.0%, then all such changes are accumulated and made effective at one time on a quarterly basis after the close of trading on the third Friday in each of March, June, September and December. The NASDAQ-100 Index[®] share weights for those underlying stocks are derived from each security's total shares outstanding. The NASDAQ-100 Index[®] share weights for those underlying stocks are adjusted by the same percentage amount by which the total shares outstanding have changed in those NASDAQ-100 Index[®] securities.

The price of the component security is adjusted for the amount of the special cash dividend. A dividend is considered special if the information provided by the listing exchange in their announcement of the ex-date indicates that the dividend is special. A special dividend may also be referred to as extra, extraordinary, non-recurring, one-time, unusual, etc.

Index Rebalancing

On a quarterly basis coinciding with the quarterly scheduled Index Share adjustment procedures, the NASDAQ-100 Index[®] will be rebalanced if it is determined that: (1) the current weight of the single largest market capitalization component security is greater than 24.0% and (2) the "collective weight" of those component securities whose individual current weights are in excess of 4.5%, when added together, exceed 48.0% of the NASDAQ-100 Index[®]. In addition, a special rebalancing of the NASDAQ-100 Index[®] may be conducted at any time if it is determined necessary to maintain the integrity of the NASDAQ-100 Index[®].

If either one or both of these weight distribution requirements are met upon quarterly review or it is determined that a special rebalancing is required, a weight rebalancing will be performed.

First, relating to weight distribution requirement (1) above, if the current weight of the single largest component security exceeds 24.0%, then the weights of all Large Stocks (those greater than 1%) will be scaled down proportionately towards 1.0% by enough for the adjusted weight of the single largest component security to be set to 20.0%.

Second, relating to weight distribution requirement (2) above, for those component securities whose individual current weights or adjusted weights in accordance with the preceding step are in excess of 4.5%, if their “collective weight” exceeds 48.0%, then the weights of all Large Stocks will be scaled down proportionately towards 1.0% by just enough for the “collective weight,” so adjusted, to be set to 40.0%.

The aggregate weight reduction among the Large Stocks resulting from either or both of the above rescaling will then be redistributed to the Small Stocks (those stocks less than or equal to 1%) in the following iterative manner.

In the first iteration, the weight of the largest Small Stock will be scaled upwards by a factor which sets it equal to the average Index weight of 1.0%. The weights of each of the smaller remaining Small Stocks will be scaled up by the same factor reduced in relation to each stock’s relative ranking among the Small Stocks such that the smaller the component security in the ranking, the less the scale-up of its weight. This is intended to reduce the market impact of the weight rebalancing on the smallest component securities in the NASDAQ-100 Index[®].

In the second iteration, the weight of the second largest Small Stock, already adjusted in the first iteration, will be scaled upwards by a factor which sets it equal to the average index weight of 1.0%. The weights of each of the smaller remaining Small Stocks will be scaled up by this same factor reduced in relation to each stock’s relative ranking among the Small Stocks such that, once again, the smaller the stock in the ranking, the less the scale-up of its weight.

Additional iterations will be performed until the accumulated increase in weight among the Small Stocks exactly equals the aggregate weight reduction among the Large Stocks from rebalancing in accordance with weight distribution requirement (1) and/or weight distribution requirement (2).

Then, to complete the rebalancing procedure, once the final percent weights of each of the component securities are set, the NASDAQ-100 Index[®] share weights will be determined anew based upon the last sale prices and aggregate capitalization of the NASDAQ-100 Index[®] at the close of trading on the last day in February, May, August and November. Changes to the NASDAQ-100 Index[®] share weights will be made effective after the close of trading on the third Friday in March, June, September and December and an adjustment to the NASDAQ-100 Index[®] divisor will be made to ensure continuity of the NASDAQ-100 Index[®].

Ordinarily, new rebalanced weights will be determined by applying the above procedures to the current NASDAQ-100 Index[®] share weights. However, NASDAQ OMX may from time to time determine rebalanced weights, if necessary, by applying the above procedure to the actual current market capitalization of the component securities. In such instances, NASDAQ OMX would announce the different basis for rebalancing prior to its implementation.

During at the quarterly rebalancing, data is cutoff as of the previous month-end and no changes are made to the NASDAQ-100 Index[®] from that cutoff until the quarterly share change effective date with the single exception for corporate actions with an ex-date. NASDAQ OMX may, from time to time, exercise reasonable discretion as it deems appropriate in order to ensure the integrity of the NASDAQ-100 Index[®].

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THE NIKKEI 225 INDEX

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The Nikkei 225 Index is reported by Bloomberg L.P. under the ticker symbol “NKY.”

The Nikkei 225 Index is a stock index that measures the composite price performance of selected Japanese stocks. The Nikkei 225 Index is currently based on 225 underlying stocks (the “Nikkei Underlying Stocks”) trading on the Tokyo Stock Exchange (“TSE”) representing a broad cross-section of Japanese industries. Non-ordinary shares, such as shares of ETFs, REITs, preferred stock or other preferred securities or tracking stocks, are excluded from the Nikkei 225 Index.

All 225 Nikkei Underlying Stocks are stocks listed in the First Section of the TSE. Stocks listed in the First Section of the TSE are among the most actively traded stocks on the TSE. Nikkei Inc. rules require that the 75 most liquid issues (one-third of the component count of the Nikkei 225 Index) be included in the Nikkei 225 Index. Nikkei Inc. first calculated and published the Nikkei 225 Index in 1970.

Rules of the Periodic Review

Nikkei Underlying Stocks are reviewed annually (the “periodic review”) in accordance with the following rules, and results of the review are applied on the first trading day in October. Results of the review become effective on the first trading day of October, and there is no limit to the number of Nikkei Underlying Stocks that can be affected. Stocks selected by the procedures outlined below are presented as candidates to a committee comprised of academics and market professionals for comment; based on comments from the committee, Nikkei Inc. determines and announces any changes to the Nikkei Underlying Stocks.

High Liquidity Group

The top 450 most liquid stocks are chosen from the TSE First Section. For purposes of this selection, liquidity is measured by (i) trading volume in the preceding 5-year period and (ii) the magnitude of price fluctuation by volume in the preceding 5-year period. These 450 stocks constitute the “High Liquidity Group” for the review. Those Nikkei Underlying Stocks that are not in the High Liquidity Group are removed. Those stocks that are not currently Nikkei Underlying Stocks but that are in the top 75 of the High Liquidity Group are added.

Sector Balance

The High Liquidity Group is then categorized into the following six sectors: Technology, Financials, Consumer Goods, Materials, Capital Goods/Others and Transportation and Utilities. These six sector categories are further divided into 36 industrial classifications as follows:

- Technology — Pharmaceuticals, Electrical Machinery, Automobiles, Precision Machinery, Telecommunications;
- Financials — Banks, Miscellaneous Finance, Securities, Insurance;
- Consumer Goods — Marine Products, Food, Retail, Services;
- Materials — Mining, Textiles, Paper and Pulp, Chemicals, Oil, Rubber, Ceramics, Steel, Nonferrous Metals, Trading House;

- Capital Goods/Others — Construction, Machinery, Shipbuilding, Transportation Equipment, Miscellaneous Manufacturing, Real Estate; and
- Transportation and Utilities — Railroads and Buses, Trucking, Shipping, Airlines, Warehousing, Electric Power, Gas.

The “appropriate number” of constituents for each sector is defined to be half the number of stocks in that sector. After the liquidity-based adjustments, discussed above, a rebalancing is conducted if any of the sectors are over- or under-represented. The degree of representation is evaluated by comparing the actual number of constituents in the sector against the appropriate number for that sector.

For over-represented sectors, current constituents in the sector are deleted in the order of liquidity (lowest liquidity first) to correct the overage. For under-represented sectors, non-constituent stocks are added from the High Liquidity Group in the order of liquidity (highest liquidity first) to correct the shortage.

Extraordinary Replacement Rules

Nikkei Underlying Stocks removed from the TSE First Section are deleted from the Nikkei 225 Index. Reasons for removal from the TSE First Section include: designation as a “security to be delisted” or actual delisting by reason of bankruptcy (including filing under the Corporate Reorganization Act, Civil Rehabilitation Act or liquidation), delisting due to corporate restructuring such as merger, share exchange or share transfer, designation as a “security to be delisted” or actual delisting due to excess debt or transfer to the Second Section. In addition, a component stock transferred to the “Kanri-Post” (Posts for stocks under supervision) is in principle a candidate for deletion. However, the decision to delete such candidates will be made by examining the sustainability and the probability of delisting in the individual case.

When a Nikkei Underlying Stock is deleted from the Nikkei 225 Index as outlined in the preceding paragraph, a new Nikkei Underlying Stock will be selected and added, in principle, from the same sector of the High Liquidity Group in order of liquidity. Notwithstanding the foregoing, the following rules may apply depending on the timing and circumstances of the deletion: (i) when such deletion is scheduled close to the periodic review, additional stocks may be selected as part of the periodic review process and (ii) when multiple deletions are scheduled in a season other than the periodic review, additions may be selected using the sector balancing rules outlined above.

Procedures to Implement Constituent Changes

As a general rule, for both the periodic review and the extraordinary replacement rules, additions and deletions are made effective on the same day in order to keep the number of Nikkei Underlying Stocks 225. However, under the circumstances outlined below, when an addition cannot be made on the same day as a deletion, the Nikkei 225 Index may be calculated with fewer than 225 Nikkei Underlying Stocks. In this case, the divisor is adjusted to ensure continuity.

The first instance when the Nikkei 225 Index may be calculated with fewer than 225 Nikkei Underlying Stocks is when a Nikkei Underlying Stock is delisted by reason of share exchange or transfer and the succeeding company becomes listed a short period of time later. The second instance is when a Nikkei Underlying Stock is deleted due to a sudden announcement of bankruptcy, or is designated as a “security to be delisted” for the same reason, and there is not sufficient time to add a new Nikkei Underlying Stock in the same day.

Calculation of the Nikkei 225 Index

The Nikkei 225 Index is a modified, price-weighted index (*i.e.*, a Nikkei Underlying Stock’s weight in the index is based on its price per share rather than the total market capitalization of the issuer) that is calculated by (i) multiplying the per share price of each Nikkei Underlying Stock by the corresponding weighting factor for such Nikkei Underlying Stock (a “Weight Factor”), (ii) calculating the sum of all these products and (iii) dividing such sum by a divisor (the “Divisor”). The Divisor is subject to periodic

adjustments as set forth below. Each Weight Factor is computed by dividing ¥50 by the par value of the relevant Nikkei Underlying Stock, so that the share price of each Nikkei Underlying Stock when multiplied by its Weight Factor corresponds to a share price based on a uniform par value of ¥50. The stock prices used in the calculation of the Nikkei 225 Index are those reported by a primary market for the Nikkei Underlying Stocks (currently the TSE). The level of the Nikkei 225 Index is calculated once per minute during TSE trading hours.

In order to maintain continuity in the Nikkei 225 Index in the event of certain changes due to non-market factors affecting the Nikkei Underlying Stocks, such as the addition or deletion of stocks, substitution of stocks, stock splits or distributions of assets to stockholders, the Divisor used in calculating the Nikkei 225 Index is adjusted in a manner designed to prevent any instantaneous change or discontinuity in the level of the Nikkei 225 Index. Thereafter, the Divisor remains at the new value until a further adjustment is necessary as the result of another change. As a result of such change affecting any Nikkei Underlying Stock, the Divisor is adjusted in such a way that the sum of all share prices immediately after such change multiplied by the applicable Weight Factor and divided by the new Divisor (*i.e.*, the level of the Nikkei 225 Index immediately after such change) will equal the level of the Nikkei 225 Index immediately prior to the change.

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In addition, the Nikkei 225 Index Sponsor gives no assurance regarding any modification or change in any methodology used in calculating the Nikkei 225 Index and is under no obligation to continue the calculation, publication and dissemination of the Nikkei 225 Index.

The Tokyo Stock Exchange

The TSE is one of the world’s largest securities exchanges in terms of market capitalization. Trading hours are currently from 9:00 a.m. to 11:00 a.m. and from 12:30 p.m. to 3:00 p.m., Tokyo time, Monday through Friday.

Due to the time zone difference, the TSE will close on any normal trading day prior to the opening of business in New York City on the same calendar day. Therefore, the closing level of the Nikkei 225 Index

on a trading day will generally be available in the United States by the opening of business on the same calendar day.

The TSE has adopted certain measures, including daily price floors and ceilings on individual stocks, intended to prevent any extreme short-term price fluctuations resulting from order imbalances. In general, any stock listed on the TSE cannot be traded at a price lower than the applicable price floor or higher than the applicable price ceiling. These price floors and ceilings are expressed in absolute Japanese yen, rather than percentage limits based on the closing price of the stock on the previous trading day. In addition, when there is a major order imbalance in a listed stock, the TSE posts a “special bid quote” or a “special asked quote” for that stock at a specified higher or lower price level than the stock’s last sale price in order to solicit counter-orders and balance supply and demand for the stock. Prospective investors should also be aware that the TSE may suspend the trading of individual stocks in certain limited and extraordinary circumstances, including, for example, unusual trading activity in that stock. As a result, changes in the Nikkei 225 Index may be limited by price limitations or special quotes, or by suspension of trading, on individual stocks that make up the Nikkei 225 Index, and these limitations, in turn, may adversely affect the value of the notes.

THE RUSSELL INDICES

All information contained in this underlying supplement regarding the Russell 1000[®] Index, the Russell 2000[®] Index and the Russell 3000[®] Index (each, a “Russell Index” and collectively, the “Russell Indices”), including, without limitation, their make-up, method of calculation and changes in their components, has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, FTSE Russell, a company wholly owned by London Stock Exchange Group plc (“the LSEG”). The Russell Indices were developed by Russell Investment Group and are calculated, maintained and published by FTSE Russell. FTSE Russell has no obligation to publish, and may discontinue the publication of, the Russell Indices.

The Russell 1000[®] Index

The Russell 1000[®] Index measures the composite price performance of stocks of 1,000 companies (with respect to the Russell 1000[®] Index, the “Component Stocks”) domiciled in the U.S. and its territories. All stocks included in the Russell 1000[®] Index are traded on an eligible U.S. exchange. Eligible U.S. exchanges include the New York Stock Exchange, the NYSE MKT, The NASDAQ Stock Market and the NYSE Arca. The companies included in the Russell 1000[®] Index are the 1,000 largest companies that form the Russell 3000E[™] Index, which is composed of the 4,000 largest U.S. companies as determined by total market capitalization and represents approximately 99% of the U.S. equity market. The Russell 1000[®] Index is reported by Bloomberg L.P. under the ticker symbol “RIY.”

The Russell 2000[®] Index

The Russell 2000[®] Index measures the capitalization-weighted price performance of the small-capitalization stocks included in the Russell 2000[®] Index (with respect to the Russell 2000[®] Index, the “Component Stocks”) and is designed to track the performance of the small-capitalization segment of the U.S. equity market. All stocks included in the Russell 2000[®] Index are traded on an eligible U.S. exchange, as described above. The companies included in the Russell 2000[®] Index are the middle 2,000 of the companies that form the Russell 3000E[™] Index, which is composed of the 4,000 largest U.S. companies as determined by total market capitalization and represents approximately 99% of the U.S. equity market. The Russell 2000[®] Index is reported by Bloomberg L.P. under the ticker symbol “RTY.”

The Russell 3000[®] Index

The Russell 3000[®] Index measures the capitalization-weighted price performance of the stocks included in the Russell 3000[®] Index (with respect to the Russell 3000[®] Index, the “Component Stocks”) and is designed to represent the broad U.S. equity market. All stocks included in the Russell 3000[®] Index are traded on an eligible U.S. exchange, as described above. The companies included in the Russell 3000[®] Index are the 3,000 largest U.S. companies that form the Russell 3000E[™] Index, which is composed of the 4,000 largest U.S. companies as determined by total market capitalization and represents approximately 99% of the U.S. equity market. The Russell 3000[®] Index consists of the 3,000 companies included in the Russell 1000[®] Index and the Russell 2000[®] Index, which are subsets of the Russell 3000E[™] Index, and represents approximately 98% of the U.S. equity market. The Russell 3000E[™] Index is not the same as the Russell 3000[®] Index, which is a subset of the Russell 3000E[™] Index. The Russell 3000[®] Index is reported by Bloomberg L.P. under the ticker symbol “RAY.”

Selection of Stocks Underlying the Russell Indices

The Russell Indices are sub-indices of the Russell 3000E[™] Index. To be eligible for inclusion in the Russell 3000E[™] Index and, consequently, a Russell Index, a company’s stock must be listed on the last trading day in May of a given year, and FTSE Russell must have access to documentation on that date verifying the company’s eligibility for inclusion. Eligible initial public offerings (“IPOs”) are added to Russell Indices at the end of each calendar quarter, based on total market capitalization rankings within the market-adjusted capitalization breaks established during the most recent reconstitution. To be added to any Russell Index during a quarter outside of reconstitution, IPOs must meet all eligibility criteria, and as of the most recent reconstitution, must (i) be priced and traded and (ii) rank larger in total market

capitalization than the market-adjusted smallest company in the Russell 3000E™ Index as of the latest June reconstitution. A one-month window will be used to ensure that companies submitting the requisite filings just outside of the quarter are not excluded from eligibility.

U.S. companies are eligible for inclusion in the Russell 3000E™ Index and, consequently, any Russell Index. FTSE Russell uses the following method for determining whether a company is a U.S. company. If a company incorporates in, has a stated headquarters location in and also trades in the same country (ADRs and ADSs are not eligible), the company is assigned to its country of incorporation. If any of the three do not match, FTSE Russell then defines three Home Country Indicators (“HCIs”). The HCIs are as follows:

- country of incorporation;
- country of headquarters; and
- country of the most liquid exchange as defined by two-year average daily dollar trading volume from all exchanges within a country.

After the HCIs are defined, the next step in the country assignment involves an analysis of assets by location. FTSE Russell cross-compares the primary location of the company’s assets with the three HCIs. If the primary location of assets matches any of the HCIs, then the company is assigned to its primary asset location.

If there is not enough information to determine a company’s primary country of assets, FTSE Russell uses the primary location of the company’s revenue for the same cross-comparison and assigns the company to the appropriate country in a similar fashion. FTSE Russell uses an average of two years of assets or revenue data for analysis to reduce potential turnover.

If conclusive country details cannot be derived from assets or revenue, FTSE Russell assigns the company to the country where its headquarters are located unless the country is a Benefit Driven Incorporation (“BDI”) country. If the country in which its headquarters are located is a BDI country, the company is assigned to the country of its most liquid stock exchange. The BDI countries are Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, Bonaire, British Virgin Islands, Cayman Islands, Channel Islands, Cook Islands, Curacao, Faroe Islands, Gibraltar, Guernsey, Isle of Man, Jersey, Liberia, Marshall Islands, Panama, Saba, Sint Eustatius, Sint Maarten and Turks and Caicos Islands.

The following securities are specifically excluded from the Russell Indices: (i) stocks that are not traded on an eligible U.S. exchange (Bulletin Board, Pink Sheet and over-the-counter (“OTC”) securities are not eligible, including securities for which prices are displayed on the FINRA Alternative Display Facility); (ii) preferred stock, convertible preferred stock, redeemable shares, participating preferred stock, warrants, rights, installment receipts and trust receipts; and (iii) securities issued by royalty trusts, limited liability companies, closed-end investment companies (due to SEC treatment of reporting, business development companies are no longer eligible as of the June 2014 annual reconstitution), blank-check companies, special purpose acquisition companies, limited partnerships, exchange-traded funds and mutual funds.

The primary criterion used to determine the initial list of securities eligible for the Russell 3000E™ Index and, consequently, any Russell Index, is total market capitalization, which is defined as the total number of outstanding shares times the closing price of the shares as of the last trading day in May for those securities being considered at annual reconstitution. An IPO’s eligibility is determined each quarter. Common stock, non-restricted exchangeable shares and partnership units/membership interests (in certain cases) are used to calculate a company’s total market capitalization. Exchangeable shares are shares that may be exchanged at any time, at the holder’s option, on a one-for-one basis for common stock. Partnership units/membership interests represent an economic interest in a limited partnership or limited liability company. FTSE Russell includes partnership units/membership interests as part of total

market capitalization when the company in question is a holding company whose sole asset is its partnership units/membership interests in an underlying entity. In these cases, total market capitalization will be calculated based on 100% of the value of all partnership units/membership interests. Any other form of shares — such as preferred or convertible preferred stock, redeemable shares, participating preferred stock, warrants and rights or trust receipts — is excluded from the calculation. If multiple share classes of common stock exist, they are combined. In cases where the common stock share classes act independently of each other (e.g., tracking stocks), each class is considered for inclusion separately.

During annual reconstitution, a stock’s closing price on its primary exchange on the last trading day in May (typically, but a confirmed timetable is announced each spring) is used to determine total market capitalization. If an eligible company trades under multiple share classes, FTSE Russell will review each share class independently for inclusion in the Russell 3000E™ Index, and consequently, any Russell Index. Share classes in addition to the primary share class that meet minimum size, liquidity and float requirements will also be eligible. Those share classes must have a total market capitalization larger than that of the smallest company currently included in the Russell 3000E™ Index, must have an average daily dollar trading value in excess of the median average daily dollar trading value of all stocks eligible for inclusion in the Russell 3000E™ Index and must have greater float than 5% of shares available in the marketplace. If the additional share class does not meet the requirements, the shares will be aggregated with the primary share class to maintain a representative index weight for the company. For reconstitution ranking purposes, all share classes for a company, including unlisted shares, will be aggregated and total market capitalization will be based on the primary share class’s closing price. Rank will be determined based on cumulative market capitalization. As of the 2016 annual reconstruction, share classes not qualifying for eligibility independently will not be aggregated with the primary share class within the available shares calculation. For companies with multiple share classes, the primary share class will be designated as the share class with the highest two-year trading volume as of the last trading day in May. In the absence of two years’ worth of data, all available data will be used in the determination. If the difference between trading volumes for each share class is less than 20%, the share class with the most available shares outstanding will be used as the primary share class. At least 100-day trading volume is necessary to consider the class as a primary share class for existing members. New members will be analyzed on all available data, even if that data is for less than 100 days. If applicable, shares held across different share classes will be represented on a mathematically equivalent basis. Growth, value, defensive and dynamic probabilities will be based on that of the primary share class and assigned consistently across all additional share classes. Shares of an additional share class distributed through mandatory corporation action to a company’s existing shareholders or made available via initial public offering will be evaluated for separate membership in the Russell 3000E™ Index, and consequently, any Russell Index. Index membership of additional share classes that are added due to corporate actions will mirror that of the primary share class, as will style and stability probabilities.

Once the market capitalization for each security is determined by use of total shares and price as described above, each security is placed in the appropriate Russell market capitalization-based index. The largest 4,000 securities become members of the Russell 3000E™ Index. If eligible securities total less than 4,000, the Russell 3000E™ will include all eligible securities. Market capitalization breakpoints for each Russell Index are determined by the break between the companies below.

Index	Companies Included (based on descending total market capitalization)
Russell 3000® Index	Companies #1 – 3,000
Russell 1000® Index	Companies #1 – 1,000
Russell 2000® Index	Companies #1,001 – 3,000

After the initial market capitalization breakpoints are determined by the ranges listed above, new members are assigned on the basis of the breakpoints and existing members are reviewed to determine if they fall within a cumulative 5% market cap range around these new market capitalization breakpoints. If an existing member’s market cap falls within this cumulative 5% of the market capitalization breakpoint, it will remain in its current index rather than be moved to a different market capitalization-based Russell index. Companies that fall on the edge of market capitalization breakpoints are often still within the

manager's opportunity set, since they have not significantly grown or declined in market capitalization. As an exception, there will be no percentile banding at the bottom of the Russell 3000[®] Index (stock 3,000) or the Russell 3000E[™] Index (stock 4,000).

Set forth below are the steps in calculating percentile ranges:

- Sort the Russell 3000E[™] Index members in descending order by total market capitalization.
- Calculate the total market capitalization of the Russell 3000E[™] Index by summing all members' total market capitalizations.
- Calculate percentiles for each company in the Russell 3000E[™] Index by dividing the cumulative market cap associated with each member by the total market cap of the Russell 3000E[™] index.
- Calculate a range of five percentiles around the newly determined market cap breakpoints, by subtracting, and then adding, 2.5% from/to the calculated percentile of the market cap breakpoint.

After membership is determined, a security's shares are adjusted to include only those shares available to the public ("free float"). The purpose of this adjustment is to exclude from market calculations the capitalization that is not available for purchase and is not part of the investable opportunity set. Stocks in the Russell Indices are weighted by their available (also called float-adjusted) market capitalization, which is calculated by multiplying the primary closing price by the available shares. Adjustments to shares are reviewed at reconstitution and for major corporate actions such as mergers. For merger and spin-off transactions that are effective between the last trading day in May and the Friday prior to annual reconstitution in June, the market capitalizations of the impacted securities are recalculated and membership is reevaluated as of the effective date of the corporate action. For corporate events that occur during the final week of reconstitution (during which reconstitution is finalized Friday after U.S. market close), market capitalizations and memberships will not be reevaluated. Non-index members that have been considered ineligible as of rank day (the last trading day in May) will not be reevaluated in the event of a subsequent corporate action that occurs between rank day and the reconstitution effective date.

Companies with only a total market capitalization of less than \$30 million are not eligible for inclusion in the Russell 3000E[™] Index or, consequently, any Russell Index.

In addition, companies with only 5% or less of their shares available in the marketplace are not eligible for inclusion in the Russell 3000E[™] Index or, consequently, any Russell Index. When unavailable shares are determined to be 94.5% or greater, this will be rounded to 95%. Also, stocks must have a closing price at or above \$1.00 on their primary exchange on the last trading day in May to be eligible for inclusion in any Russell Index at annual reconstitution. In order to reduce unnecessary turnover, if an existing Component Stock's closing price is less than \$1.00 on its primary exchange on the last trading day in May, it will be considered eligible if the average of the daily closing prices from its primary exchange during the month of May is equal to or greater than \$1.00. If an existing index member does not trade on the last trading day in May, it must price at \$1.00 or above on another eligible U.S. exchange to remain eligible. A stock added during the quarterly IPOs process is considered a new index addition and therefore must have a close price on its primary exchange at or above \$1.00 on the last day of the IPO eligibility period in order to qualify for index inclusion.

Companies that produce unrelated business taxable income ("UBTI") are restricted from ownership for tax-exempt investors. In recognition of this, FTSE Russell screens all real estate investment trusts and publicly traded partnerships, removing any security from eligibility that generates or has historically generated UBTI and has not taken steps to block UBTI to equity holders. The research process is conducted as part of FTSE Russell's annual rebalance effort. Additional screening will not be assessed or changed outside of the reconstitution period. Information used to confirm UBTI impact includes the following publicly available sources: 10-K, SEC Form S-3, K-1, company annual report, dividend notices and the company website.

The Russell Indices are reconstituted annually to reflect changes in the marketplace. The list of companies is ranked based on total market capitalization as of the last trading day in May, with the actual reconstitution occurring on the last Friday in June each year, except that if the last Friday in June of any year is the 29th or 30th, reconstitution will occur on the preceding Friday. Changes in the Component Stocks are pre-announced and subject to change if any corporate activity occurs or if any new information is received prior to release. IPOs are considered for inclusion on a quarterly basis.

Capitalization Adjustments

The following types of shares are removed from total market capitalization to arrive at free float or available market capitalization. Adjustments are based on information recorded in SEC corporate filings, including DEF 14, 424B, and 10K filings, or other reliable sources in the event of missing or questionable data (but not 13F filings).

- Officers' and directors' holdings — Shares held by officers and directors are considered unavailable and removed entirely from available shares. FTSE Russell's float research process allows removal of options/warrants/convertibles from the officer and director holdings when those shares are provided in a summed format within the footnotes. However, if FTSE Russell determines that a company is being excluded from membership in the Russell 3000E™ Index solely on the basis of the minimum float requirement, FTSE Russell will use best available information found within SEC filings, filed on or before the rank day in May;
- Large private holdings — Shares held privately will be removed from available shares if they exceed 10% of shares outstanding. Share percentage is determined by those shares held either by an individual or by a group of individuals acting together. Private equity and venture capital firms are considered large private holders;
- Institutional holdings — Shares held by investment companies, partnerships, insurance companies, mutual funds and banks will be removed from available shares if their holding is greater than 30%. If a firm has a direct relationship to the company, such as board representation, they will be considered strategic and will be excluded regardless of the size of holding per the officers and directors' exclusion rule;
- Publicly listed companies — Shares held by publicly listed companies will be removed from the available shares of a member of the Russell 3000E™ Index. Institutional holdings will be considered as available unless the 30% threshold is surpassed, regardless of listing;
- ESOP or LESOP shares — Shares held by an Employee Stock Ownership Plan ("ESOP") or a Leveraged Employee Stock Ownership Plan ("LESOP") are considered unavailable and removed entirely from available shares;
- IPO lock-ups — Shares locked up during an IPO are not available to the public and will be excluded from available shares at the time the IPO enters the Russell 3000E™ Index;
- Government Holdings:
 - Direct government holders — those holdings listed as "government of" or shares held by government controlled/affiliated entities are considered unavailable and will be removed entirely from available shares;
 - Indirect government holders — shares held by government investment boards and/or investment arms will be treated similarly to large private holdings and removed if the holding is greater than 10%; and
 - Government pensions — any holding by a government pension plan is considered an institutional holding and will not be removed from available shares unless the holding is greater than 30%.

Corporate Actions Affecting the Russell Indices

FTSE Russell applies corporate actions to its indices on a daily basis, both to reflect the evolution of securities and to ensure that the indices remain highly representative of the U.S. equity market. A company's membership in a Russell Index and its weight in that index can be impacted by these corporate actions. FTSE Russell uses a variety of reliable public sources to determine when an action is final, including a company's press releases and regulatory filings; local exchange notifications; and official updates from other data providers FTSE Russell deems trustworthy. Prior to the completion of a corporate action, FTSE Russell estimates the effective date on the basis of the same above sources. As new information becomes available, FTSE Russell may revise the anticipated effective date and the terms of the corporate action, before ultimately confirming its effective date. Depending upon the time an action is determined to be final, FTSE Russell either (1) applies the action before the open on the ex-date or (2) applies the action providing appropriate notice, referred to as a "delayed action" (see specific action types for details on timing and procedure). FTSE Russell applies the following methodology guidelines when adjusting the applicable Russell Index in response to corporate actions:

- "No Replacement" Rule — Securities that leave the relevant Russell Index for any reason (e.g., mergers, acquisitions or other similar corporate activity) are not replaced. Thus, the number of securities in the relevant Russell Index over a year will fluctuate according to corporate activity.
- Mergers and Acquisitions — Mergers and acquisitions ("M&A") activity may result in changes to index membership as well as to the shares included in the relevant Russell Index. Adjustment due to M&A activity are applied to the relevant Russell Index after the action is determined to be final, providing appropriate notice. To avoid unnecessary delays, FTSE Russell may consider M&A transactions "final" prior to shareholder approval or prior to a delisting notice. FTSE Russell will consider prevailing shareholder sentiment, board/director recommendations, exchange notification and stock price versus deal value when making this decision.
 - Acquisition of a Russell Index member for cash — The target company is deleted from the relevant Russell Index at the last traded price. In the event that trading in the target company has halted at the time of implementation, it will be deleted from the relevant Russell Index using the cash terms.
 - Merger between Russell Index members for stock — The target company is deleted from the relevant Russell Index and the shares of the acquiring stock are increased, according to the offer terms. FTSE Russell affects the action after it has considered the transaction as final with the provision of appropriate notice. In the absence of an active market for the target company at the time of index implementation, the target company will be deleted from the relevant Russell Index using a synthetic price based on the offer terms.
 - Merger between Russell Index members for cash or stock, or a combination thereof — The target company is deleted from the relevant Russell Index and the shares of the acquiring company are simultaneously increased per the election results and the announced number of shares being issued (adjusted to account for FTSE Russell's current float factor of the target). If the terms are cash and stock (no option); then the shares of the acquirer will be increased per the offer terms. In the absence of an active market for the target company at the time of implementation, the target company will be deleted from the relevant Russell Index using a synthetic price based on the default offer terms (the consideration an investor will receive for non-election).
- M&A activity between a Russell Index member and a non-member — A non-member is a company that is not a member of the Russell 3000E™ Index. The M&A activity can involve either of two scenarios: (1) the acquiring company is a member of the Russell 3000E™ Index and the target company is not; or (2) the

acquiring company is not a member, but the target company is a member. If the target company is the member, it is deleted from the relevant Russell Index after the action is determined as final. If the acquiring company is the member, its shares are adjusted by adding the target company's market capitalization through a month-end share adjustment (if the increase in shares is greater than 5%).

- Cross-border M&A activity — In the event of a merger or acquisition in which the acquiring company and the target company are in different countries, FTSE Russell applies the action when the transaction is determined as final. The target company's market capitalization moves to the acquiring stock according to the transaction terms. Cumulative market capitalization of the acquiring company increases, while the cumulative market capitalization of the target company decreases by the same amount. If FTSE Russell is able to determine the status of the action to be final prior to 1:00 p.m. Eastern Time, these actions will be applied after the close of the current day. If FTSE Russell is able to determine the status of the action to be final after 1:00 p.m. Eastern Time, these actions will be deemed a "delayed action" and will be applied after the close of the following day. The deleted company will remain in the relevant Russell Index at a stale price, based on the previous day's close, and will be removed the following day at a synthetic price based on the terms offered by the acquiring company.
- Reincorporations — Members of the relevant Russell Index that reincorporate in another country are analyzed for country assignment during annual reconstitution, as long as they continue to trade in the United States. Members of the relevant Russell Index that reincorporate to another country and no longer trade in the United States are immediately deleted from the relevant Russell Index. Companies that reincorporate to the United States are assessed for membership during annual reconstitution.
- Reclassifications of Shares (primary share classes) — Primary share classes will not be assessed or changed outside of a reconstitution period unless the existing primary share class ceases to exist. In the event of extenuating circumstances signaling a necessary primary share class change, proper notification will be made.
- Rights Offerings — FTSE Russell will not apply poison pill rights or entitlements that give shareholders the right to purchase ineligible securities such as convertible debt. FTSE Russell will adjust the relevant Russell Index to account for a right only if the subscription price of the right is at a discount to the market price of the stock. Provided FTSE Russell has been alerted to the rights offer prior to the ex-date, a price adjustment will be applied before the open on the ex-date to account for the value of the rights, and shares increased according to the terms of the offering. The treatment is consistent for both transferable and non-transferable rights. Where the rights issue / entitlement offer subscription price remains unconfirmed on the ex-date, an estimated price will be used. FTSE Russell will estimate the subscription price using the value being raised and the offer terms. Where there is a range of values, the mid value will be used to estimate the subscription price. Where the value being raised and/or offer terms are unknown, no adjustment will be made on the ex-date. If those details are subsequently released or a company announces a rights issue with a historical ex-date, a price adjustment and share increase will be applied as soon as practical. The latest close price prior to the announcement will be used to confirm whether the rights are being offered at a discount and to calculate the adjustment.
- Changes to Shares Outstanding — Changes to shares outstanding due to buybacks (including Dutch auctions), secondary offerings, and other potential corporate activity are updated at the end of each month. For FTSE Russell to implement a month-end change to available shares outstanding, the cumulative change to available shares must be greater than 5%. Share changes that are confirmed by FTSE Russell's vendors and verified by FTSE Russell by use of an SEC

filing at least six days prior to month end are implemented and communicated to FTSE Russell's subscribers five trading days prior to month end. The float factor last determined (either at reconstitution or due to a corporate action implementation) is applied to the new shares. If the float factor has been updated since reconstitution due to the implementation of a corporate action, the updated float factor will be used. If any new shares issued are unavailable according to the filing, that portion will not be added to the relevant Russell Index.

Changes to available shares outstanding due to merger activity between members of the relevant Russell Index and non-members will be implemented if the availability of the newly issued shares can be confirmed within the appropriate filings or press releases. When the new shares are partially available, FTSE Russell will increase shares per the available amount if the cumulative change to available shares outstanding is greater than 5%. When the availability of new shares cannot be confirmed with an appropriate source, FTSE Russell will defer any increase to the next reconstitution, allowing for further information to be announced. This applies to mergers with both publicly listed and privately held non-members.

November and December month-end share changes will be processed as one event after the close on the third Friday of each December along with fourth quarter IPO additions. This date is used rather than December month end due to low liquidity in the financial markets at year end and the proximity of a separate November month-end process.

Because annual reconstitution occurs in June, month-end share changes are not scheduled for the month of June. Residual changes to shares outstanding that are not addressed as part of the annual reconstitution process are rolled into the following July month-end process.

- Spin-offs and IPOs — Spin-offs will be valued using an estimate prior to the ex-date, based on the following (listed in order of preference):
 - A “When Issued” price will be used where available;
 - If no “When Issued” price is available company valuation will be used;
 - If a company valuation is unavailable broker estimates will be used; and
 - If broker estimates are unavailable the spin-off will be added at zero.

If the spun-off company trades the on ex-date, no revision to the FTSE Russell estimated value will be made. If the spun-off company does not trade on the ex-date and the estimated value is incorrect by greater than 10% of the parent's value as measured at open, the spin-off valuation will be updated intraday to set the value equal to the change in parent's value. This will be measured by parent's cum-date close minus ex-date open.

When a spin-off results in an eligible security type being listed on an eligible exchange, the spin-off company will remain in the relevant Russell Index until the next review of index constituents, regardless of size. When an index constituent spins off an ineligible security type or the spin-off company is listed on an ineligible exchange only, the security will be added to the relevant Russell Index on the ex-date and subsequently removed with notice at market price once “regular way” trade has commenced. If a spin-off company has not commenced trading after 20 business days, the suspended companies rule will apply.

For domestic spin-offs, spin-off companies are added to the relevant Russell Index at the time they are spun-off from their parent company, with the parent's market value reducing simultaneously per the spin-off valuation. The spin-off company will be added to the parent's index on the ex-date.

For cross-border spin-offs, a spun-off company may be assigned to a different country from the parent, if any of its HCIs differ from those of the parent. Consequently, the spin-off company may

become a member of the Russell Global Index. Otherwise, the same rules apply between domestic or cross-border spin-off additions. If any of the HCIs differ from those of the parent, country assignment research for the spun-off company will be reviewed using the country assignment rules discussed above, with one exception. In the absence of independent reported asset and revenue data, the spun-off company will not be allowed to default to the new entity headquarter location and instead will default to the parent's country assignment and will be reviewed independently during the subsequent annual reconstitution. This treatment allows time for standard filings to be presented in the absence of critical data components used for country classification.

- **Tender Offers** — In the case of a cash tender offer, the target company will be removed from the relevant Russell Index when (i) offer acceptances reach 90%, shareholders have validly tendered, the shares have been irrevocably accepted for payment, all pertinent offer conditions have been reasonably met and the acquirer has not explicitly stated it does not intend to acquire the remaining shares, (ii) where the offer acceptances are below 90%, there is reason to believe that the remaining free float is under 5% based on information available at the time or (iii) following completion of the offer, the acquirer has stated an intent to finalize the acquisition via a short-form merger, squeeze-out, top-up option or any other compulsory mechanism.

The target company is deleted from the relevant Russell Index at the last traded price. In the event that trading in the target company has halted at the time of implementation, it will be deleted from the relevant Russell Index at a price based on the offer terms. In the event where a company has been deleted from the relevant Russell Index but retains a listing with a float greater than 5%, it will not be considered for index eligibility for a period of 12 months.

When non-tradable Contingent Value Rights (“CVRs”) are included within the tender offer terms, FTSE Russell may consider a tender offer “final” prior to the expiration date of the offer. FTSE Russell will establish the likelihood of tender offer completion using confirmed tendered shares, board/director recommendations, exchange notifications, stock price versus deal value and any other available information. Where the conditions for deletion are not met, FTSE Russell may implement a free float change based on the reported acceptance results at the expiration of the initial, subsequent, or final offer period where (i) the minimum acceptance level as stipulated by the acquirer has been met, (ii) shareholders have validly tendered and the shares have been irrevocably accepted for payment and (iii) all pertinent offer conditions have been reasonably met. A minimum two days’ notice period of the change is generally provided. If the offer includes a stock consideration, the acquiring company’s shares will be increased proportionate to the free float change of the target company. The target company will then be deleted as a second step, if the conditions for deletion are achieved at the expiration of a subsequent offer period. FTSE Russell does not review partial tender offers and acquisitions.

- **Voluntary Exchange Offers** — A publicly traded company may offer to exchange or split off some or all of its ownership in a separate publicly traded company. Shareholders are given the option to retain their shares; or to exchange them, in full or in part, for shares of the “split-off” company. Once the offer expires, FTSE Russell will decrease the available shares in the offering company, and increase the available shares of the “split-off” company, based on the results of the offering. FTSE Russell will effect this change based on, but not limited to, preliminary results, company filings, and exchange notices.
- **Delisted Stocks** — Only companies listed on U.S. exchanges are included in the Russell Indices. Therefore, when a company is delisted from a U.S. exchange and moved to OTC, the company is removed from the Russell Indices. If FTSE Russell determines that the action is final prior to 1:00 p.m. Eastern Time on a given day, the deletions will be applied after the close of the current day (t), using the last traded price. If, instead, FTSE Russell determines that the action is final after 1:00 p.m. Eastern Time on a given day, the deletions will be applied after the close of the following day (t+1), using the closing OTC price. Stocks previously halted that fail to trade on the

primary exchange prior to being moved to OTC will always be removed the following day (t+1) at the OTC closing price, regardless of the time of notification.

- **Bankruptcy and Voluntary Liquidations** — A company that files for a Chapter 7 liquidation bankruptcy or that files a liquidation plan will be removed from the relevant Russell Index at the time of filing. When shareholder approval is required to finalize the liquidation plan, FTSE Russell will remove the security once shareholder approval has been granted. A company that files for a Chapter 11 reorganization bankruptcy will remain a member of the relevant Russell Index, unless the company's stock is delisted from the primary exchange, in which case normal delisting rules apply. If a company files for bankruptcy, its stock is delisted, and it can be confirmed that the stock will not trade OTC, FTSE Russell may remove the stock at a nominal price of \$0.0001.
- **Stock Distributions** — A price adjustment for a stock distribution is applied on the ex-date of the distribution. When the distribution is a fixed amount of stock distributed on the ex-date, FTSE Russell increases the number of shares on the ex-date. When the distribution is an undetermined amount of stock based on future earnings and profits to be distributed at a future date, FTSE Russell increases the number of shares on the pay-date.
- **Dividends** — Gross dividends are included in the daily total return calculation of the relevant Russell Index on the basis of their ex-dates. The ex-date is used rather than the pay-date because the marketplace price adjustment for the dividend occurs on the ex-date. If a dividend is payable in stock and cash and the number of shares to be issued cannot be determined by the ex-date, the dividend is treated as all cash. If the number of shares to be issued as a stock dividend is announced subsequently, FTSE Russell will give effect to the share change on the pay date, providing appropriate notice can be given. Monthly, quarterly and annual total returns are calculated by compounding the reinvestment of dividends daily. The reinvestment and compounding is at the total index level, not at the security level. Stock prices are adjusted to reflect special cash dividends on the ex-date.
- **Halted Stocks** — When a stock's trading has been halted, FTSE Russell holds the security at its most recent closing price until trading is resumed or is officially delisted. Stocks that are scheduled for changes but are halted or suspended prior to reconstitution will have their scheduled updates postponed and will be monitored for trade resumption. Once trading resumes, these securities changes will be announced and will have their positions updated accordingly.

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THE S&P/ASX 200 INDEX

All information contained in this underlying supplement regarding the S&P/ASX 200 Index, including, without limitation, its make-up, method of calculation and changes in its components, has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, S&P Dow Jones Indices LLC (“S&P Dow Jones”). The S&P/ASX 200 Index is calculated, maintained and published by S&P Dow Jones. S&P Dow Jones has no obligation to continue to publish, and may discontinue publication of, the S&P/ASX 200 Index.

The S&P/ASX 200 Index is reported by Bloomberg L.P. under the ticker symbol “AS51.”

The S&P/ASX 200 Index is designed to be the primary gauge for the Australian equity market, and it is recognized as an investable benchmark in Australia. The S&P/ASX 200 Index measures the performance of the 200 largest index-eligible stocks listed on the Australian Securities Exchange (the “ASX”) by float-adjusted market capitalization, and is widely considered Australia’s benchmark index. The index is float-adjusted, covering approximately 80% of Australian equity market capitalization.

Composition of the S&P/ASX 200 Index

The S&P/ASX 200 Index weights companies according to the Global Industry Classification Standard (“GICS[®]”), which creates uniform ground rules for replicable, custom-tailored, industry-focused portfolios. It also enables meaningful comparisons of sectors and industries across regions.

Standards for Listing and Maintenance

The index committee of the S&P/ASX 200 Index aims to design a highly liquid and tradable index whose total market capitalization is large enough to approximate the market segment it is capturing while keeping the number of stocks at a minimum. Both market capitalization and liquidity are assessed using the previous six months’ worth of data. Quarterly review changes take effect the third Friday of March, June, September and December.

The criteria for index additions include, but are not limited to:

- *Listing.* Only securities listed on the ASX are considered for inclusion in the S&P/ASX 200 Index;
- *Market Capitalization.* The market capitalization criterion for stock inclusion is based upon the daily average market capitalization of a security over the last six months. The stock price history (last six months), latest available shares on issue and the investable weight factor (“IWF”) are the relevant variables for the calculation. The IWF is a variable that is primarily used to determine the available float of a security for ASX listed securities; and
- *Liquidity.* Only securities that are regularly traded are eligible for inclusion in the S&P/ASX 200 Index. A stock’s liquidity is measured relative to its peers. Relative Liquidity is calculated as follows:

$$\text{Relative Liquidity} = \frac{\text{Stock Median Liquidity}}{\text{Market Liquidity}}$$

Where:

- Stock Median Liquidity is the median daily value traded for each stock divided by the average float/index weight-adjusted market capitalization for the previous six months; and
- Market Liquidity is determined using the market capitalization weighted average of the stock median liquidities of the 500 constituents in the All Ordinaries index, an index that includes nearly all ordinary shares listed on the ASX.

Stocks must have a minimum Relative Liquidity of 50% to be included in the S&P/ASX 200 Index.

- *Eligible Securities.* Common and equity preferred stocks (which are not of a fixed income nature) are eligible for inclusion in the S&P/ASX 200 Index. Hybrid stocks, such as convertible stock, bonds, warrants and preferred stock that provide a guaranteed fixed return, are not eligible. Listed investment companies (LICs) that invest in a portfolio of securities are not eligible. Companies that are currently under consideration for merger or acquisition are not eligible.

Intra-Quarter Additions/Deletions. Between rebalancing dates, an addition to the S&P/ASX 200 Index is generally made only if a vacancy is created by an index deletion. Index additions are made according to market size and liquidity. An initial public offering (IPO) is added to the S&P/ASX 200 only when an appropriate vacancy occurs and is subject to proven liquidity for at least two months. An exception may be made for extraordinary large offerings where sizeable trading volumes justify index inclusion. An index constituent that appears to violate criteria for addition to the S&P/ASX 200 Index will not be deleted unless ongoing conditions warrant an index change. Deletions can occur between index rebalancing dates due to acquisitions, mergers and spin-offs or due to suspension or bankruptcies. The decision to remove a stock from the S&P/ASX 200 Index will be made once there is sufficient evidence that the transaction will be completed. Stocks that are removed due to mergers & acquisitions activity are removed from the S&P/ASX 200 Index at the cash offer price for cash-only offers. Otherwise, the best available price in the market is used.

Rebalancing. Rebalancing of the S&P/ASX 200 Index series occurs on a regular basis. Both market capitalization and liquidity are assessed using the previous six months' worth of data to determine index eligibility. Shares and IWFs updates are also applied regularly.

Frequency. The S&P/ASX 200 Index constituents are rebalanced quarterly to ensure adequate market capitalization and liquidity. Quarterly rebalancing changes take effect on the third Friday of March, June, September and December.

Share Updates. The share count for all index constituents are updated quarterly and are rounded to the nearest thousand ('000). An update to the number of issued shares will be considered if the change is at least 5% of the float adjusted shares or \$100 million Australian dollars. Intra quarter share changes are implemented at the effective date or as soon as reliable information is available; however, they will only take place in the following circumstances:

- Changes in a company's float-adjusted shares of 5% or more due to market-wide shares issuance;
- Rights issues, bonus issues and other major corporate actions; and
- Share issues resulting from index companies merging and major off-market buy-backs.

Share changes due to mergers or acquisitions are implemented when the transaction occurs, even if both of the companies are not in the same index and regardless of the size of the change.

Notification of intra quarter changes to the number of issued shares generally takes place three business days prior to the implementation date.

Calculation of the S&P/ASX 200 Index

The S&P/ASX 200 Index is calculated using a base-weighted aggregate methodology so that the level of the S&P/ASX 200 Index reflects the total market value of all the component stocks relative to a particular base period. The total market value of a company is determined by multiplying the price of its stock by the number of shares available after float (IWF) adjustment. An indexed number is used to

represent the result of this calculation in order to make the value easier to work with and track over time.

Investable Weight Factor (IWF). A stock's weight in the S&P/ASX 200 Index is determined by the float-adjusted market capitalization of the stock. This is a function of current index shares, the latest available stock price and the IWF. The IWF represents the float-adjusted portion of a stock's equity capital. Therefore any strategic holdings that are classified as either corporate, private or government holdings reduce the IWF which, in turn, results in a reduction in the float-adjusted market capital. Shares owned by founders, directors of the company, trusts, venture capitalists and other companies are also excluded. These are also deemed strategic holders and are considered long-term holders of a stock's equity. Any strategic shareholdings that are greater than 5% of total issued shares are excluded from the relevant float.

On any given day, the S&P/ASX 200 Index value is the quotient of the total available market capitalization of its constituents and its divisor. Continuity in the S&P/ASX 200 Index values is maintained by adjusting the divisor for all changes in the constituents' share capital after the base date. This includes additions and deletions to the S&P/ASX 200 Index, rights issues, share buybacks and issuances, spin-offs, and adjustments in availability. The divisor's time series is, in effect, a chronological summary of all changes affecting the base capital of the index. The divisor is adjusted such that the S&P/ASX 200 Index value at an instant just prior to a change in base capital equals the S&P/ASX 200 Index value at an instant immediately following that change.

Corporate Action Adjustment

The table below summarizes the types of index maintenance adjustments upon various corporate actions and indicate whether or not a divisor adjustment is required.

<u>Type of Corporate Action</u>	<u>Index Treatment</u>	<u>Divisor Adjustment</u>
Special cash dividend	Price adjustment needed	Yes
Stock dividend and/or split	Shares are multiplied by and price is divided by the split factor	No
Stock dividend from class A shares into existing class B shares, both of which are included in the index	Adjustment for price of A; adjustment for shares in B	Yes
Stock dividend of different class, same company and is not included in the index	Price adjustment	Yes
Reverse Split	Adjustment for price and shares	No
Rights offering	Adjustment for price and shares	Yes
Rights offering for a new line	Adjustment for price	Yes
New share issuance	Adjustment for shares	Yes
Reduction of capital	Share adjustment	Yes
New addition to index	Share adjustment	Yes
Deletion from index	Share adjustment	Yes
Merger (acquisition by index company for stock)	Share increase	Yes

Index Governance

Each of S&P Dow Jones' global indices is the responsibility of an index committee that monitors overall policy guidelines and methodologies, as well as additions to and deletions from these indices. S&P Dow Jones chairs the S&P/ASX Index Committee, which is composed of five members representing both S&P Dow Jones and the ASX.

Decisions made by the index committee include all matters relating to index construction and maintenance. The index committee meets regularly to review market developments and convenes as needed to address major corporate actions. It is the sole responsibility of the Index Committee to decide on all matters relating to methodology, maintenance, constituent selection and index procedures. The index committee makes decisions based on all publicly available information and discussions are kept confidential to avoid any unnecessary impact on market trading.

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THE S&P SELECT INDUSTRY INDICES

All information contained in this underlying supplement regarding the S&P[®] Homebuilders Select Industry[™] Index, the S&P[®] Metals & Mining Select Industry[™] Index, the S&P[®] Oil & Gas Exploration & Production Select Industry[™] Index and the S&P[®] Regional Banks Select Industry[™] Index (each, a “Select Industry Index” and collectively, the “Select Industry Indices”), including, without limitation, their make-up, method of calculation and changes in their components, has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, S&P Dow Jones Indices LLC (“S&P Dow Jones”). S&P Dow Jones has no obligation to continue to calculate and publish, and may discontinue calculation and publication of, the Select Industry Indices.

The Select Industry Indices are designed to measure the performance of GICS[®] sub-industries or groups of sub-industries. Membership is based on a company’s GICS[®] classification, as well as liquidity and market capitalization requirements. Additional information concerning the Select Industry Indices may be obtained at the S&P Dow Jones website (<http://us.spindices.com/>). Information contained in the S&P Dow Jones website is not incorporated by reference in, and should not be considered part of, this underlying supplement.

The S&P Total Market Index

The S&P Total Market Index (the “S&P TM Index”) offers broad market exposure to companies of all market capitalization, including all U.S. common equities listed on the New York Stock Exchange (including NYSE Arca), the NYSE MKT, the NASDAQ Global Select Market, the NASDAQ Global Select Market, the NASDAQ Select Market and the NASDAQ Capital Market. Only U.S. companies are eligible for inclusion in the S&P TM Index. All members of the Select Industry Indices are selected from the S&P TM Index.

The S&P[®] Homebuilders Select Industry[™] Index

The S&P[®] Homebuilders Select Industry[™] Index is a modified equal-weighted index that is designed to measure the performance of the GICS[®] homebuilding sub-industry. As described below, the S&P[®] Homebuilders Select Industry[™] Index may also include companies in the following supplementary GICS[®] sub-industries: building products, home furnishings, home improvement retail, homefurnishing retail and household appliances. The S&P[®] Homebuilders Select Industry[™] Index is reported by Bloomberg L.P. under the ticker symbol “SPSIHO.”

The S&P[®] Metals & Mining Select Industry[™] Index

The S&P[®] Metals & Mining Select Industry[™] Index is a modified equal-weighted index that is designed to measure the performance of the following GICS[®] sub-industries: aluminum, coal & consumable fuels, diversified metals & mining, gold, precious metals & minerals, silver and steel. The S&P[®] Metals & Mining Select Industry[™] Index is reported by Bloomberg L.P. under the ticker symbol “SPSIMM.”

The S&P[®] Oil & Gas Exploration & Production Select Industry[™] Index

The S&P[®] Oil & Gas Exploration & Production Select Industry[™] Index is a modified equal-weighted index that is designed to measure the performance of the following GICS[®] sub-industries: integrated oil & gas, oil & gas exploration & mining and oil & gas refining & marketing. The S&P[®] Oil & Gas Exploration & Production Select Industry[™] Index is reported by Bloomberg under the ticker symbol “SPSIOP.”

The S&P® Regional Banks Select Industry™ Index

The S&P® Regional Banks Select Industry™ Index is a modified equal-weighted index that is designed to measure the performance of the GICS® regional banks sub-industry. The S&P® Regional Banks Select Industry™ Index is reported by Bloomberg L.P. under the ticker symbol “SPSIRBK.”

Index Eligibility

For purposes of membership in the Select Industry Indices, S&P Dow Jones applies the inclusion and exclusion criteria separately. Membership is based on a company’s GICS® classification, as well as liquidity and market cap requirements.

Index Inclusion Criteria

To be eligible for inclusion in the Select Industry Indices, companies must be in the S&P TM Index, must be included in the relevant GICS® sub-industry (*i.e.* homebuilding) and must satisfy one of the two following combined size and liquidity criteria:

1. float-adjusted market capitalization above U.S. \$500 million and float-adjusted liquidity ratio (“FALR”) above 90%; or
2. float-adjusted market capitalization above U.S. \$400 million and FALR above 150%.

A number of companies in the S&P TM Index are represented by multiple share classes. To determine eligibility for the Select Industry Indices, the float-adjusted market capitalization of each share class of multiple class companies is combined to arrive at a company float-adjusted market capitalization figure. The liquidity of each individual share class is evaluated independently based on the float-adjusted market capitalization of that individual line. If an individual share class of a multiple share class company does not meet the liquidity criteria, the remaining share class has its float-adjusted market capitalization reevaluated independently to ensure that it continues to meet the size criteria on its own. In a Select Industry Index, each company is represented once by the primary listing. In the event that a company issues a secondary share class to index share class holders by means of a mandatory distribution, the newly issued share class will be added to that Select Industry Index on the distribution *ex-date*, *provided* that the distributed class is not considered to be *de minimis*. Both share classes will remain in that Select Industry Index until next rebalancing, at which time only the primary share class will be considered for continued inclusion.

All stocks satisfying the above requirements are included in a Select Industry Index. At each rebalancing, at least 35 stocks are selected for each Select Industry Index. In the event that fewer than 35 stocks are selected for each Select Industry Index using the eligible primary sub-industries (primary stocks), certain indices will select stocks for inclusion from a supplementary list of highly correlated sub-industries (supplementary stocks) based on process established by S&P Dow Jones. Additionally, minimum market capitalization requirements may be relaxed for all Select Industry Indices to ensure that there are at least 22 stocks in each Select Industry Index as of each rebalancing effective date.

Index Exclusion Criteria

Existing index constituents are removed at the quarterly rebalancing effective date if either their float-adjusted market capitalization falls below U.S. \$300 million or their FALR falls below 50%.

Eligibility Factors

Market Capitalization. Float-adjusted market capitalization should be at least U.S. \$400 million for inclusion in a Select Industry Index. Existing index components must have a float-adjusted market capitalization of U.S. \$300 million to remain in the applicable Select Industry Index at each rebalancing.

Liquidity. The liquidity measurement used is a liquidity ratio, defined as dollar value traded over the previous 12-months divided by the float-adjusted market capitalization as of the applicable Select Industry Index rebalancing reference date.

Constituents having a float-adjusted market capitalization above U.S. \$500 million must have a liquidity ratio greater than 90% to be eligible for addition to a Select Industry Index. Constituents having a float-adjusted market capitalization between U.S. \$400 and U.S. \$500 million must have a liquidity ratio greater than 150% to be eligible for addition to a Select Industry Index. Existing index constituents must have a liquidity ratio greater than 50% to remain in the applicable Select Industry Index at the quarterly rebalancing. Some of the Select Industry Indices may have different market capitalization and float-adjusted liquidity ratio requirements. The length of time to evaluate liquidity is reduced to the available trading period for IPOs or spin-offs that do not have 12 months of trading history. In these cases, the dollar value traded available as of the rebalance reference date is annualized.

Takeover Restrictions. At the discretion of S&P Dow Jones, constituents with shareholder ownership restrictions defined in company bylaws may be deemed ineligible for inclusion in a Select Industry Index. Ownership restrictions preventing entities from replicating the index weight of a stock may be excluded from the eligible universe or removed from the applicable Select Industry Index. S&P Dow Jones will provide up to five days advance notification of a deletion between rebalancing due to ownership restrictions.

Turnover. S&P Dow Jones believes turnover in index membership should be avoided when possible. At times a stock may appear to temporarily violate one or more of the addition criteria. However, the addition criteria are for addition to a Select Industry Index, not for continued membership. As a result, an index constituent that appears to violate criteria for addition to a Select Industry Index will not be deleted unless ongoing conditions warrant a change in the composition of the applicable Select Industry Index.

Sector Classification. A Select Industry Index includes companies in the applicable GICS[®] sub-industries set forth above.

Index Construction and Calculations

The Select Industry Indices are equal-weighted, with adjustments to individual constituent weights to ensure concentration and liquidity requirements, and calculated by the divisor methodology.

The index value of each Select Industry Index is simply the market value of that Select Industry Index divided by the index divisor:

$$\text{Index Value} = (\text{Index Market Value}) / \text{Divisor}$$

$$\text{Index Market Value} = \sum_{i=1}^N P_i \times \text{Shares}_i \times \text{IWF}_i \times \text{AWF}_i$$

where N is the number of stocks in the index, P_i the price of stock i , IWF_i is the float factor of stock i (as defined below), and AWF_i is the adjustment factor of stock i assigned at each index rebalancing date, t , which makes all index constituents modified market capitalization equal (and, therefore, equal weight), while maintaining the total market value of the overall index. The AWF for each index constituent, i , at rebalancing date, t , is calculated by:

$$\text{AWF}_{i,t} = Z / N \times \text{FloatAdjustedMarketValue}_{i,t}$$

where Z is an index specific constant set for the purpose of deriving the AWF and, therefore, each stock's share count used in the index calculation (often referred to as modified index shares).

Float Adjustment. Float adjustment means that the number of shares outstanding is reduced to exclude closely held shares from the calculation of the index value because such shares are not available to investors. The goal of float adjustment is to distinguish between strategic (control) shareholders,

whose holdings depend on concerns such as maintaining control rather than the economic fortunes of the company, and those holders whose investments depend on the stock's price and their evaluation of a company's future prospects. Generally, these "control holders" include officers and directors, private equity, venture capital & special equity firms, other publicly traded companies that hold shares for control, strategic partners, holders of restricted shares, employee stock ownership plans, employee and family trusts, foundations associated with the company, holders of unlisted share classes of stock or government entities at all levels (other than government retirement/pension funds) and any individual person who controls a 5% or greater stake in a company as reported in regulatory filings. Shares that are not considered outstanding are also not included in the available float. These generally include treasury stock, stock options, equity participation units, warrants, preferred stock, convertible stock and rights.

For each component, S&P Dow Jones calculates an Investable Weight Factor ("IWF"), which represents the portion of the total shares outstanding that are considered part of the public float for purposes of the relevant Select Industry Index.

Divisor. Continuity in index values of each Select Industry Indices is maintained by adjusting its divisor for all changes in its constituents' share capital after its base date. This includes additions and deletions to the relevant Select Industry Index, rights issues, share buybacks and issuances and non-zero price spin-offs. The value of each Select Industry Index's divisor over time is, in effect, a chronological summary of all changes affecting the base capital of that Select Industry Index. The divisor of each Select Industry Index is adjusted such that the index value of that Select Industry Index at an instant just prior to a change in base capital equals the index value of that Select Industry Index at an instant immediately following that change.

Constituent Weightings

At each quarterly rebalancing, companies are initially equally weighted using closing prices as of the second Friday of the last month of the quarter as the reference price. For those companies with multiple share classes in an index, the weight assigned to each share class is proportional to its float-adjusted market capitalization as of the rebalance reference date. Adjustments are then made to ensure that there are no individual constituents whose weight in the applicable Select Industry Index exceeds the value that can be traded in a single day for a given theoretical portfolio value ranging from U.S. \$500 million to U.S. \$2,000 million (the "Theoretical Portfolio Value"). Theoretical Portfolio Values are determined and reviewed annually by The Americas Thematic and Strategy Index Committee (the "Index Committee") at S&P Dow Jones. Any updates to Theoretical Portfolio Values are made at the discretion of the Index Committee and announced to the clients with ample lead time.

S&P Dow Jones calculates a maximum basket liquidity weight for each constituent in the applicable Select Industry Index using the ratio of its three-month median daily value traded to the Theoretical Portfolio Value. Each constituent's weight in the applicable Select Industry Index is, then, compared to its maximum basket liquidity weight and is set to the lesser of its maximum basket liquidity weight or its initial equal weight. All excess weight is redistributed across the applicable Select Industry Index to the uncapped stocks. If necessary, a final adjustment is made to ensure that no stock in the applicable Select Industry Index has a weight greater than 4.5%. This step of the iterative weighting process may force the weight of those stocks limited to their maximum basket liquidity weight to exceed that weight. In such cases, S&P Dow Jones will make no further adjustments. If any of the Select Industry Indices contain exactly 22 stocks as of the rebalancing effective date, the applicable Select Industry Index is equally weighted without basket liquidity constraints.

Index Maintenance

The membership to the Select Industry Indices is reviewed quarterly. Rebalancings occur after the closing on the third Friday of the quarter ending month. The reference date for float-adjusted market capitalization and FALR is after the closing of the last trading date of the previous month. Closing prices as of the second Friday of the last month of the quarter are used for setting index weights. The reference date for GICS® classification is as of the rebalancing effective date.

Timing of Changes

Additions. Stocks are added between rebalancings only if a deletion in the applicable Select Industry Index causes the stock count to fall below 22. In those cases, each stock deletion is accompanied with a stock addition. The new stock will be added to the applicable Select Industry Index at the weight of the deleted company. In the case of mergers involving two index constituents, the merged entity will remain in the applicable Select Industry Index provided that it meets all general eligibility requirements. The merged entity will be added to the applicable Select Industry Index at the weight of the stock deemed to be the surviving stock in the transaction (i.e. the surviving stock will not experience a weight change and its subsequent weight will not be equal to that of the pre-merger weight of the merged entities). In the case of spin-offs, the applicable Select Industry Index will follow the S&P TM Index's treatment of the action.

Deletions. A stock is deleted from the applicable Select Industry Index if the S&P TM Index drops the company. If a stock deletion causes the number of stocks in the relevant index to fall below 22, each stock deletion is accompanied with a corresponding stock addition. In case of GICS® changes, where a company does not belong to a qualifying sub-industry after the classification change, it is removed from the applicable Select Industry Index at the next rebalancing.

Adjustments

The tables below summarize the types of index maintenance adjustments and indicate whether or not an index adjustment is required.

S&P TM Index Actions

S&P TM Index Action	Adjustment Made to a Select Industry Index	Divisor Adjustment
Constituent Deletion	If the constituent is a member of a Select Industry Index, it is dropped.	Yes
Constituent Addition	Only in cases where the deletion causes the stock count to fall below 22 stocks, then the deletion is accompanied by an addition assuming the weight of the dropped stock. If a stock is removed from a Select Industry Index at a price of \$0.00, the stock's replacement will be added to the applicable Select Industry Index at the weight using the previous day's closing value, or the most immediate prior business day that the deleted stock was not valued at \$0.00.	No, except in the case of stocks removed at \$0.00
GICS® Change	In the case of additions due to spin-offs, the Select Industry Indices follow the S&P TM Index's treatment of the action. None. If, after the GICS® change, a stock no longer qualifies to belong to a Select Industry Index, it is removed at the next rebalancing.	No

Corporate Actions

Type of Corporate Action	Adjustment Made to a Select Industry Index	Divisor Adjustment
Spin-Off	In general, both the parent stock and spun-off stocks will remain in the applicable Select Industry Index until the next index rebalancing, regardless of whether they conform to the theme of the applicable Select Industry Index.	No
Rights Offering	The price is adjusted to the price of the parent company minus (the price of the rights subscription/rights ratio). The index shares change so that the company's weight remains the same as its weight before the spin-off.	No
Stock Dividend, Stock Split or Reverse Stock Split	The index shares are multiplied by and price is divided by the split factor.	No
Share Issuance or Share Repurchase	None	No
Special Dividends	Price of the stock making the special dividend payment is reduced by the per share special dividend amount after the close of trading on the day before the dividend ex-date.	Yes

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THE S&P SELECT SECTOR INDICES

All information contained in this underlying supplement regarding the Consumer Discretionary Select Sector Index, the Consumer Staples Select Sector Index, the Energy Select Sector Index, the Financial Select Sector Index, the Financial Services Select Sector Index, the Health Care Select Sector Index, the Industrial Select Sector Index, the Materials Select Sector Index, the Real Estate Select Sector Index, the Technology Select Sector Index and the Utilities Select Sector Index (each, a “Select Sector Index” and collectively, the “Select Sector Indices”), including, without limitation, their make-up, method of calculation and changes in their components, has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, S&P Dow Jones Indices LLC (“S&P Dow Jones”). The S&P U.S. Indices are calculated, maintained and published by S&P Dow Jones. S&P Dow Jones has no obligation to continue to publish, and may discontinue the publication of, any of the S&P U.S. Indices.

The constituents included in each Select Sector Index are all members of the S&P 500[®] Index. Each constituent of the S&P 500[®] Index is assigned to at least one Select Sector Index. S&P Dow Jones assigns constituents to a Select Sector Index based on the constituent’s classification under the Global Industry Classification Standard (“GICS[®]”). For additional information about the S&P 500[®] Index, see “Equity Index Descriptions — S&P U.S. Indices” in this underlying supplement.

The Consumer Discretionary Select Sector Index

The Consumer Discretionary Select Sector Index measures the performance of the GICS[®] consumer discretionary sector, which currently includes companies in the following industries: auto components; automobiles; household durables; leisure products; textiles, apparel and luxury goods; hotels, restaurants and leisure; diversified consumer services; media; distributors; internet and catalog retail; multiline retail; and speciality retail. The Consumer Discretionary Select Sector Index is reported by Bloomberg L.P. under the ticker symbol “IXY.”

The Consumer Staples Select Sector Index

The Consumer Staples Select Sector Index measures the performance of the GICS[®] consumer staples sector, which currently includes companies in the following industries: food and staples retailing; beverages; food products; tobacco; household products; and personal products. The Consumer Staples Select Sector Index is reported by Bloomberg L.P. under the ticker symbol “IXR.”

The Energy Select Sector Index

The Energy Select Sector Index measures the performance of the GICS[®] energy sector, which currently includes companies in the following industries: energy equipment and services; and oil, gas and consumable fuels. The Energy Select Sector Index is reported by Bloomberg L.P. under the ticker symbol “IXE.”

The Financial Select Sector Index

The Financial Select Sector Index measures the performance of the GICS[®] financials sector, which currently includes companies in the following industries: banks; thrifts and mortgage finance; diversified financial services; consumer finance; capital markets; insurance; real estate investment trusts (“REITs”); and real estate management and development. The Financial Select Sector Index is reported by Bloomberg L.P. under the ticker symbol “IXM.”

The Financial Services Select Sector Index

The Financial Services Select Sector Index measures the performance of the GICS[®] financials sector excluding the real estate industry group, but including mortgage REITs. The Financial Services Select Sector Index currently includes companies in the following industries: banks; thrifts and mortgage finance;

diversified financial services; consumer finance; capital markets; insurance; and REITs. The Financial Services Select Sector Index is reported by Bloomberg L.P. under the ticker symbol “IXFNS.”

The Health Care Select Sector Index

The Health Care Select Sector Index measures the performance of the GICS® health care sector, which currently includes companies in the following industries: health care equipment and supplies; health care providers and services; health care technology; biotechnology; pharmaceuticals; and life sciences tools and services. The Health Care Select Sector Index is reported by Bloomberg L.P. under the ticker symbol “IXV.”

The Industrial Select Sector Index

The Industrial Select Sector Index measures the performance of the GICS® industrials sector, which currently includes companies in the following industries: aerospace and defense; building products; construction and engineering; electrical equipment; industrial conglomerates; machinery; trading companies and distributors; commercial services and supplies; professional services; air freight and logistics; airlines; marine; road and rail; and transportation infrastructure. The Industrial Select Sector Index is reported by Bloomberg L.P. under the ticker symbol “IXI.”

The Materials Select Sector Index

The Materials Select Sector Index measures the performance of the GICS® materials sector, which currently includes companies in the following industries: chemicals; construction materials; containers and packaging; metals and mining; and paper and forest products. The Materials Select Sector Index is reported by Bloomberg L.P. under the ticker symbol “IXB.”

The Real Estate Select Sector Index

The Real Estate Select Sector Index measures the performance of the GICS® real estate sector excluding mortgage REITs, which currently includes companies in the real estate management and development industry. The Real Estate Select Sector Index is reported by Bloomberg L.P. under the ticker symbol “IXRE.”

The Technology Select Sector Index

The Technology Select Sector Index measures the performance of the GICS® information technology sector, which currently includes companies in the following industries: internet software and services; IT services; software; communications equipment; technology hardware, storage and peripherals; electronic equipment, instruments and components; and semiconductors and semiconductor equipment. The Technology Select Sector Index is reported by Bloomberg L.P. under the ticker symbol “IXT.”

The Utilities Select Sector Index

The Utilities Select Sector Index measures the performance of the GICS® utilities sector, which currently includes companies in the following industries: electric utilities; gas utilities; multi-utilities; water utilities; and independent power and renewable electricity producers. The Utilities Select Sector Index is reported by Bloomberg L.P. under the ticker symbol “IXU.”

Select Sector Index Capping Methodology

For reweighting purposes, the Select Sector Indices are rebalanced quarterly after the close of business on the second to last calculation day of March, June, September and December using the following procedures:

1. The rebalancing reference date is two business days prior to the last calculation day of March, June, September and December.

2. With prices reflected on the rebalancing reference date, and membership, shares outstanding and other metrics as of the rebalancing effective date, each company is weighted using the modified market capitalization methodology. Modifications are made as described below.
3. The Select Sector Indices are first evaluated based on their companies' modified market capitalization weights to ensure none of the Select Sector Indices breach the maximum allowable limits defined in paragraphs 4 and 7 below. If a Select Sector Index breaches any of the allowable limits, the companies are reweighted based on their float-adjusted market capitalization weights calculated using the prices as of the rebalancing reference date, and membership, shares outstanding and other metrics as of the rebalancing effective date.
4. If any company has a weight greater than 24%, that company has its float-adjusted market capitalization weight capped at 23%. The cap is set to 23% to allow for a 2% buffer. This buffer is needed to ensure that no company exceeds 25% as of the quarter end diversification requirement date.
5. All excess weight is equally redistributed to all uncapped companies within the relevant Select Sector Capped Index.
6. After this redistribution, if the float-adjusted market capitalization weight of any other company then breaches 23%, the process is repeated iteratively until no company breaches the 23% weight cap.
7. The sum of the companies with weight greater than 4.8% cannot exceed 50% of the total index weight. These caps are set to allow for a buffer below the 5% limit.
8. If the rule in paragraph 7 is breached, all the companies are ranked in descending order of their float-adjusted market capitalization weights and the first company that causes the 50% limit to be breached is identified. The weight of this company is, then, reduced to 4.6%.
9. This excess weight is equally redistributed to all companies with weights below 4.6%. This process is repeated iteratively until paragraph 7 is satisfied.
10. Index share amounts are assigned to each constituent to arrive at the weights calculated above. Since index shares are assigned based on prices one business day prior to rebalancing, the actual weight of each constituent at the rebalancing differs somewhat from these weights due to market movements.

If necessary, the reweighting process may take place more than once prior to the close on the last business day of March, June, September or December to ensure the Select Sector Indices conform to all diversification requirements.

When companies represented in the Select Sector Indices are represented by multiple share classes, maximum weight capping is based on company float-adjusted market capitalization, with the weight of multiple-class companies allocated proportionally to each share class based on its float-adjusted market capitalization as of the rebalancing reference date. If no capping is required, both share classes remain in the relevant Select Sector Index at their natural float-adjusted market capitalization.

Calculation, Maintenance and Governance of the Select Sector Indices

The Select Sector Indices are calculated, maintained and governed using the same methodology as the S&P 500[®] Index. For additional information about the calculation, maintenance and governance of the S&P 500[®] Index, see "Equity Index Descriptions — S&P U.S. Indices" in this underlying supplement.

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THE S&P U.S. INDICES

All information contained in this underlying supplement regarding the S&P 500[®] Index, the S&P MidCap 400[®] Index and the S&P SmallCap 600[®] Index (each, an “S&P U.S. Index” and collectively, the “S&P U.S. Indices”), including, without limitation, their make-up, method of calculation and changes in their components, has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, S&P Dow Jones Indices LLC (“S&P Dow Jones”). The S&P U.S. Indices are calculated, maintained and published by S&P Dow Jones. S&P Dow Jones has no obligation to continue to publish, and may discontinue the publication of, any of the S&P U.S. Indices.

The S&P 500[®] Index

The S&P 500[®] Index consists of stocks of 500 companies selected to provide a performance benchmark for the U.S. equity markets. The S&P 500[®] Index is reported by Bloomberg L.P. under the ticker symbol “SPX.”

The S&P MidCap 400[®] Index

The S&P MidCap 400[®] Index consists of stocks of 400 companies selected to provide a performance benchmark for the medium market capitalization segment of the U.S. equity markets. The S&P MidCap 400[®] Index is reported by Bloomberg L.P. under the ticker symbol “MID.”

The S&P SmallCap 600[®] Index

The S&P SmallCap 600[®] Index consists of stocks of 600 companies selected to provide a performance benchmark for the small market capitalization segment in the U.S. equity markets. The S&P SmallCap 600[®] Index is reported by Bloomberg L.P. under the ticker symbol “SML.”

Composition of the S&P U.S. Indices

Changes to the S&P U.S. Indices are made as needed, with no annual or semi-annual reconstitution. Constituent changes are typically announced one to five days before they are scheduled to be implemented.

Effective with the September 2015 rebalance, each class of stock for a company with multiple share classes is separately evaluated for inclusion, and separately weighted, in the S&P U.S. Indices. It is possible that one listed share class may be included in an S&P U.S. Index while a second listed share class of the same company is excluded. Unlisted share classes will not be combined with any other listed share classes, but these unlisted share classes will be included in the company total market capitalization. For companies that issue a second publicly traded share class to index share class holders, the newly issued share class will be considered for inclusion if the event is mandatory and the market capitalization of the distributed class is not considered to be de minimis.

Additions to the S&P U.S. Indices are evaluated based on the following eligibility criteria:

- *Market Capitalization.* The unadjusted company market capitalization should be within a specified range. For the S&P 500[®] Index, the range is currently \$5.3 billion or more, for the S&P MidCap 400[®] Index, the range is currently \$1.4 billion to \$5.9 billion and for the S&P SmallCap 600[®] Index, the range is currently \$400 million to \$1.8 billion. These ranges are reviewed from time to time to assure consistency with market conditions. The market capitalization of a potential addition to an S&P U.S. Index is looked at in the context of its short- and medium-term historical trends, as well as those of its industry. S&P U.S. Index membership eligibility for a company with multiple share classes is based on the total market capitalization of the company, including all publicly listed and unlisted share classes, if applicable. For spin-offs, S&P U.S. Index membership eligibility is determined using when-issued prices, if available.

- **Liquidity.** Using composite pricing and volume, the ratio of annual dollar value traded to float-adjusted market capitalization should be 1.00 or greater, and the stock should trade a minimum of 250,000 shares in each of the six months leading up to the evaluation date. For companies with multiple share classes, each listed share class is viewed independently to determine if its meets the liquidity criteria.
- **Domicile.** The company should be a U.S. company, meaning a company that has the following characteristics:
 - the company should file 10-K annual reports and should not be considered a foreign entity by the SEC;
 - the U.S. portion of fixed assets and revenues should constitute a plurality of the total, but need not exceed 50%. When these factors are in conflict, assets determine plurality. Revenue determines plurality when there is incomplete asset information. If this criteria is not met or is ambiguous, S&P Dow Jones may still deem the company to be a U.S. company for index purposes if its primary listing, headquarters and incorporation are all in the United States and/or “a domicile of convenience” (Bermuda, Channel Islands, Gibraltar, islands in the Caribbean, Isle of Man, Luxembourg, Liberia or Panama);
 - the primary listing of the common stock is the New York Stock Exchange (including NYSE Arca and NYSE MKT), the NASDAQ Global Select Market, the NASDAQ Select Market or the NASDAQ Capital Market. ADRs are not eligible for inclusion; and
 - the company should have a corporate governance structure consistent with U.S. practice.

In situations where the only factor suggesting that a company is not a U.S. company is its tax registration in a “domicile of convenience” or another location chosen for tax-related reasons, S&P Dow Jones normally determines that the company is still a U.S. company. The final determination of domicile eligibility is made by the S&P Dow Jones’s U.S. index committee.

- **Public Float.** There should be a public float of at least 50% of the company’s stock. For companies with multiple share classes, each share class is evaluated separately. Only those share classes with a public float of at least 50% are considered for inclusion.
- **Sector Classification.** The company is evaluated for its contribution to sector balance maintenance, as measured by a comparison of each GICS® sector’s weight in an S&P U.S. Index with its weight in the market, in the relevant market capitalization range.
- **Financial Viability.** The sum of the most recent four consecutive quarters’ as-reported earnings of the company should be positive as should the most recent quarter. As-reported earnings are Generally Accepted Accounting Principles (GAAP) net income excluding discontinued operations and extraordinary items. For equity real estate investment trusts (REITs), financial viability is based on as-reported earnings and/or Funds From Operations (FFO), if reported. Another measure of financial viability is a company’s balance sheet leverage, which should be operationally justifiable in the context of both its industry peers and its business model.
- **Treatment of IPOs.** Initial public offerings should be seasoned for six to 12 months before being considered for addition to an S&P U.S. Index.
- **Eligible Securities.** Eligible securities include all U.S. common equities listed on the New York Stock Exchange, NYSE Arca, NYSE MKT, NASDAQ Global Select Market, NASDAQ Select Market and NASDAQ Capital Market. Ineligible securities include business development companies (BDCs), limited partnerships, master limited partnerships, limited liability companies (LLCs), OTC bulletin board issues, closed-end funds, ETFs, ETNs, royalty trusts, tracking stocks, preferred and convertible preferred stock, unit trusts, equity warrants, convertible bonds,

investment trusts, rights, ADRs, ADSs and master limited partnership units. Real estate investment trusts (REITs) are eligible for inclusion.

Removals from the S&P U.S. Indices are evaluated based as follows:

- *Companies that are involved in mergers, acquisitions, or significant restructuring such that they no longer meet inclusion criteria.* Companies delisted as a result of merger, acquisition or other corporate action are removed at a time announced by S&P Dow Jones, normally at the close of the last day of trading or expiration of a tender offer. Constituents that are halted from trading may be kept in an S&P U.S. Index until trading resumes, at the discretion of S&P Dow Jones. If a stock is moved to the pink sheets or the bulletin board, the stock is removed.
- *Companies that substantially violate one or more of the addition criteria.* S&P Dow Jones believes turnover in index membership should be avoided when possible. At times a stock may appear to temporarily violate one or more of the addition criteria. However, the addition criteria are for addition to an index, not for continued membership. As a result, an index constituent that appears to violate criteria for addition to that index is not deleted unless ongoing conditions warrant an index change. When a stock is removed from an index, S&P Dow Jones explains the basis for the removal.

Calculation of the S&P U.S. Indices

The S&P U.S. Indices are float-adjusted market capitalization-weighted indices. On any given day, the index value of each S&P U.S. Index is the total float-adjusted market capitalization of that S&P U.S. Index's constituents *divided* by its divisor. The float-adjusted market capitalization reflects the price of each stock in the relevant S&P U.S. Index *multiplied* by the number of shares used in the index value calculation.

Float Adjustment. Float adjustment means that the number of shares outstanding is reduced to exclude closely held shares from the calculation of the index value because such shares are not available to investors. The goal of float adjustment is to distinguish between strategic (control) shareholders, whose holdings depend on concerns such as maintaining control rather than the economic fortunes of the company, and those holders whose investments depend on the stock's price and their evaluation of a company's future prospects. Generally, these "control holders" include officers and directors, private equity, venture capital & special equity firms, other publicly traded companies that hold shares for control, strategic partners, holders of restricted shares, employee stock ownership plans, employee and family trusts, foundations associated with the company, holders of unlisted share classes of stock or government entities at all levels (other than government retirement/pension funds) and any individual person who controls a 5% or greater stake in a company as reported in regulatory filings. Shares that are not considered outstanding are also not included in the available float. These generally include treasury stock, stock options, equity participation units, warrants, preferred stock, convertible stock and rights.

For each component, S&P Dow Jones calculates an Investable Weight Factor ("IWF"), which represents the portion of the total shares outstanding that are considered part of the public float for purposes of the relevant S&P U.S. Index.

Divisor. Continuity in index values of each S&P U.S. Indices is maintained by adjusting its divisor for all changes in its constituents' share capital after its base date. This includes additions and deletions to the relevant S&P U.S. Index, rights issues, share buybacks and issuances and non-zero price spin-offs. The value of each S&P U.S. Index's divisor over time is, in effect, a chronological summary of all changes affecting the base capital of that S&P U.S. Index. The divisor of each S&P U.S. Index is adjusted such that the index value of that S&P U.S. Index at an instant just prior to a change in base capital equals the index value of that S&P U.S. Index at an instant immediately following that change.

Maintenance of the S&P U.S. Indices

Changes in response to corporate actions and market developments can be made at any time. Constituent changes are typically announced one to five days before they are scheduled to be implemented.

Share Updates. Changes in a company's shares outstanding due to its acquisition of another public company are made as soon as reasonably possible. At S&P Dow Jones' discretion, de minimis merger and acquisition share changes are accumulated and implemented with the quarterly share rebalancing. All other changes of less than 5% are accumulated and made quarterly on the third Friday of March, June, September and December.

5% Rule. Changes in a company's total shares outstanding of 5% or more due to public offerings, tender offers, Dutch auctions or exchange offers are made as soon as reasonably possible. Other changes of 5% or more (for example, due to company stock repurchases, private placements, acquisitions of private companies or non-index companies that do not trade on a major exchange, redemptions, exercise of options, warrants, conversion of preferred stock, notes, debt, equity participations, at-the-market stock offerings or other recapitalizations) are made weekly, and are announced on Fridays for implementation after the close of trading the following Friday (one week later). If an exchange holiday/closure falls on a Friday, the weekly share change announcement will be made the day before the exchange holiday/closure.

If a 5% or more share change causes a company's IWF to change by five percentage points or more (for example from 0.80 to 0.85), the IWF is updated at the same time as the share change. IWF changes resulting from partial tender offers are considered on a case-by-case basis.

For weekly share reviews involving companies with multiple share classes, the 5% share change threshold is based on each individual share class rather than total company shares.

Share Freezes. S&P Dow Jones implements a share freeze the week leading up to the rebalancing effective date (the third Friday of the last month of each quarter). During this frozen period, shares are not changed except for certain corporate action events (merger activity, stock splits, rights offerings and certain share dividend payable events).

Corporate Actions. Corporate actions (such as stock splits, stock dividends, non-zero price spin-offs and rights offerings) are applied after the close of trading on the day prior to the ex-date.

Other Adjustments. In cases where there is no achievable market price for a stock being deleted, it can be removed at a zero or minimal price at the S&P Dow Jones's U.S. index committee's discretion, in recognition of the constraints faced by investors in trading bankrupt or suspended stocks.

The table below summarizes types of index maintenance adjustments and indicates whether or not a divisor adjustment is required.

Type of Corporate Action	Comments	Divisor Adjustment
Company added/deleted	Net change in market value determines 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

Type of Corporate Action	Comments	Divisor Adjustment
Non-zero price spin-off	If the spun-off company is not being added to the index, the divisor adjustment reflects the decline in index market value (<i>i.e.</i> , the value of the spun-off unit).	Yes
Non-zero price spin-off	Spun-off company added to the index, no company removed from the index.	No
Non-zero price 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 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 dividend	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 capitalization measured as the shares issued multiplied by the price paid.	Yes

Stock splits and stock dividends do not affect the 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 relevant component. All stock split and dividend adjustments are made after the close of trading on the day before the ex-date.

Governance of the S&P U.S. Indices

The S&P U.S. Indices are maintained by S&P Dow Jones's U.S. index committee. All index committee members are full-time professional members of S&P Dow Jones' staff. The index committee meets monthly. At each meeting, the index committee reviews pending corporate actions that may affect index constituents, statistics comparing the composition of the indices to the market, companies that are being considered as candidates for addition to an index, and any significant market events. In addition, the index committee may revise index policy covering rules for selecting companies, treatment of dividends, share counts or other matters.

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THE SWISS MARKET INDEX

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The SMI[®] is reported by Bloomberg L.P. under the ticker symbol “SMI.”

The SMI[®] is a free-float adjusted market capitalization-weighted price return index of the Swiss equity market. The SMI[®] was standardized on June 30, 1988 with an initial baseline value of 1,500 points.

Composition of the SMI[®]

The SMI[®] is composed of the most highly capitalized and liquid stocks of the Swiss Performance Index[®] (“SPI[®]”). The SMI[®] represents approximately 85% of the free-float market capitalization of the Swiss equity market. The SMI[®] is recalculated every time a new transaction is made for a stock included in the SMI[®]. The shortest interval is one second.

The SMI[®] is composed of the 20 highest ranked securities of the Swiss Performance Index[®] (“SPI[®]”), where the ranking of each security is determined by a combination of the following criteria:

- average free-float market capitalization (compared to the capitalization of the entire SPI[®]); and
- cumulated on order book turnover (compared to the total turnover of the SPI[®]).

The average market capitalization in percent and the turnover in percent are each given a weighting of 50% and yield the weighted market share. A security is admitted to the SMI[®] if it ranks 18 or better in the selection list. A security is excluded from the SMI[®] if it ranked 23 or lower in the selection list. A share ranked 19 or 20 is admitted only if a share included in the SMI[®] meets the exclusion criteria directly (position 23 or lower) and no other share that either meets the admission criteria directly (position 18 or higher) or is rated higher has moved up in its place. A share ranked 21 or 22 is excluded only if a share meets the admission criteria directly (position 18 or higher) and no other share that either meets the exclusion criteria directly (position 23 or lower) or is rated lower has been excluded in its place.

Standards for Admission and Exclusion

To ensure that the composition of the SMI[®] maintains a high level of continuity, the stocks contained within it are subject to a special admission and exclusion procedure. This is based on the criteria of free-float market capitalization and liquidity. The index-basket adjustments which arise from this procedure are, as a rule, made once per year.

Changes to the index-basket composition will be made once a year after prior notice of at least two months on the third Friday in September after close of trading. The number of securities and free-float shares are adjusted on four ordinary adjustment dates a year: the third Friday in March, the third Friday in June, the third Friday in September and the third Friday in December (in each case, after the close of trading).

Calculation of the SMI[®]

The SMI[®] is calculated using the Laspeyres method with the weighted arithmetic mean of a defined number of securities issues. The index level is calculated by dividing the market capitalizations of all securities included in the SMI[®] by a divisor:

$$I_s = \frac{\sum_{i=1}^M p_{i,s} \times x_{i,t} \times f_{i,t} \times r_s}{D_t}$$

where t is current day; s is current time on day t; I_s is the current index level at time s; D_t is the divisor on day t; M is the number of issues in the SMI[®]; $p_{i,s}$ is the last-paid price of security i; $x_{i,t}$ is the number of shares of security i on day t; $f_{i,t}$ is the free float for security i on day t; and r_s is the current CHF exchange rate at time s.

The divisor is a technical number used to calculate the SMI[®]. If the market capitalization changes due to a corporate event, the divisor changes while the index value remains the same. The new divisor is calculated on the evening of the day before the corporate event takes effect. Regular cash dividend payments do not result in adjustments to the divisor. Repayments of capital through the reduction of a share's par value, which can take the place of a regular cash dividend or constitute a component of the regular distribution, are treated in the same way as a normal dividend payment (*i.e.*, no adjustment to the divisor). Distributions (*e.g.*, special dividends and anniversary bonuses) that, contrary to a company's usual dividend policy, are paid out or declared extraordinary dividends, are not deemed dividends in the above sense. These distributions are considered corporate events and also result in adjustments to the divisor. Share dividends are not treated like ordinary dividend payments. The increase in the number of shares is offset by the lower price of the shares on the ex-date. The capitalization does not change in total and the divisor is not adjusted.

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THE TOPIX® INDEX

All information contained in this underlying supplement regarding the Tokyo Stock Price Index, or the TOPIX® Index, including, without limitation, its make-up, method of calculation and changes in its components, has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, the Tokyo Stock Exchange (the “TSE”). The TOPIX® Index is calculated, maintained and published by the TSE. The TSE has no obligation to continue to publish, and may discontinue publication of, the TOPIX® Index.

The TOPIX® Index is reported by Bloomberg L.P. under the ticker symbol “TPX.”

The component stocks of the TOPIX® Index consist of all Japanese common stocks listed on the First Section of the TSE. The TOPIX® Index measures changes in the aggregate market value of these stocks. The TOPIX® Index was developed by the TSE. Publication of the TOPIX® Index began on July 1, 1969, based on an initial Index value of 100 at January 4, 1968, which was reset at 1,000 on April 1, 1998. The TOPIX® Index is computed and published every second via TSE’s Market Information System, and is reported to securities companies across Japan and available worldwide through computerized information networks.

The TSE Japanese stock market is divided into two sections: the First Section and the Second Section. Listings of stocks on the TSE are divided between these two sections, with stocks listed on the First Section typically being limited to larger, longer established and more actively traded issues and the Second Section to smaller and newly listed companies. The component stocks of the TOPIX® Index are determined based on market capitalization and liquidity. Review and selection of component stocks is conducted semiannually, based on market data as of the base date for selection.

The TOPIX® Index is a free-float adjusted market capitalization-weighted index, with the market price of each component stock multiplied by the number of shares listed (as adjusted by multiplying the free-float weight (“FFW”) to take into account only the listed shares deemed to be available for trading in the market). The TSE is responsible for calculating and maintaining the TOPIX® Index, and can add, delete or substitute the stocks underlying the TOPIX® Index or make other methodological changes that could change the value of the TOPIX® Index. The underlying stocks may be removed, if necessary, in accordance with deletion/addition rules which provide generally for the deletion of a stock from the TOPIX® Index if such stock ceases to meet the criteria for inclusion. Stocks listed on the Second Section of the TSE may be transferred to the First Section if they satisfy applicable criteria. Such criteria include numerical minimum values for number of shares listed, number of shareholders and average monthly trading volume, among others. Similarly, when a First Section stock falls within the coverage of TSE rules prescribing reassignment thereof to the Second Section, such stock will be removed from the First Section.

The TOPIX® Index is not expressed in Japanese yen, but is presented in terms of points (as a decimal figure), rounded to the nearest one-hundredth. The TOPIX® Index is calculated by multiplying 100 by the figure obtained by dividing the current free-float adjusted market value (the current market price per share at the time of the index calculation multiplied by the number of free-float adjusted common shares listed on the First Section of the TSE at the same instance) (as adjusted by multiplying the FFW) (the “Current Market Value”) by the base market value (*i.e.*, the Current Market Value on the base date) (the “Base Market Value”).

The calculation of the TOPIX® Index can be represented by the following formula:

$$\text{Index} = \frac{\text{Current Market Value}}{\text{Base Market Value}} \times 100$$

In order to maintain continuity, the Base Market Value is adjusted from time to time to ensure that it reflects only price movements resulting from auction market activity, and to eliminate the effects of other factors and prevent any instantaneous change or discontinuity in the level of the TOPIX® Index. Such

factors include, without limitation: new listings, delistings, new share issues either through public offerings or through rights offerings to shareholders, issuance of shares as a consequence of exercise of convertible bonds or warrants, and transfer of listed securities from the First Section to the Second Section of the TSE.

The formula for the adjustment is as follows:

$$\frac{\text{Free-float adjusted Market Value on business day before adjustment date}}{\text{Base Market Value before adjustment}} = \frac{(\text{Free-float adjusted Market Value on business day before adjustment date} \pm \text{Adjustment Amount})}{\text{Base Market Value after adjustment}}$$

Where Adjustment Amount is equal to the changes in the number of shares included in the calculation of the TOPIX® Index *multiplied* by the price of those shares used for the purposes of the adjustment.

Therefore,

$$\text{New Base Market Value} = \frac{\text{Old Base Market Value} \times (\text{Free-float adjusted Market Value on business day before adjustment date} \pm \text{Adjustment Amount})}{\text{Free-float adjusted Market Value on business day before adjustment date}}$$

The Base Market Value remains at the new value until a further adjustment is necessary as a result of another change. As a result of such change affecting the Current Market Value or any stock underlying the TOPIX® Index, the Base Market Value is adjusted in such a way that the new value of the TOPIX® Index will equal the level of the TOPIX® Index immediately prior to such change.

No adjustment is made to the Base Market Value, however, in the case of events such as stock splits or decreases in capital without compensation, which theoretically do not affect market capitalization.

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The Tokyo Stock Exchange

The TSE is one of the world’s largest securities exchanges in terms of market capitalization. Trading hours are currently from 9:00 a.m. to 11:00 a.m. and from 12:30 p.m. to 3:00 p.m., Tokyo time, Monday through Friday.

Due to the time zone difference, the TSE will close on any normal trading day prior to the opening of business in New York City on the same calendar day. Therefore, the closing level of the TOPIX[®] Index on a trading day will generally be available in the United States by the opening of business on the same calendar day.

The TSE has adopted certain measures, including daily price floors and ceilings on individual stocks, intended to prevent any extreme short-term price fluctuations resulting from order imbalances. In general, any stock listed on the TSE cannot be traded at a price lower than the applicable price floor or higher than the applicable price ceiling. These price floors and ceilings are expressed in absolute Japanese yen, rather than percentage limits based on the closing price of the stock on the previous trading day. In addition, when there is a major order imbalance in a listed stock, the TSE posts a “special bid quote” or a “special asked quote” for that stock at a specified higher or lower price level than the stock’s last sale price in order to solicit counter-orders and balance supply and demand for the stock. Prospective investors should also be aware that the TSE may suspend the trading of individual stocks in certain limited and extraordinary circumstances, including, for example, unusual trading activity in that stock. As a result, changes in the TOPIX[®] Index may be limited by price limitations or special quotes, or by suspension of trading, on individual stocks that make up the TOPIX[®] Index, and these limitations, in turn, may adversely affect the value of the notes.

COMMODITY INDEX DESCRIPTIONS

THE BLOOMBERG COMMODITY INDICES

General

All information contained in this underlying supplement regarding the Bloomberg Commodity IndexSM, its single-commodity sub-indices and the forward-month version of the Bloomberg Commodity IndexSM and its single-commodity sub-indices (each, a “Bloomberg Commodity Index” and collectively, the “Bloomberg Commodity Indices”), including, without limitation, their make-up, methods of calculation and changes in their components, has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, UBS Securities LLC (“UBS”) and Bloomberg Finance L.P. (“Bloomberg”). UBS and Bloomberg are not involved in the offer of the notes in any way and have no obligation to consider your interests as a holder of the notes. UBS and Bloomberg have no obligation to continue to publish, and may discontinue publication of, the Bloomberg Commodity Indices at any time in their sole discretion.

On July 1, 2014, Bloomberg became responsible for the governance, calculation, distribution and licensing of the Bloomberg Commodity Indices. The Dow Jones-UBS Commodity IndexSM was renamed to the Bloomberg Commodity IndexSM and the ticker changed from “DJUBS” to “BCOM.” UBS has maintained its ownership, but Bloomberg calculates the Bloomberg Commodity Index on behalf of UBS. Material changes or amendments to the index methodology are subject to approval by the Bloomberg index oversight committee in consultation, if practical, with UBS.

Overview

The Bloomberg Commodity IndexSM was introduced in July of 1998 to provide a unique, diversified, economically rational and liquid benchmark for commodities as an asset class. The Bloomberg Commodity IndexSM currently is composed of the prices of twenty-two exchange-traded futures contracts on physical commodities. A futures contract is a bilateral agreement providing for the purchase and sale of a specified type and quantity of a commodity or financial instrument during a stated delivery month for a fixed price. For a general description of the commodity futures markets, please see “The Commodity Futures Markets” below. The commodities included in the Bloomberg Commodity IndexSM for 2016 are as follows: aluminum, coffee, copper, corn, cotton, crude oil (WTI and Brent), gold, ultra-low-sulfur diesel (“ULS diesel”), lean hogs, live cattle, natural gas, nickel, silver, soybean meal, soybean oil, soybeans, sugar, unleaded gasoline, wheat (soft and hard red winter) and zinc. The Bloomberg Commodity IndexSM tracks futures contracts that trade on the Chicago Board of Trade (“CBOT”), New York Board of Trade (“NYBOT”), Commodities Exchange division of the New York Mercantile Exchange (“COMEX”), New York Mercantile Exchange (“NYMEX”), the Kansas City Board of Trade (“KCBOT”), the London Metals Exchange (“LME”) and ICE Futures Europe.

The Bloomberg Commodity IndexSM is composed of exchange-traded futures contracts on physical commodities and is designed to be a highly liquid and diversified benchmark for commodities as an asset class. Its component weightings are determined primarily based on liquidity data, which is the relative amount of trading activity of a particular commodity. The Bloomberg Commodity IndexSM is published by Bloomberg L.P. under the ticker symbols “BCOM” for the excess return version and “BCOMTR” for the total return version.

The single-commodity sub-indices of the Bloomberg Commodity IndexSM follow the methodology of the Bloomberg Commodity IndexSM, except that the calculation of each single-commodity sub-index utilizes the prices of the relevant futures contracts (listed under “— Designated Contracts for Each Commodity”) and the relevant Commodity Index Multiplier (determined as described under “— Commodity Index Multipliers”). The single-commodity sub-indices of the Bloomberg Commodity IndexSM are published by Bloomberg L.P. If the notes are linked in whole or in part to a single-commodity sub-index of the Bloomberg Commodity IndexSM, the ticker symbol will be provided in the relevant terms supplement.

Bloomberg also publishes forward-month versions of the Bloomberg Commodity IndexSM and its single-commodity sub-indices that trades longer-dated commodity futures contracts. The Bloomberg Commodity Index 3 Month ForwardSM follows the methodology of the Bloomberg Commodity IndexSM, except that the futures contracts used for calculating the Bloomberg Commodity Index 3 Month ForwardSM are advanced, as compared to the Bloomberg Commodity IndexSM, such that the delivery months for the reference contracts are later than those of the corresponding reference contracts used for the Bloomberg Commodity IndexSM. The Bloomberg Commodity Index 3 Month ForwardSM is published by Bloomberg L.P. under the ticker symbols “BCOMF3” for the excess return version and “BCOMF3T” for the total return version.

The forward-month single-commodity sub-indices of the Bloomberg Commodity IndexSM follow the methodology of the Bloomberg Commodity IndexSM, except that the calculation of each forward-month single-commodity sub-index utilizes the prices of the relevant futures contracts (as listed under “— Designated Contracts for Each Commodity”) and the relevant Commodity Index Multiplier (determined as described under “— Commodity Index Multipliers”). In addition, the futures contracts used for calculating the forward-month single-commodity sub-indices are advanced, as compared to the futures contracts included in the Bloomberg Commodity IndexSM, such that the delivery months for the reference contracts are later than those of the corresponding reference contracts used for the single-commodity sub-indices. The forward-month single-commodity sub-indices of the Bloomberg Commodity IndexSM are published by Bloomberg L.P. If the notes are linked in whole or in part to a forward-month single-commodity sub-index of the Bloomberg Commodity IndexSM, the ticker symbol will be provided in the relevant terms supplement.

Bloomberg publishes both a total return version and excess return version of each of the Bloomberg Commodity Indices. The total return version of each Bloomberg Commodity Index reflects the returns on a fully collateralized investment in the excess return version of such Bloomberg Commodity Index. Accordingly, the total return version of each Bloomberg Commodity Index combines the returns of the relevant excess return version with returns on cash collateral invested in Treasury Bills. The cash collateral returns are calculated using the most recent weekly auction high rate for 13-week (3 Month) U.S. Treasury Bills, as reported on the website www.publicdebt.treas.gov/AI/OFBills under the column heading “Discount Rate %,” published by the Bureau of the Public Debt of the U.S. Treasury (or any successor source). Information contained in the Bureau of the Public Debt of the U.S. Treasury website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement. Weekly auction high rates are generally published once each week on Monday. The notes may be linked to the excess return or the total return version of the Bloomberg Commodity Indices, as specified in the relevant terms supplement.

UBS and its affiliates actively trade futures contracts and options on futures contracts on the commodities that underlie the Bloomberg Commodity IndexSM, as well as commodities, including commodities included in the Bloomberg Commodity IndexSM. For information about how this trading may affect the value of the Bloomberg Commodity Indices, see “Risk Factors — For notes linked to a Bloomberg Commodity Index, trading and other transactions by UBS and its affiliates in the futures contracts constituting the Bloomberg Commodity Indices and the underlying commodities may affect the level of the Bloomberg Commodity Indices” in this underlying supplement.

The Bloomberg Index Oversight Committee and Index Advisory Council

Bloomberg established an internal index oversight committee (the “IOC”) as part of its initiative to comply with the “19 Principles for Financial Benchmarks” as published by the International Organization of Securities Commissions (IOSCO). The committee consists of senior representatives from various Bloomberg business units. The purpose of the IOC is to provide oversight and accountability over all aspects of the Index determination process.

Additionally, an external index advisory council (the “IAC”) will be convened from time to time for the Bloomberg Commodity IndexSM in order to provide Bloomberg with guidance and feedback from the investment community on the Bloomberg Commodity IndexSM, index products and commodities markets generally.

Four Main Principles Guiding the Creation of the Bloomberg Commodity IndexSM

The Bloomberg Commodity IndexSM was created using the following four main principles:

- **ECONOMIC SIGNIFICANCE.** A commodity index should fairly represent the importance of a diversified group of commodities to the world economy. To achieve a fair representation, the Bloomberg Commodity IndexSM uses both liquidity data and dollar-weighted production data in determining the relative quantities of included commodities. The Bloomberg Commodity IndexSM primarily relies on liquidity data, or the relative amount of trading activity of a particular commodity, as an important indicator of the value placed on that commodity by financial and physical market participants. The Bloomberg Commodity IndexSM also relies on production data as a useful measure of the importance of a commodity to the world economy. Production data alone, however, may underestimate the economic significance of storable commodities (e.g., gold) relative to non-storable commodities (e.g., live cattle). Production data alone also may underestimate the investment value that financial market participants place on certain commodities, and/or the amount of commercial activity that is centered around various commodities. Accordingly, production statistics alone do not necessarily provide as accurate a reflection of economic importance as the markets themselves. The Bloomberg Commodity IndexSM thus relies on data that is both endogenous to the futures market (liquidity) and exogenous to the futures market (production) in determining relative weightings.
- **DIVERSIFICATION.** A second major goal of the Bloomberg Commodity IndexSM is to provide diversified exposure to commodities as an asset class. Disproportionate weighting of any particular commodity or sector increases volatility and negates the concept of a broad-based commodity index. Instead of diversified commodities exposure, the investor is unduly subjected to micro-economic shocks in one commodity or sector. As described further below, diversification rules have been established and are applied annually. Additionally, the Bloomberg Commodity IndexSM is re-balanced annually on a price-percentage basis in order to maintain diversified commodities exposure over time.
- **CONTINUITY.** The third goal of the Bloomberg Commodity IndexSM is to be responsive to the changing nature of commodity markets in a manner that does not completely reshape the character of the Bloomberg Commodity IndexSM from year to year. The Bloomberg Commodity IndexSM is intended to provide a stable benchmark so that end-users may be reasonably confident that historical performance data (including such diverse measures as correlation, spot yield, roll yield and volatility) is based on a structure that bears some resemblance to both the current and future composition of the Bloomberg Commodity IndexSM.
- **LIQUIDITY.** Another goal of the Bloomberg Commodity IndexSM is to provide a highly liquid index. The explicit inclusion of liquidity as a weighting factor helps to ensure that the Bloomberg Commodity IndexSM can accommodate substantial investment flows. The liquidity of an index affects transaction costs associated with current investments. It also may affect the reliability of historical price performance data.

These four principles represent goals of the Bloomberg Commodity IndexSM and its creators, and there can be no assurance that these goals will be achieved.

Composition of the Bloomberg Commodity IndexSM — Commodities Available for Inclusion

Commodities have been selected that are believed to be both sufficiently significant to the world economy to merit consideration for inclusion in the Bloomberg Commodity IndexSM and tradable through a qualifying related futures contract. With the exception of several metals contracts (aluminum, lead, tin, nickel and zinc) that trade on the LME and contracts for Brent crude, which trade on ICE Futures Europe, each of the potential commodities is currently the subject of at least one futures contract that trades on a U.S. exchange.

The 24 commodities currently available for inclusion in the Bloomberg Commodity IndexSM are aluminum, cocoa, coffee, copper, corn, cotton, crude oil (WTI and Brent), gold, ULS diesel, lead, lean hogs, live cattle, natural gas, nickel, platinum, silver, soybean meal, soybean oil, soybeans, sugar, tin, unleaded gasoline, wheat (soft (Chicago) and hard red winter (KC HRW)) and zinc.

The 20 commodities included in the Bloomberg Commodity IndexSM (each, an “Index Commodity” and collectively, the “Index Commodities”) for 2016 are as follows: aluminum, coffee, copper, corn, cotton, crude oil (WTI and Brent), gold, ULS diesel, lean hogs, live cattle, natural gas, nickel, silver, soybean meal, soybean oil, soybeans, sugar, unleaded gasoline, wheat (soft and hard red winter) and zinc.

Designated Contracts for Each Commodity

One or more futures contracts known as a “Designated Contract” is selected by Bloomberg for each commodity available for inclusion in the Bloomberg Commodity IndexSM. Historically, through and including the composition of the Bloomberg Commodity IndexSM for 2016, Bloomberg has chosen for each Commodity one Designated Contract that is traded in North America and denominated in U.S. dollars (with the exception of several LME contracts, which are traded in London, and with the exception of crude oil, for which two Designated Contracts have been selected starting in 2012, and wheat, for which two Designated Contracts that are traded in North America have been selected starting in 2013).

Bloomberg may in the future select more than one Designated Contract for additional commodities or may select Designated Contracts that are traded outside of the United States or in currencies other than the U.S. dollar. For example, in the event that changes in regulations concerning position limits materially affect the ability of market participants to replicate the Bloomberg Commodity IndexSM in the underlying futures markets, it may become appropriate to include multiple Designated Contracts for more commodities (in addition to crude oil and wheat) in order to enhance liquidity.

The termination or replacement of a futures contract on an established exchange occurs infrequently; if a Designated Contract were to be terminated or replaced, a comparable futures contract, if available, would be selected to replace that Designated Contract. Please see “Risk Factors — S&P or Bloomberg may be required to replace a contract underlying an S&P GSCI[®] Index or a Bloomberg Commodity Index, if the existing futures contract is terminated or replaced” in this underlying supplement.

The 2016 Designated Contracts for the commodities underlying the Bloomberg Commodity IndexSM are set forth in the table below:

Commodity	Designated Contract	Exchange	Units	Price quote
Aluminum	High Grade Primary Aluminum	LME	25 metric tons	USD/metric ton
Coffee	Coffee “C”	NYBOT	37,500 lbs	U.S. cents/pound
Copper*	Copper	COMEX	25,000 lbs	U.S. cents/pound
Corn	Corn	CBOT	5,000 bushels	U.S. cents/bushel
Cotton	Cotton	NYBOT	50,000 lbs	U.S. cents/pound
Crude (WTI)	Light, Sweet Crude Oil	NYMEX	1,000 barrels	USD/barrel
Crude (Brent)	Brent Crude Oil	ICE Futures Europe	1,000 barrels	USD/barrel
Gold	Gold	COMEX	100 troy oz.	USD/troy oz.
Lean Hogs	Lean Hogs	CME	40,000 lbs	U.S. cents/pound
Live Cattle	Live Cattle	CME	40,000 lbs	U.S. cents/pound
Natural Gas	Henry Hub Natural Gas	NYMEX	10,000 mmbtu	USD/mmbtu
Nickel	Primary Nickel	LME	6 metric tons	USD/metric ton
Silver	Silver	COMEX	5,000 troy oz.	U.S. cents/troy oz.
Soybeans	Soybeans	CBOT	5,000 bushels	U.S. cents/bushel
Soybean Meal	Soybean Meal	CBOT	100 short tons	USD/short ton
Soybean Oil	Soybean Oil	CBOT	60,000 lbs	U.S. cents/pound
Sugar	World Sugar No. 11	NYBOT	112,000 lbs	U.S. cents/pound
ULS diesel	ULS diesel	NYMEX	42,000 gallons	U.S. cents/gallon

<u>Commodity</u>	<u>Designated Contract</u>	<u>Exchange</u>	<u>Units</u>	<u>Price quote</u>
Unleaded Gasoline (RBOB)	Reformulated Gasoline Blendstock for Oxygen Blending	NYMEX	42,000 gal	U.S. cents/gallon
Wheat (Chicago)	Soft Wheat	CBOT	5,000 bushels	U.S. cents/bushel
Wheat (KC HRW)	Hard Red Winter Wheat	KCBOT	5,000 bushels	U.S. cents/ bushel
Zinc	Special High Grade Zinc	LME	25 metric tons	USD/metric ton

* The Bloomberg Commodity IndexSM uses the copper contract traded on the COMEX division of the New York Mercantile Exchange for copper contract prices and LME volume data in determining the weighting for the Bloomberg Commodity IndexSM.

In addition to the commodities set forth in the above table, cocoa, lead, platinum and tin also are considered annually for inclusion in the Bloomberg Commodity IndexSM.

Commodity Groups

For purposes of applying the diversification rules discussed above and below, the commodities available for inclusion in the Bloomberg Commodity IndexSM are assigned to Commodity Groups. The Commodity Groups, and the commodities currently included in each Commodity Group, are as follows:

<u>Commodity Group:</u>	<u>Commodities:</u>	<u>Commodity Group:</u>	<u>Commodities:</u>
Energy	Crude Oil (WTI and Brent) ULS diesel Natural Gas Unleaded Gasoline (RBOB)	Livestock	Lean Hogs Live Cattle
Precious Metals	Gold Silver Platinum	Grains	Corn Soybeans Soybean Meal Soybean Oil Wheat (Chicago and KC HRW)
Industrial Metals	Aluminum Copper Lead Nickel Tin Zinc	Softs	Cocoa Coffee Cotton Sugar

Bloomberg Commodity IndexSM Breakdown by Commodity Group

The Commodity Group Breakdown set forth below is based on the weightings and composition of the Bloomberg Commodity IndexSM set forth under "The Bloomberg Commodity IndexSM 2016 Commodity Index Target Weights" below.

Energy	31.03%
Precious Metals	15.59%
Industrial Metals	17.11%

Livestock	5.63%
Grains	23.22%
Softs	7.42%

Annual Reweightings and Rebalancings of The Bloomberg Commodity IndexSM

The Bloomberg Commodity IndexSM is reweighted and rebalanced each year in January on a price-percentage basis. The annual weightings for the Bloomberg Commodity IndexSM are determined each year in the third or fourth quarter by Bloomberg index managers operating under the supervision of the IOC following advice from the IAC and are published as promptly as practicable following the calculation. The annual weightings for the next calendar year are implemented the following January.

For example, the target composition of the Bloomberg Commodity IndexSM for 2016 was published on October 29, 2015. The January 2016 reweighting and rebalancing was based on the following percentages:

The Bloomberg Commodity IndexSM 2016 Commodity Index Target Weights

Commodity	Weighting
Crude Oil	15.000000%
WTI Crude Oil:	7.4697630%
Brent Crude Oil:	7.5302370%
Gold	11.3798610%
Natural Gas	8.4488420%
Copper	7.6272480%
Corn	7.3587030%
Soybeans	5.7038300%
Aluminum	4.5987080%
Wheat	4.4799740%
Chicago:	3.3268340%
KC HRW:	1.1531400%
Silver	4.2131830%
Sugar	3.6272510%
ULS Diesel*	3.8290390%
Unleaded Gasoline	3.7478780%
Live Cattle	3.5666190%
Soybean Oil	2.8375480%
Soybean Meal	2.8446630%
Zinc	2.5276320%
Coffee	2.2946230%
Nickel	2.3593750%
Lean Hogs	2.0621330%

Commodity	Weighting
Cotton	1.4931910%

* CME's heating oil contract on NYMEX was renamed ULS diesel futures after the April 2013 contract.

Information concerning the Bloomberg Commodity IndexSM, including weightings and composition, may be obtained at the Bloomberg website at www.bloombergindexes.com/bloomberg-commodity-index-family. Information contained in the Bloomberg website is not incorporated by reference in, and should not be considered part of, this underlying supplement or the relevant terms supplement.

Determination of Relative Weightings

The relative weightings of the Index Commodities are determined annually according to both liquidity and dollar-adjusted production data in 2/3 and 1/3 shares, respectively. Each year, for each Designated Contract selected as a reference contract for a commodity designated for potential inclusion in the Bloomberg Commodity IndexSM, liquidity is measured by the Commodity Liquidity Percentage ("CLP") and production by the Commodity Production Percentage ("CPP"). The CLP for each Designated Contract is determined by taking a five-year average of the product of trading volume and the historical dollar value of that Designated Contract, and dividing the result by the sum of such products for all Designated Contracts. The CPP is determined for each commodity by taking a five-year average of annual world production figures, adjusted by the historical U.S. dollar value of the applicable Designated Contract, and dividing the result by the sum of such production figures for all the commodities that were designated for potential inclusion in the Bloomberg Commodity IndexSM. The CLP and the CPP are then combined (using a ratio of 2:1) to establish the Commodity Index Percentage ("CIP") for each commodity. This CIP is then adjusted in accordance with certain diversification rules to determine the Index Commodities that will be included in the Bloomberg Commodity IndexSM and their respective percentage weights.

Diversification Rules

The Bloomberg Commodity IndexSM is designed to provide diversified exposure to commodities as an asset class. To ensure that no single commodity or commodity sector dominates the Bloomberg Commodity IndexSM, the following diversification rules are applied to the annual reweighting and rebalancing of the Bloomberg Commodity IndexSM as of January of each year:

- No single commodity (e.g., natural gas or silver) may constitute more than 15% of the Bloomberg Commodity IndexSM.
- No single commodity sector, together with its derivatives (e.g., WTI crude oil and Brent crude oil, together with ULS diesel and unleaded gasoline), may constitute more than 25% of the Bloomberg Commodity IndexSM.
- No related group of commodities designated as a "Commodity Group" (e.g., energy, precious metals, livestock or grains) may constitute more than 33% of the Bloomberg Commodity IndexSM.
- No single commodity included in the Bloomberg Commodity IndexSM may constitute less than 2% of the Bloomberg Commodity IndexSM, as liquidity allows.
- Any single commodity constituting less than 0.4% of the Bloomberg Commodity IndexSM will be eliminated.
- Adjust gold and silver percentages so that their weights are equal to their CIP without violating the previous diversification rules.
- The ratio of CIP divided by the associated CLP must be less than or equal to 3.5.

Following the annual reweighting and rebalancing of the Bloomberg Commodity IndexSM in January, the percentage of any Index Commodity or Commodity Group at any time prior to the next reweighting or rebalancing will fluctuate and may exceed or be less than the percentages established in January.

Commodity Index Multipliers

Following application of the diversification rules discussed above, CIPs are incorporated into the Bloomberg Commodity IndexSM by calculating the new unit weights for each Designated Contract. Near the beginning of each new calendar year, the CIPs, along with the settlement prices determined on that date for Designated Contracts included in the Bloomberg Commodity IndexSM, are used to determine a Commodity Index Multiplier (“CIM”) for each Designated Contract. This CIM is used to achieve the percentage weightings of the Designated Contracts, in dollar terms, indicated by their respective CIPs. After the CIMs are calculated, they remain fixed throughout the year. As a result, the observed price percentage of each Designated Contract will float throughout the year, until the CIMs are reset the following year based on new CIPs.

Calculations

The price return version of the Bloomberg Commodity IndexSM is calculated by Bloomberg by applying the impact of the changes to the futures prices of commodities included in the Bloomberg Commodity IndexSM (based on their relative weightings). Once the CIMs are determined as discussed above, the calculation of the price return version of the Bloomberg Commodity IndexSM is a mathematical process whereby the CIMs for the Index Commodities are multiplied by the prices in U.S. dollars for the applicable Designated Contracts. These products are then summed. The percentage change in this sum is then applied to the prior Bloomberg Commodity IndexSM price return level to calculate the new Bloomberg Commodity IndexSM price return level.

The total return version of the Bloomberg Commodity IndexSM is calculated by Bloomberg by applying the impact of the changes in the level of the price return version of the Bloomberg Commodity IndexSM and adding interest that could be earned on funds committed to the trading of the underlying futures contracts. Once the level of the price return version of the Bloomberg Commodity IndexSM is determined as discussed above, the daily return on a 13-week (3-month) T-bill is added to the percentage change in the price return version of the Bloomberg Commodity IndexSM (as compared with the prior Bloomberg Commodity IndexSM price return level) to obtain the total return. The total return is then applied to the prior Bloomberg Commodity IndexSM total return level to calculate the new Bloomberg Commodity IndexSM total return level.

The Bloomberg Commodity IndexSM Is a Rolling Index

The Bloomberg Commodity IndexSM is composed of futures contracts on physical commodities. Unlike equities, which typically entitle the holder to a continuing stake in a corporation, commodity futures contracts normally specify a certain date for the delivery of the underlying commodity. In order to avoid delivering the underlying physical commodities and to maintain exposure to the underlying physical commodities, periodically futures contracts on physical commodities specifying delivery on a nearby date must be sold and futures contracts on physical commodities that have not yet reached the delivery period must be purchased. The rollover for each contract occurs over a period of five Index Business Days (as defined below) each month according to a pre-determined schedule. This process is known as “rolling” a futures position. The Bloomberg Commodity IndexSM is a “rolling index.”

An “Index Business Day” is a day on which the sum of the Commodity Index Percentages (as defined above in “Determination of Relative Weightings”) for the Index Commodities that are open for trading is greater than 50%. For example, based on the weighting of the Index Commodities for 2015, if the CBOT, the NYMEX and the LME are each closed for trading on the same day, an Index Business Day will not exist.

Bloomberg Commodity IndexSM Calculation Disruption Events

From time to time, disruptions can occur in trading futures contracts on various commodity exchanges. The daily calculation of the Bloomberg Commodity IndexSM will be adjusted in the event that Bloomberg determines that any of the following index calculation disruption events exists:

(a) the termination or suspension of, or material limitation or disruption in the trading of any futures contract used in the calculation of the Bloomberg Commodity IndexSM on that day;

(b) the settlement price of any futures contract used in the calculation of the Bloomberg Commodity IndexSM reflects the maximum permitted price change from the previous day's settlement price;

(c) the failure of an exchange to publish official settlement prices for any futures contract used in the calculation of the Bloomberg Commodity IndexSM; or

(d) with respect to any futures contract used in the calculation of the Bloomberg Commodity IndexSM that trades on the LME, a business day on which the LME is not open for trading.

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This underlying supplement and the relevant terms supplement relate only to the notes and does not relate to the exchange-traded physical commodities underlying any of the Bloomberg Commodity IndexSM components. Purchasers of the notes should not conclude that the inclusion of a futures contract in the Bloomberg Commodity IndexSM is any form of investment recommendation of the futures contract or the underlying exchange-traded physical commodity by UBS, Bloomberg or any of their subsidiaries or affiliates. The information in this underlying supplement regarding the Bloomberg Commodity IndexSM components has been derived solely from publicly available documents. None of UBS, Bloomberg or any

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The Commodity Futures Markets

Futures contracts on physical commodities are traded on regulated futures exchanges, in the over-the-counter market and on various types of physical and electronic trading facilities and markets. As of the date of this underlying supplement, all of the contracts included in the Bloomberg Commodity IndexSM described in this underlying supplement are exchange-traded futures contracts. An exchange-traded futures contract provides for the purchase and sale of a specified type and quantity of a commodity or financial instrument during a stated delivery month for a fixed price. A futures contract provides for a specified settlement month in which cash settlement is made or in which the commodity or financial instrument is to be delivered by the seller (whose position is therefore described as “short”) and acquired by the purchaser (whose position is therefore described as “long”).

No purchase price is paid or received on the purchase or sale of a futures contract. Instead, an amount of cash or cash equivalents must be deposited with the broker as “initial margin.” This amount varies based on the requirements imposed by the exchange clearing houses, but it may be lower than 5% of the notional value of the contract. This margin deposit provides collateral for the obligations of the parties to the futures contract.

By depositing margin, which may vary in form depending on the exchange, with the clearing house or broker involved, a market participant may be able to earn interest on its margin funds, thereby increasing the total return that it may realize from an investment in futures contracts.

Futures contracts are traded on organized exchanges, known as “contract markets” in the United States. At any time prior to the expiration of a futures contract, a trader may elect to close out its position by taking an opposite position on the exchange on which the trader obtained the position, subject to the availability of a liquid secondary market. This operates to terminate the position and fix the trader’s profit or loss. Futures contracts are cleared through the facilities of a centralized clearing house and a brokerage firm, referred to as a “futures commission merchant,” which is a member of the clearing house.

Unlike equity securities, futures contracts, by their terms, have stated expirations at a specified point in time prior to expiration. At a specific point in time prior to expiration, trading in a futures contract for the

current delivery month will cease. As a result, a market participant wishing to maintain its exposure to a futures contract on a particular commodity or financial instrument with the nearest expiration must close out its position in the expiring contract and establish a new position in the contract for the next delivery month, a process referred to as “rolling.” For example, a market participant with a long position in a futures contract expiring in November who wishes to maintain a position in the nearest delivery month will, as the November contract nears expiration, sell the November contract, which serves to close out the existing long position, and buy a futures contract expiring in December. This will “roll” the November position into a December position, and, when the November contract expires, the market participant will still have a long position in the nearest delivery month.

Futures exchanges and clearing houses in the United States are subject to regulation by the Commodity Futures Trading Commission. Exchanges may adopt rules and take other actions that affect trading, including imposing speculative position limits, maximum price fluctuations and trading halts and suspensions and requiring liquidation of contracts in certain circumstances.

Futures markets outside the United States are generally subject to regulation by comparable regulatory authorities. The structure and nature of trading on non-U.S. exchanges may differ from this description.

THE S&P GSCI® INDICES

All information contained in this underlying supplement regarding the S&P GSCI® Indices (as defined below), including, without limitation, their make-up, method of calculation and changes in their components, has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, S&P Dow Jones Indices LLC (“S&P Dow Jones”), the publisher of the S&P GSCI® Indices. The S&P GSCI® Indices are determined, composed and calculated by S&P Dow Jones, without regard to the notes. S&P Dow Jones acquired the rights to the S&P GSCI® Indices from Goldman, Sachs & Co. in 2007. Goldman, Sachs & Co. established and began calculating the S&P GSCI® in May 1991. The former name of the S&P GSCI® was the Goldman Sachs Commodity Index, or GSCI®. S&P Dow Jones has no obligation to continue to publish, and may discontinue publication of, any S&P GSCI® Index.

The notes may be linked in whole or in part to the performance of the S&P GSCI® Index (“S&P GSCI®”), the S&P GSCI® Light Energy Index or certain of the S&P GSCI®’s commodity sector sub-indices: the S&P GSCI® Agriculture Index, the S&P GSCI® Energy Index, the S&P GSCI® Industrial Metals Index, the S&P GSCI® Livestock Index and the S&P GSCI® Precious Metals Index (each a “S&P GSCI® Sector Index,” and together, the “S&P GSCI® Sector Indices”), or the S&P GSCI®’s single commodity sub-indices (each a “S&P GSCI® Single Component Index,” and collectively, the “S&P GSCI® Single Component Indices”). The S&P GSCI® Single Component Indices and S&P GSCI® Sector Indices are referred to in this underlying supplement collectively as the “S&P GSCI® Component Indices,” and together with the S&P GSCI® and the S&P GSCI® Light Energy Index, as the “S&P GSCI® Indices,” and each, a “S&P GSCI® Index.” If the notes are linked to any S&P GSCI® Single Component Index, any relevant disclosure for such S&P GSCI® Single Component Index will be provided in the relevant terms supplement.

S&P Dow Jones publishes excess return and total return versions of each of the S&P GSCI® Indices. The relevant terms supplement will specify whether the notes are linked to the excess return or total return version of the S&P GSCI® Indices. The excess return versions of the S&P GSCI® Indices is based on price levels of the futures contracts included in that S&P GSCI® Index as well as the discount or premium obtained by “rolling” hypothetical positions in those contracts forward as they approach delivery. The total return versions of the S&P GSCI® Indices incorporate the returns of the excess return versions, except that the total return versions also reflect interest earned on hypothetical, fully collateralized contract positions on the included commodities.

The S&P GSCI® is an index on a world production-weighted basket of principal non-financial commodities (*i.e.*, physical commodities) that satisfy specified criteria. The S&P GSCI® is designed to be a measure of the performance over time of the markets for these commodities. The only commodities represented in the S&P GSCI® are those physical commodities on which active and liquid contracts are traded on trading facilities in major industrialized countries. The commodities included in the S&P GSCI® are weighted, on a production basis, to reflect the relative significance (in the view of S&P, as described below) of such commodities to the world economy. The fluctuations in the value of the S&P GSCI® are intended generally to correlate with changes in the prices of such physical commodities in global markets. The S&P GSCI® has been normalized such that its hypothetical level on January 2, 1970 was 100. Futures contracts on the S&P GSCI®, and options on such futures contracts, are currently listed for trading on the Chicago Mercantile Exchange.

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

the effect of changes in energy prices on the S&P GSCI[®] Light Energy Index. Increases in the prices of energy commodities, therefore, will not increase the level of the S&P GSCI[®] Light Energy Index to the same extent as the S&P GSCI[®].

The S&P GSCI[®] Agriculture Index is a world production-weighted index of certain agricultural commodities in the world economy, including Wheat, Kansas Wheat, Corn, Soybeans, Cotton, Sugar, Coffee and Cocoa. The S&P GSCI[®] Energy Index is a world production-weighted index of certain energy commodities in the world economy, including Crude Oil, Brent Crude Oil, RBOB Gasoline, Heating Oil, Gasoil and Natural Gas. The S&P GSCI[®] Industrial Metals Index is a world production-weighted index of certain industrial metals commodities in the world economy, including High Grade Primary Aluminum, Copper, Standard Lead, Primary Nickel and Special High Grade Zinc. The S&P GSCI[®] Livestock Index is a world production-weighted index of certain livestock commodities in the world economy, including live cattle, feeder cattle and lean hogs. The S&P GSCI[®] Precious Metals Index is a world production-weighted index consisting of two precious metals commodities in the world economy: Gold and Silver.

Set forth below is a summary of the methodology used to calculate the S&P GSCI[®] Indices. Because the S&P GSCI[®] is the base index of the S&P GSCI[®] Component Indices, the methodology for compiling the S&P GSCI[®] relates as well to the methodology of compiling the S&P GSCI[®] Component Indices. Each of the S&P GSCI[®] Component Indices is calculated in the same manner as the S&P GSCI[®], except that (i) the daily contract reference price, CPWs and roll weights (each as discussed below) used in performing those calculations are limited to those of the commodities included in the relevant S&P GSCI[®] Component Index and (ii) each S&P GSCI[®] Component Index has a separate normalizing constant (discussed below). The methodology for determining the composition and weighting of the S&P GSCI[®] and for calculating its value is subject to modification in a manner consistent with the purposes of the S&P GSCI[®], as described below. S&P Dow Jones makes the official calculations of the S&P GSCI[®] Indices.

The Index Committee and the Index Advisory Panel

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

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

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

Composition of the S&P GSCI[®]

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

- the contract must be in respect of a physical commodity and not a financial commodity;

- the contract must have a specified expiration or term or provide in some other manner for delivery or settlement at a specified time, or within a specified period, in the future;
- the contract must, at any given point in time, be available for trading at least five months prior to its expiration or such other date or time period specified for delivery or settlement;
- the contract must be traded on an exchange, facility or other platform (referred to as a “trading facility”) that allows market participants to execute spread transactions, through a single order entry, between the pairs of contract expirations included in the S&P GSCI[®] that, at any given point in time, will be involved in the rolls to be effected in the next three roll periods (defined below);
- the contract must be denominated in U.S. dollars; and
- the contract must be traded on or through a trading facility that has its principal place of business or operations in a country that is a member of the Organization for Economic Cooperation and Development and that:
 - makes price quotations generally available to its members or participants (and to S&P Dow Jones) in a manner and with a frequency that is sufficient to provide reasonably reliable indications of the level of the relevant market at any given point in time;
 - makes reliable trading volume information available to S&P Dow Jones with at least the frequency required by S&P Dow Jones to make the monthly determinations;
 - accepts bids and offers from multiple participants or price providers; and
 - is accessible by a sufficiently broad range of participants.

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

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

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

- In order to be added to the S&P GSCI[®], a contract that is not included in the S&P GSCI[®] at the time of determination and that is based on a commodity that is not represented in the S&P GSCI[®] at such time must have an annualized total dollar value traded over the relevant

period of at least U.S. \$15 billion. The total dollar value traded is the dollar value of the total quantity of the commodity underlying transactions in the relevant contract over the period for which the calculation is made, based on the average of the daily contract reference prices on the last day of each month during the period.

- In order to continue to be included in the S&P GSCI[®], a contract that is already included in the S&P GSCI[®] at the time of determination and that is the only contract on the relevant commodity included in the S&P GSCI[®] must have an annualized total dollar value traded of at least U.S. \$5 billion over the relevant period and of at least U.S. \$10 billion during at least one of the three most recent annual periods used in making the determination.
- In order to be added to the S&P GSCI[®], a contract that is not included in the S&P GSCI[®] at the time of determination and that is based on a commodity on which there are one or more contracts already included in the S&P GSCI[®] at such time must have an annualized total dollar value traded over the relevant period of at least U.S. \$30 billion.
- In order to continue to be included in the S&P GSCI[®], a contract that is already included in the S&P GSCI[®] at the time of determination and that is based on a commodity on which there are one or more contracts already included in the S&P GSCI[®] at such time must have an annualized total dollar value traded, over the relevant period of at least U.S. \$10 billion over the relevant period and of at least U.S. \$20 billion during at least one of the three most recent annual periods used in making the determination.

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

- In order to continue to be included in the S&P GSCI[®], a contract that is already included in the S&P GSCI[®] at the time of determination must have a reference percentage dollar weight of at least 0.10%. The reference percentage dollar weight of a contract is determined by multiplying the CPW (defined below) of a contract by the average of its daily contract reference prices on the last day of each month during the relevant period. These amounts are summed for all contracts included in the S&P GSCI[®] and each contract's percentage of the total is then determined.
- In order to be added to the S&P GSCI[®], a contract that is not included in the S&P GSCI[®] at the time of determination must have a reference percentage dollar weight of at least 1.00% at the time of determination.

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

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

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

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

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

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

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

Contract Expirations

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

If a trading facility deletes one or more contract expirations, the S&P GSCI[®] will be calculated during the remainder of the year in which such deletion occurs based on the remaining contract expirations designated by S&P Dow Jones. If a trading facility ceases trading in all contract expirations relating to a particular contract, S&P Dow Jones may designate an eligible replacement contract on the commodity.

To the extent practicable, the replacement will be in effect during the next monthly review of the composition of the S&P GSCI[®]. If that timing is not practicable, S&P Dow Jones will determine the date of the replacement and will consider a number of factors, including the differences between the existing contract and the replacement contract specifications and contract expirations.

Value of the S&P GSCI[®]

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

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

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

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

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

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

- no daily contract reference price is available for a given contract expiration;
- any such price represents the maximum or minimum price for such contract month, based on exchange price limits (referred to as a “Limit Price”);
- the daily contract reference price published by the relevant trading facility reflects manifest error, or such price is not published by 4:00 p.m., New York City time. In that event, S&P Dow Jones may, but is not required to, determine a daily contract reference price and complete the relevant portion of the roll based on such price; *provided*, that, if the trading facility publishes a price

before the opening of trading on the next day, S&P Dow Jones will revise the portion of the roll accordingly; or

- trading in the relevant contract terminates prior to its scheduled closing time.

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

Contract Daily Return

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

Calculation of the S&P GSCI[®] Indices

Excess return S&P GSCI[®] Indices

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

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

Total Return S&P GSCI[®] Indices

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

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

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

Information

All information contained herein relating to the S&P GSCI[®] and each of the S&P GSCI[®] Indices, including their make-up, method of calculation, changes in their components and historical performance, has been derived from publicly available information, without independent verification.

The information contained herein with respect to each of the S&P GSCI[®] Indices and the S&P GSCI[®] reflects the policies of, and is subject to change by, S&P Dow Jones.

Current information regarding the market values of the S&P GSCI[®] Indices is available from S&P Dow Jones and from numerous public information sources.

License Agreement

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The Commodity Futures Markets

Futures contracts on physical commodities are traded on regulated futures exchanges, in the over-the-counter market and on various types of physical and electronic trading facilities and markets. As of the date of this underlying supplement, all of the contracts included in the S&P GSCI[®] Indices are exchange-traded futures contracts. An exchange-traded futures contract provides for the purchase and sale of a specified type and quantity of a commodity or financial instrument during a stated delivery month for a fixed price. A futures contract provides for a specified settlement month in which cash settlement is made or in which the commodity or financial instrument is to be delivered by the seller (whose position is therefore described as "short") and acquired by the purchaser (whose position is therefore described as "long").

No purchase price is paid or received on the purchase or sale of a futures contract. Instead, an amount of cash or cash equivalents must be deposited with the broker as “initial margin.” This amount varies based on the requirements imposed by the exchange clearing houses, but it may be lower than 5% of the notional value of the contract. This margin deposit provides collateral for the obligations of the parties to the futures contract.

By depositing margin, which may vary in form depending on the exchange, with the clearing house or broker involved, a market participant may be able to earn interest on its margin funds, thereby increasing the total return that it may realize from an investment in futures contracts.

Futures contracts are traded on organized exchanges, known as “contract markets” in the United States. At any time prior to the expiration of a futures contract, a trader may elect to close out its position by taking an opposite position on the exchange on which the trader obtained the position, subject to the availability of a liquid secondary market. This operates to terminate the position and fix the trader’s profit or loss. Futures contracts are cleared through the facilities of a centralized clearing house and a brokerage firm, referred to as a “futures commission merchant,” which is a member of the clearing house.

Unlike equity securities, futures contracts, by their terms, have stated expirations at a specified point in time prior to expiration. At a specific point in time prior to expiration, trading in a futures contract for the current delivery month will cease. As a result, a market participant wishing to maintain its exposure to a futures contract on a particular commodity or financial instrument with the nearest expiration must close out its position in the expiring contract and establish a new position in the contract for the next delivery month, a process referred to as “rolling.” For example, a market participant with a long position in a futures contract expiring in November who wishes to maintain a position in the nearest delivery month will, as the November contract nears expiration, sell the November contract, which serves to close out the existing long position, and buy a futures contract expiring in December. This will “roll” the November position into a December position, and, when the November contract expires, the market participant will still have a long position in the nearest delivery month.

Futures exchanges and clearing houses in the United States are subject to regulation by the Commodity Futures Trading Commission. Exchanges may adopt rules and take other actions that affect trading, including imposing speculative position limits, maximum price fluctuations and trading halts and suspensions and requiring liquidation of contracts in certain circumstances.

Futures markets outside the United States are generally subject to regulation by comparable regulatory authorities. The structure and nature of trading on non-U.S. exchanges may differ from this description. From their inception to the present, the S&P GSCI[®] Indices have been composed exclusively of futures contracts traded on regulated exchanges.

FUND DESCRIPTIONS

THE iSHARES[®] 20+ YEAR TREASURY BOND ETF

All information contained in this underlying supplement regarding the iShares[®] 20+ Year Treasury Bond ETF (the “20+ Treasury Fund”) has been derived from publicly available information, without independent verification. This 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 20+ Treasury Fund is an investment portfolio maintained and managed by iShares[®] Trust. BFA is currently the investment adviser to the 20+ Treasury Fund. The 20+ Treasury Fund is an exchange-traded fund (“ETF”) that trades on the NYSE Arca, Inc. (“NYSE Arca”) under the ticker symbol “TLT.”

On March 31, 2016, the 20+ Treasury Fund ceased tracking the Barclays U.S. 20+ Year Treasury Bond Index and began tracking the ICE U.S. Treasury 20+ Year Index (the “ICE 20+ Year Index”). The ICE 20+ Year Index measures the performance of the U.S. dollar-denominated, fixed-rate U.S. Treasury market that has a remaining maturity of 20 or more years. For more information on the ICE 20+ Year Index, please see “The ICE U.S. Treasury 20+ Year Index” below.

The 20+ Treasury Fund pursues a “representative sampling” indexing strategy in attempting to track the performance of the 20+ Treasury Index. The 20+ Treasury Fund invests in a representative sample of securities that collectively has an investment profile similar to that of the ICE U.S. Treasury 20+ Year Index. The 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, duration, maturity or credit ratings and yield) and liquidity measures similar to those of the ICE U.S. Treasury 20+ Year Index.

The ICE U.S. Treasury 20+ Year Index is a theoretical financial calculation, while the 20+ Treasury Fund is an actual investment portfolio. The performance of the 20+ Treasury Fund and the ICE U.S. Treasury 20+ Year Index may vary for a number of reasons, including transaction costs, non-U.S. currency valuations, asset valuations, corporate actions (such as mergers and spin-offs), timing variances and differences between the 20+ Treasury Fund’s portfolio and the ICE U.S. Treasury 20+ Year Index resulting from the 20+ Treasury Fund’s use of representative sampling or from legal restrictions (such as diversification requirements) that apply to the 20+ Treasury Fund but not to the ICE U.S. Treasury 20+ Year Index. Because the 20+ Treasury Fund uses a representative sampling indexing strategy, it can be expected to have a larger tracking error than if it used a replication indexing strategy.

iShares[®] Trust is a registered investment company that consists of numerous separate investment portfolios, including the 20+ Treasury Fund. Information provided to or filed with the SEC by iShares[®] Trust 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 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 20+ Treasury Fund, please see the 20+ Treasury Fund’s prospectus. In addition, information about iShares[®] Trust and the 20+ Treasury 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. Information contained in the iShares[®] website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

The ICE U.S. Treasury 20+ Year Index

All information contained in this underlying supplement regarding the ICE 20+ Year Index is derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, Interactive Data Pricing and Reference Data LLC (“Interactive Data”), a subsidiary of Intercontinental Exchange, Inc. Interactive Data has no obligation to continue to publish, and may discontinue publication of, the ICE 20+ Year Index.

The ICE 20+ Year Index is a market-value weighted index that is designed to measure the performance of the U.S. dollar-denominated, fixed-rate U.S. Treasury market. The ICE 20+ Year Index was launched on December 31, 2015. The ICE 20+ Year Index measures the performance of the U.S. dollar-denominated, fixed-rate U.S. Treasury market that has a remaining maturity of 20 or more years. The ICE 20+ Year Index is reported by Bloomberg L.P. under the ticker symbols “IDCOT20.”

Index Eligibility Criteria and Inclusion Rules

The ICE 20+ Year Index consists of securities that meet the criteria listed below (the “Eligible Bond universe”). The basis of the Eligible Bond universe are those securities for which content is available daily, including evaluations and reference data, through Interactive Data.

Maturity. Each security must have a minimum effective maturity of at least twenty years as of the last business day of the month (the “Rebalance Date”). Treasury bonds issued with calls are removed from the ICE 20+ Year Index for the entire month in which they are called.

Size. Each security is required to have a minimum amount outstanding of \$300 million. Amount outstanding is defined as the par amount outstanding of each Treasury security, inclusive of any announced auctions or re-openings, less the par amount of that Treasury security held in the Federal Reserve System Open Market Account or bought at issuance by the Federal Reserve. A new issuance bought at auction by the Federal Reserve is not included in the Eligible Bond universe. Secondary market purchases by the Federal Reserve that occur in the current month are not reflected in the Eligible Bond universe until the following month.

Coupon. The Eligible Bond universe includes only fixed-rate securities, excluding zero coupon securities.

Currency. The Eligible Bond universe includes only securities with principal and interest denominated in U.S. dollars.

Bond Type. Inflation-linked securities, Treasury bills, floating-rate notes, cash-management bills and any government agency debt issued with or without a government guarantee are excluded from the Eligible Bond universe.

Index Maintenance

The ICE 20+ Year Index is rebalanced monthly. Securities are required to meet the ICE 20+ Year Index inclusion rules highlighted in the previous section to be considered for inclusion at the beginning of any given month. This includes the availability of evaluated pricing and reference data through Interactive Data.

Rebalancing. The ICE 20+ Year Index is rebalanced on the last Bond Business Day of each month. A “Bond Business Day” is a day on which the Securities Industry and Financial Markets Association (“SIFMA”) declares that the U.S. fixed-income markets are open. The new ICE 20+ Year Index for the next month is published three Business Days prior to the end of the month. The new ICE 20+ Year Index will include all securities in the Eligible Bond universe, including any new auctions or re-openings which are announced on or before the third Business Day prior to month end. The ICE 20+ Year Index is not adjusted for securities that become eligible or ineligible for inclusion during the month. Any such changes are incorporated in the ICE 20+ Year Index for the next month.

Reinvestment of Cash Flows. Cash that has accrued intra-month from interest and principal payments by the securities included in the ICE 20+ Year Index earns no reinvestment return during the month. Accumulated cash (from coupon and principal payments) is removed from the ICE 20+ Year Index at month-end, such that the cash is reinvested pro rata across the entire ICE 20+ Year Index.

New Issues. Qualifying securities issued on or before the Rebalancing Date may qualify for inclusion. Issued securities are included in the pro forma ICE 20+ Year Index with a price of \$100 until replaced with an evaluated price as soon as available after auction day.

Calculation

Returns and risk measures, such as yield duration, are first calculated at the constituent level and then aggregated to the ICE 20+ Year Index level using constituents' market weights.

Constituent Level Calculations

P_0, A_0, PAR_0, C_0 and MV_0 and P_1, A_1, PAR_1, C_1 and MV_1 denote the price, accrued interest, par amount, cumulative coupon payments and market values at date T_0 and date T_1 , respectively. C denotes the coupon payments during the period (excluding any coupon payment on date T_0 but including any coupon payment on date T_1).

Coupon payments during the period are calculated as follows: $C = C_1 - C_0$.

The market values at time T_0 and T_1 are: $MV_0 = PAR_0 \times [(P_0 + A_0) + C_0]$ and $MV_1 = PAR_1 \times [(P_1 + A_1) + C_1]$, respectively.

The price return R_1^{price} and coupon return R_1^{coupon} (whenever applicable) are defined as follows:

- Price return: return due to price appreciation over the return period:

$$R_1^{price} = \frac{P_1 - P_0}{(P_0 + A_0)}$$

- Coupon return: return due to coupon accrual during the period:

$$R_1^{coupon} = \frac{(A_1 - A_0) + C}{(P_0 + A_0)}$$

The total return is the sum of the price return and the coupon return:

$$Total\ Return_0 = Price\ Return_1 + Coupon\ Return_1$$

Index Level Calculations

The ICE 20+ Year Index had an initial level of 100 at the inception date. As time passes, the ICE 20+ Year Index level is calculated in an iterative way as follows:

$$Index\ Level_1 = Index\ Level_0 + (Index\ Level_0 \times Index\ Total\ Returns_1)$$

The ICE 20+ Year Index total return is calculated by aggregating the constituent level total returns using market weights. To calculate the ICE 20+ Year Index total return for the period from dates T_0 and T_1 , market value weights at date T_0 are used. The total market value of the ICE 20+ Year Index at time T_0 is $\sum_n MV_0^n$ plus any intra-month cash from coupon payment or principal repayment and the weight for constituent security, which is calculated as follows:

$$w_0^i = \frac{MV_0^i}{(Cash + \sum_n MV_0^n)}$$

The ICE 20+ Year Index's level will be provided to four decimal places.

Index Policies

Timing and Pricing Source. 3:00 p.m. Eastern Standard Time evaluations from Interactive Data will be used to calculate the ICE 20+ Year Index's level at the end of each day. Bonds in the ICE 20+ Year Index are priced on the bid side.

Calendar. The ICE 20+ Year Index follows the SIFMA U.S. bond market holiday schedule. The ICE 20+ Year Index's level is calculated daily at the end of each Bond Business Day. When the bond market closes early per the SIFMA schedule, the ICE 20+ Year Index's level may be calculated at a time in accordance with the recommended close. However, evaluated pricing from Interactive Data must be available to calculate the ICE 20+ Year Index's level.

Verification. The ICE 20+ Year Index's level is calculated using 3:00 p.m. Eastern Standard Time evaluations from Interactive Data. These evaluations are based upon methodologies designed to accurately and reliably reflect the market the ICE 20+ Year Index is based upon.

Interactive Data's bid-side evaluations are market-based measurements that represent its good faith opinions as to what the holder would receive in an orderly transaction (for an institutional round lot position, typically \$1,000,000 or greater current value in U.S. dollars or local currency equivalent) under current market conditions. Trades and bids are reviewed to determine that the lot size is representative of an institutional round lot, though smaller or retail sized lots may be considered especially if this is the only or primary trading information available. Interactive Data's evaluators meet regularly to discuss market movements and other macro-economic information. Interactive Data evaluates U.S. Treasury securities by obtaining feeds continuously from a number of live data sources including active market makers and inter-dealer brokers. Sources are reviewed on the basis of their historical accuracy for individual issues and maturity ranges. As new information is received, it is compared against the previous evaluation as part of the daily process. Interactive Data also maintains a verification process designed to identify price tolerance breaks for further investigation.

When needed to establish an ICE 20+ Year Index determination, Expert Judgment will be based upon the Interactive Data Index Design Principles, which detail the core design principles adhered to by the Interactive Data ETF & Index Services Team (the "Services Team") in establishing an ICE 20+ Year Index determination specific to the ICE 20+ Year Index. "Expert Judgment" refers to the exercise of discretion by the Services Team with respect to the use of data in determining a benchmark. Expert Judgment includes extrapolating values from prior or related transactions, adjusting values for factors that might influence the quality of data such as market events or impairment of a buyer's or seller's credit quality or weighting firm bids or offers greater than a particular concluded transaction. The Interactive Data Index Design Principles are available on request to Interactive Data.

Restatements. Interactive Data reserves the right to restate the ICE 20+ Year Index's level based on its discretion. The ICE 20+ Year Index subscribers are notified prior to a restatement of data. Restatements are typically communicated on the same day but may take longer depending on the volume of restatements required and other conditions.

Index Governance

The Interactive Data Index Governance Committee (the "Governance Committee") is responsible for governance, accountability and oversight of the ICE 20+ Year Index. The Governance Committee provides oversight to the Services Team that has daily responsibilities for the development, issuance and operation of the ICE 20+ Year Index.

The Governance Committee will approve any necessary changes in the ICE 20+ Year Index's methodology. The Services Team is then responsible for implementing the changes and notifying the people or entities that purchase benchmark determination services from the Services Team ("Subscribers"). Advance notice will be provided, where possible, and the amount of notice will be based upon the severity of the impact of the change to allow for comments from Subscribers and appropriate preparation to implement the change.

THE iSHARES[®] ETFS

All information contained in this underlying supplement regarding the iShares[®] MSCI Brazil Capped ETF, the iShares[®] MSCI Canada ETF, the iShares[®] MSCI Emerging Markets ETF, the iShares[®] MSCI EAFE ETF, the iShares[®] MSCI Japan ETF, the iShares[®] MSCI Mexico Capped ETF, the iShares[®] Russell 2000 ETF, the iShares[®] Russell 3000 ETF and the iShares[®] U.S. Real Estate ETF (each, an “iShares[®] ETF” and collectively, the “iShares[®] ETFs”) has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, the fund manager of each iShares[®] ETF, BlackRock Institutional Trust Company, N.A. (“BTC”) and BlackRock Fund Advisors (“BFA”). The iShares[®] ETFs are investment portfolios maintained and managed by their respective fund managers. BFA is currently the investment adviser to the iShares[®] ETFs. The iShares[®] ETFs are exchange-traded funds that trade on the NYSE Arca, Inc. under their respective ticker symbols.

Each iShares[®] ETF uses a “representative sampling” indexing strategy in attempting to track the performance of its respective underlying index. Each iShares[®] ETF invests in a representative sample of securities that collectively has an investment profile similar to its respective underlying 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 each iShares[®] ETF’s respective underlying index. Each iShares[®] ETF may or may not hold all of the securities in its respective underlying index.

Each iShares[®] ETF’s underlying index is a theoretical financial calculation, while each iShares[®] ETF is an actual investment portfolio. The performance of each iShares[®] ETF and its underlying 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 iShares[®] ETF’s portfolio and its underlying index resulting from legal restrictions (such as diversification requirements) that apply to the iShares[®] ETF but not to its underlying index or to the use of representative sampling. Because the EWZ Fund uses a representative sampling indexing strategy, it can be expected to have a greater tracking error than if it used a replication indexing strategy.

iShares[®] Trust and iShares[®], Inc. are registered investment companies that consist of numerous separate investment portfolios, including the iShares[®] ETFs. Information provided to or filed with the SEC by iShares[®] Trust and iShares[®], Inc. 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 333-92935 and 811-09729, respectively, for iShares[®] Trust, and SEC file numbers 033-97598 and 811-09102, respectively, for iShares[®], Inc., through the SEC’s website at <http://www.sec.gov>. For additional information regarding iShares[®] Trust, iShares[®], Inc., BFA and the iShares[®] ETFs, please see the iShares[®] ETFs’ prospectuses. In addition, information about iShares[®] Trust, iShares[®], Inc. and the iShares[®] ETFs 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. Information contained in the iShares[®] website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement

The iShares[®] MSCI Brazil Capped ETF

The iShares[®] MSCI Brazil Capped ETF (the “EWZ Fund”) seeks to track the investment results, before fees and expenses, of an index composed of Brazilian equities, which is currently the MSCI Brazil 25/50 Index. For more information about the MSCI 25/50 Brazil Index, please see “Equity Index Descriptions — The MSCI 25/50 Indices” in this underlying supplement. The EWZ Fund is an investment portfolio maintained and managed by iShares[®], Inc. The EWZ Fund trades under the ticker symbol “EWZ.”

The iShares[®] MSCI Canada ETF

The iShares[®] MSCI Canada ETF (the “EWC Fund”) seeks to track the investment results, before fees and expenses, of an index composed of Canadian equities, which is currently the MSCI Canada Index. For more information about the MSCI Canada Index, please see “Equity Index Descriptions — The MSCI

Indices” in this underlying supplement. The EWC Fund is an investment portfolio maintained and managed by iShares[®], Inc. The EWC Fund trades under the ticker symbol “EWC.”

The iShares[®] MSCI Emerging Markets ETF

The iShares[®] MSCI Emerging Markets ETF (the “EEM Fund”) seeks to track the investment results, before fees and expenses, of an index composed of large- and mid-cap emerging market equities, which is currently the MSCI Emerging Markets Index. For more information about the MSCI Emerging Markets Index, please see “Equity Index Descriptions — The MSCI Indices” in this underlying supplement. The EEM Fund is an investment portfolio maintained and managed by iShares[®], Inc. The EEM Fund trades under the ticker symbol “EEM.”

The iShares[®] MSCI EAFE ETF

The iShares[®] MSCI EAFE ETF (the “EFA Fund”) seeks to track the investment results, before fees and expenses, of an index composed of large- and mid-capitalization developed market equities, excluding the U.S. and Canada, which is currently the MSCI EAFE[®] Index. For more information about the MSCI EAFE[®] Index, please see “Equity Index Descriptions — The MSCI Indices” in this underlying supplement. The EFA Fund is an investment portfolio maintained and managed by iShares[®] Trust. The EFA Fund trades under the ticker symbol “EFA.”

The iShares[®] MSCI Japan ETF

The iShares[®] MSCI Japan ETF (the “EWJ Fund”) seeks to track the investment results, before fees and expenses, of an index composed of Japanese equities, which is currently the MSCI Japan Index. For more information about the MSCI Japan Index, please see “Equity Index Descriptions — The MSCI Indices” in this underlying supplement. The EWJ Fund is an investment portfolio maintained and managed by iShares[®], Inc. The EWJ Fund trades under the ticker symbol “EWJ.”

The iShares[®] MSCI Mexico Capped ETF

The iShares[®] MSCI Mexico Capped ETF (the “EWW Fund”) seeks to track the investment results, before fees and expenses, of an index composed of Mexican equities, which is currently the MSCI Mexico Investable Market (IMI) 25/50 Index. For more information about the MSCI Mexico IMI 25/50 Index, please see “Equity Index Descriptions — The MSCI 25/50 Indices” in this underlying supplement. The EWW Fund is an investment portfolio maintained and managed by iShares[®], Inc. The EWW Fund trades under the ticker symbol “EWW.”

The iShares[®] Russell 2000 ETF

The iShares[®] Russell 2000 ETF (the “IWM Fund”) seeks to track the investment results, before fees and expenses, of an index composed of small-capitalization U.S. equities, which is currently the Russell 2000[®] Index. For more information about the Russell 2000[®] Index, please see “Equity Index Descriptions — The Russell Indices” in this underlying supplement. The IWM Fund is an investment portfolio maintained and managed by iShares[®] Trust. The IWM Fund trades under the ticker symbol “IWM.”

The iShares[®] Russell 3000 ETF

The iShares[®] Russell 3000 ETF (the “IWK Fund”) seeks to track the investment results, before fees and expenses, of a broad-based index composed of U.S. equities, which is currently the Russell 3000[®] Index. For more information about the Russell 3000[®] Index, please see “Equity Index Descriptions — The Russell Indices” in this underlying supplement. The IWK Fund is an investment portfolio maintained and managed by iShares[®] Trust. The IWK Fund trades under the ticker symbol “IWK.”

The iShares[®] U.S. Real Estate ETF

The iShares[®] U.S. Real Estate ETF (the “IYR Fund”) seeks to track the investment results, before fees and expenses, of an index composed of U.S. equities in the real estate sector, which is currently the

Dow Jones U.S. Real Estate Index. For more information about the Dow Jones U.S. Real Estate Index, please see “— Dow Jones U.S. Real Estate Index” below. The IYR Fund is an investment portfolio maintained and managed by iShares® Trust. The IYR Fund trades under the ticker symbol “IYR.”

The Dow Jones U.S. Real Estate Index

All information contained in this underlying supplement regarding the Dow Jones U.S. Real Estate Index, including, without limitation, its make-up, method of calculation and changes in its components, has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, S&P Dow Jones Indices LLC (“S&P Dow Jones”). The Dow Jones U.S. Real Estate Index is calculated, maintained and published by S&P Dow Jones. S&P Dow Jones is under no obligation to continue to publish, and may discontinue publication of, the Dow Jones U.S. Real Estate Index.

Dow Jones U.S. Real Estate Index Composition and Maintenance

The Dow Jones U.S. Real Estate Index measures the performance of the real estate sector of the United States equity market. Component companies include those that invest directly or indirectly in real estate through development, investment or ownership; companies that provide services to real estate companies but do not own the properties themselves (agencies, brokers, leasing companies, management companies and advisory services); and real estate investment trusts or corporations (“REITs”) or listed property trusts (“LPTs”) that invest in office, industrial, retail, residential, specialty (e.g., health care), hotel, lodging and other properties or that are directly involved in lending money to real estate owners and operators or indirectly through the purchase or mortgages or mortgage-backed securities. REITs are passive investment vehicles that invest primarily in income producing real estate or real estate-related loans and interests.

The Dow Jones U.S. Real Estate Index is one of the 19 supersector indices that make up the Dow Jones U.S. Index. The Dow Jones U.S. Real Estate Index is a subset of the Dow Jones U.S. Financials Index, which in turn is a subset of the Dow Jones U.S. Index. The Dow Jones U.S. Index is part of the Dow Jones Global IndexSM family, which is a benchmark family that represents approximately 95% of the float-adjusted market capitalization of countries that are open to foreign investors. The Dow Jones Global IndexSM family represents 48 countries. The Dow Jones U.S. Real Estate Index is weighted by float-adjusted market capitalization, rather than full market capitalization, to reflect the actual number of shares available to investors.

To establish the investable universe, index component candidates are filtered through screens for share class and liquidity. For share class, index component candidates must be common shares or other securities that have the characteristics of common equities. All classes of common shares, both fully and partially paid, are eligible. Fixed-dividend shares and securities such as convertible notes, warrants, rights, mutual funds, unit investment trusts, closed-end fund shares, shares in limited partnerships and business development companies are not eligible. Temporary issues arising from corporate actions, such as “when-issued shares,” are considered on a case-by-case basis when necessary to maintain continuity in a company’s index membership. REITs, LPTs and similar real-property-owning pass-through structures taxed as REITs by their domiciles are also eligible. Multiple classes of shares are included if each issue, on its own merit, meets the other eligibility criteria. For liquidity, securities that have had ten or more non-trading days during the past quarter are excluded.

Stocks in the investable universe are sorted by float-adjusted market capitalization. Stocks in the top 95% of the index universe by float-adjusted market capitalization (as of December 1998) are selected as components of the Dow Jones U.S. Index, excluding stocks that fall within the bottom 1% of the universe by float-adjusted market capitalization (as currently measured) and within the bottom 0.01% of the universe by turnover (as currently measured).

Stocks selected as components of the Dow Jones U.S. Index are then classified into Subsectors based on their primary source of revenue. The Subsectors are rolled up into Sectors, which in turn are rolled up into Supersectors and finally into Industries. Subsectors, Sectors, Supersectors and Industries

are defined by a proprietary classification system used by S&P Dow Jones. The Dow Jones U.S. Real Estate Index is a Supersector that is a subset of the Dow Jones Financials Index.

The Dow Jones U.S. Real Estate Index is reviewed by S&P Dow Jones on a quarterly basis. Shares outstanding totals for component stocks are updated during the quarterly review. However, if the number of float-adjusted shares outstanding for an index component changes by more than 5% due to a corporate action, the shares total will be adjusted immediately after the close of trading on the date of the event. Whenever possible, S&P Dow Jones will announce the change at least two business days prior to its implementation. Changes in shares outstanding due to stock dividends, splits and other corporate actions also are adjusted immediately after the close of trading on the day they become effective. Quarterly reviews are implemented during March, June, September and December. Both component changes and share changes become effective at the opening on the first Monday after the third Friday of the review month. Changes to the Dow Jones U.S. Real Estate Index are implemented after the official closing values have been established. All adjustments are made before the start of the next trading day. Constituent changes that result from the periodic review will be announced on the second Friday of the third month of each quarter (e.g., March, June, September and December).

In addition to the scheduled quarterly review, the Dow Jones U.S. Real Estate Index is reviewed on an ongoing basis. Changes in index composition and related weight adjustments are necessary whenever there are extraordinary events such as delistings, bankruptcies, mergers or takeovers involving index components. In these cases, each event will be taken into account as soon as it is effective. Whenever possible, the changes in the index components will be announced at least two business days prior to their implementation date. In the event that a component no longer meets the eligibility requirements, it will be removed from the Dow Jones U.S. Real Estate Index.

THE MARKET VECTORS GOLD MINERS ETF

All information contained in this underlying supplement regarding the Market Vectors Gold Miners ETF (the “GDX Fund”) has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, Market Vectors ETF Trust and Van Eck Associates Corporation (“Van Eck”). The GDX Fund is an investment portfolio of the Market Vectors ETF Trust (the “Trust”). Van Eck is currently the investment adviser to the GDX Fund. The GDX Fund is an exchange-traded fund that trades on the NYSE Arca, Inc. (“NYSE Arca”) under the ticker symbol “GDX.”

Effective May 1, 2016, Van Eck Global and all of its businesses and investment offerings will operate under the single global brand “VanEck.” Accordingly, the Market Vectors ETF Trust will be renamed the “VanEck Vectors ETF Trust” and the Market Vectors Gold Miners ETF will be renamed the “VanEck Vectors Gold Miners ETF.”

The GDX Fund seeks to replicate as closely as possible, before fees and expenses, the price and yield performance of the NYSE Arca Gold Miners Index (the “Gold Miners Index”). For more information about the Gold Miners Index, please see “The NYSE Arca Gold Miners Index” below.

The GDX Fund uses a “passive” or indexing investment approach to attempt to approximate the investment performance of the Gold Miners Index. The GDX Fund will normally invest at least 80% of its total assets in companies that are involved in the gold mining industry. These companies may include small- and medium-capitalization companies and foreign issuers. The GDX Fund normally invests at least 80% of its total assets in securities that comprise the Gold Miners Index. The GDX Fund may or may not hold all of the securities that are included in the Gold Miners Index.

The Gold Miners Index is a theoretical financial calculation, while the GDX Fund is an actual investment portfolio. The performance of the GDX Fund and the Gold Miners Index may vary somewhat due to operating expenses, transaction costs, and differences between the GDX Fund’s portfolio and the Gold Miners Index resulting from legal restrictions that apply to the GDX Fund but not to the Gold Miners Index or lack of liquidity. Van Eck expects that, over time, the correlation between the GDX Fund’s performance and that of the Gold Miners Index before fees and expenses will be 95% or better. A figure of 100% would indicate perfect correlation.

The Trust is a registered investment company that consists of numerous separate investment portfolios, including the GDX Fund. Information provided to or filed with the SEC by the Trust 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 333-123257 and 811-10325, respectively, through the SEC’s website at <http://www.sec.gov>. For additional information regarding the Trust, Van Eck and the GDX Fund, please see the GDX Fund’s prospectus. In addition, information about the Trust and the GDX Fund may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the Van Eck website at www.vaneck.com. Information contained in the Van Eck website is not incorporated by reference in, and should not be considered a part of, this underlying supplement.

The NYSE Arca Gold Miners Index

All information contained in this underlying supplement regarding the Gold Miners Index, including, without limitation, its make-up, method of calculation and changes in its components, has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, the NYSE Arca. The Gold Miners Index was developed by the NYSE MKT LLC (formerly the American Stock Exchange) and is calculated, maintained and published by the NYSE Arca. The NYSE Arca has no obligation to continue to publish, and may discontinue the publication of, the Gold Miners Index.

The Gold Miners Index is reported by Bloomberg L.P. under the ticker symbol “GDM.”

The Gold Miners Index is a modified market capitalization weighted index composed of publicly traded companies involved primarily in the mining of gold or silver.

Eligibility Criteria for Index Components

The Gold Miners Index includes common stocks, American Depository Receipts (“ADRs”) and Global Depository Receipts (“GDRs”) of selected companies that are involved in mining for gold and silver and that are listed for trading on a major stock market that is accessible by foreign investors. Only companies with market capitalization greater than \$750 million that have an average daily trading volume of at least 50,000 shares over the past three months and an average daily value traded of at least \$1 million over the past three months are eligible for inclusion in the Gold Miners Index. For companies that were already in the Gold Miners Index prior to the September 20, 2013 rebalance, the market capitalization requirement is \$450 million, the average daily trading volume requirement is at least 30,000 shares over the past three months and the average daily value traded requirement is at least \$600,000 over the past three months. Further, the universe of companies eligible for inclusion in the Gold Miners Index will specifically include those companies that derive at least 50% of their revenues for gold mining and related activities. Companies already in the Gold Miners Index will be removed from the Gold Miners Index in the following quarterly review only if their gold mining revenues fall below the 40% level. The index will maintain an exposure, of not more than 20% of the Gold Miners Index weight, to companies with a significant revenue exposure to silver mining as well as gold mining. These are companies that either (1) have a revenue exposure to silver mining greater than 50% or (2) have a greater revenue exposure to silver mining than gold mining and have a combined gold/silver mining revenue exposure of greater than 50%.

In addition, both streaming companies and royalty companies are eligible for inclusion in the Gold Miners Index. Companies that have not yet commenced production are also eligible for inclusion in the Gold Miners Index, *provided* that they have tangible revenues that are related to the mining of either gold or silver ore. There are no restrictions imposed on the eligibility of company in how much the company has hedged in gold or silver production via futures, options or forward contracts.

Index Calculation

The Gold Miners Index is calculated using a modified market capitalization weighting methodology. The Gold Miners Index is weighted based on the market capitalization of each of the component securities, modified to conform to the following asset diversification requirements, which are applied in conjunction with the scheduled quarterly adjustments to the Gold Miners Index. The information utilized in this modification process will be taken from the close of trading on the second Friday of the rebalancing month:

- (1) the weight of any single component security may not account for more than 20% of the total value of the Gold Miners Index;
- (2) the component securities are split into two subgroups — (1) large and (2) small, which are ranked by their unadjusted market capitalization weight in the Gold Miners Index. Large stocks are defined as having a Gold Miners Index weight greater than or equal to 5%. Small securities are defined as having an Gold Miners Index weight below 5%; and
- (3) the final aggregate weight of those component securities which individually represent more than 4.5% of the total value of the Gold Miners Index may not account for more than 45% of the total Gold Miners Index value.

The Gold Miners Index is reviewed quarterly so that the Gold Miners Index components continue to represent the universe of companies involved in the gold mining industry. The NYSE Arca may at any time and from time to time change the number of securities composing the group by adding or deleting one or more securities, or replacing one or more securities contained in the group with one or more substitute securities of its choice, if in the NYSE Arca’s discretion such addition, deletion or substitution is necessary or appropriate to maintain the quality and/or character of the Gold Miners Index. Changes to

the Gold Miners Index compositions and/or the component share weights in the Gold Miners Index typically take effect after the close of trading on the third Friday of each calendar quarter month in connection with the quarterly index rebalance.

At the time of the quarterly rebalance, the quantities for the components stocks (taking into account expected component changes and share adjustments), are modified in accordance with the following procedures.

- **Diversification Rule 1:** If any component stock exceeds 20% of the total value of the Gold Miners Index, then all stocks greater than 20% of the Gold Miners Index are reduced to represent 20% of the value of the Gold Miners Index. The aggregate amount by which all component stocks are reduced is redistributed proportionately across the remaining stocks that represent less than 20% of the index value. After this redistribution, if any other stock then exceeds 20%, the stock is set to 20% of the index value and the redistribution is repeated. If there is no component stock over 20% of the total value of the Gold Miners Index, then Diversification Rule 1 is not executed.

- **Diversification Rule 2:** The components are sorted into two groups, (1) large components, with a starting index weight of 5% or greater, and (2) small components, with a weight of under 5% (after any adjustments for Diversification Rule 1). If there are no components that are classified as large components after Diversification Rule 1 is run, then Diversification Rule 2 is not executed. In addition, if the starting aggregate weight of the large components after Diversification Rule 1 is run is not greater than 45% of the starting index weight, then Diversification Rule 2 is not executed. If Diversification Rule 2 is executed, then the large group and the small group will represent 45% and 55%, respectively, of the final index weight. This will be adjusted for through the following process:

- The weight of each of the large stocks will be scaled down proportionately with a floor of 5% so that the aggregate weight of the large components will be reduced to represent 45% of the Gold Miners Index. If any component stock falls below a weight equal to the product of 5% and the proportion by which the stocks were scaled down following this distribution, then the weight of the stock is set equal to the product of 5% and the proportion by which the stocks were scaled down, the components with weights greater than 5% will be reduced proportionately.
- The weight of each of the small components will be scaled up proportionately from the redistribution of the large components. If any component stock exceeds a weight equal to the product of 4.5% and the proportion by which the stocks were scaled up following this distribution, then the weight of the stock is set equal to the product of 4.5% and the proportion by which the stocks were scaled up. The redistribution of weight to the remaining stocks is repeated until the entire amount has been redistributed.

Index Maintenance

The Gold Miners Index is reviewed quarterly to ensure that at least 90% of the index weight is accounted for by index components that continue to meet the initial eligibility requirements. Components will be removed from the Gold Miners Index during the quarterly review if either (1) the market capitalization falls below \$450 million or (2) the average daily volume traded for the previous three months was lower than 30,000 shares and the average daily value traded for the previous three months was lower than \$600,000. In conjunction with the quarterly review, the share quantities used in the calculation of the Gold Miners Index are determined based upon current shares outstanding modified, if necessary, to provide greater index diversification, as described above. An ADR or GDR ratio would be incorporated into this shares figure so that the shares utilized in the Gold Miners Index for a depository receipt is equal to the shares outstanding of the local share class multiplied by the depository receipt ratio. The index components and their share quantities are determined and announced prior to taking effect. The share quantity of each component stock in the index portfolio remains fixed between quarterly reviews except in the event of certain types of corporate actions, such as stock splits, reverse stock splits, stock dividends or similar events. The share quantities used in the index calculation are not typically adjusted for shares issued or repurchased between quarterly reviews. However, in the event of a merger

between two components, the share quantity of the surviving entity may be adjusted to account for any stock issued in the acquisition. The NYSE Arca may substitute stocks or change the number of stocks included in the Gold Miners Index based on changing conditions in the industry or in the event of certain types of corporate actions, including mergers, acquisitions, spin-offs, and reorganizations. In the event of component or share quantity changes to the index portfolio, the payment of dividends other than ordinary cash dividends, spin-offs, rights offerings, re-capitalization or other corporate actions affecting a component stock of the Gold Miners Index, the index divisor may be adjusted to ensure that there are no changes to the index level as a result of non-market forces.

THE SELECT SECTOR SPDR[®] FUNDS

All information contained in this underlying supplement regarding the Select Sector SPDR[®] Funds set forth in the table below (each, a “Select Sector SPDR[®] Fund” and collectively, the “Select Sector SPDR[®] Funds”) has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by the Select Sector SPDR[®] Trust (the “Select Sector Trust”) and SSGA Funds Management, Inc. (“SSGA FM”). Each Select Sector SPDR[®] Fund is an investment portfolio managed by SSGA FM, the investment adviser to the Select Sector SPDR[®] Funds. Each Select Sector SPDR[®] Fund is an exchange-traded fund (“ETF”) that trades on the NYSE Arca, Inc. (“NYSE Arca”) under the ticker symbol set forth in the table below.

The investment objective of each Select Sector SPDR[®] Fund is to provide investment results that, before expenses, correspond generally to the price and yield performance of publicly traded equities securities of companies included in a Select Sector Index, as specified in the table below. The companies included in each Select Sector Index are selected on the basis of general industry classifications from a universe of companies defined by the S&P 500[®] Index. The Select Sector Indices upon which the Select Sector SPDR[®] Funds are based together comprise all of the companies in the S&P 500[®] Index. For more information about the Select Sector Indices, please see “Equity Index Descriptions — The S&P Select Sector Indices” in this underlying supplement.

Select Sector SPDR [®] Fund	Ticker	Select Sector Index
Consumer Discretionary Select Sector SPDR [®] Fund	XLY	Consumer Discretionary Select Sector Index
Consumer Staples Select Sector SPDR [®] Fund	XLP	Consumer Staples Select Sector Index
Energy Select Sector SPDR [®] Fund	XLE	Energy Select Sector Index
Financial Select Sector SPDR [®] Fund	XLF	Financial Select Sector Index
Financial Services Select Sector SPDR [®] Fund	XLFS	Financial Services Select Sector Index
Health Care Select Sector SPDR [®] Fund	XLV	Health Care Select Sector Index
Industrial Select Sector SPDR [®] Fund	XLI	Industrial Select Sector Index
Materials Select Sector SPDR [®] Fund	XLB	Materials Select Sector Index
Real Estate Select Sector SDPR [®] Fund	XLRE	Real Estate Select Sector Index
Technology Select Sector SPDR [®] Fund	XLK	Technology Select Sector Index
Utilities Select Sector SPDR [®] Fund	XLU	Utilities Select Sector Index

Each Select Sector SPDR[®] Fund employs a replication strategy in seeking to track the performance of the relevant Select Sector Index. This means that the Select Sector SPDR[®] Fund typically invests in substantially all of the securities represented in the relevant Select Sector Index in approximately the same proportions as that Select Sector Index. There may, however, be instances where SSGA FM intends to employ a sampling strategy in managing the Select Sector SPDR[®] Funds. Sampling means that SSGA FM will use quantitative analysis to select securities, including securities in the relevant index, outside of the relevant index and derivatives that have a similar investment profile as the relevant index in terms of key risk factors, performance attributes and other economic characteristics. These include industry weightings, market capitalization and other financial characteristics of securities.

While SSGA FM seeks to track the performance of the relevant Select Sector Index as closely as possible (*i.e.*, achieve a high degree of correlation with the relevant Select Sector Index), each Select Sector SPDR[®] Fund’s return may not match or achieve a high degree of correlation with the return of the relevant Select Sector Index due to operating expenses, transaction costs, cash flows, regulatory requirements and operational inefficiencies. For example, it may take several business days for additions and deletions to the relevant Select Sector Index to be reflected in the portfolio composition of the Select Sector SPDR[®] Fund.

The Select Sector Trust is a registered investment company that consists of a separate investment portfolio for each of the Select Sector SPDR[®] Funds. Information provided to or filed with the SEC by the Select Sector Trust 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 333-57791 and 811-08837, respectively, through the SEC's website at <http://www.sec.gov>. For additional information regarding the Select Sector Trust or the Select Sector SPDR[®] Funds, please see the Select Sector SPDR[®] Funds' prospectus. In addition, information about the Select Sector Trust, SSGA FM and the Select Sector SPDR[®] Funds may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the Select Sector Trust website at <http://www.sectorspdrs.com>. Information contained in the Select Sector Trust website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

THE SPDR[®] EURO STOXX 50[®] ETF

All information contained in this underlying supplement regarding the SPDR[®] EURO STOXX 50[®] ETF (the “FEZ Fund”) has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, SSGA Funds Management, Inc. (“SSGA FM”), the investment advisor for the FEZ Fund. The FEZ Fund is an investment portfolio maintained and managed by SSGA FM. The FEZ Fund is an exchange-traded fund that trades on the NYSE Arca, Inc. under the ticker symbol “FEZ.”

The FEZ Fund’s objective is to provide investment results that, before fees and expenses, correspond generally to the total return performance of the EURO STOXX 50[®] Index. For more information about the EURO STOXX 50[®] Index, please see “Equity Index Descriptions — The EURO STOXX 50[®] Index” in this underlying supplement.

The FEZ Fund employs a sampling strategy, which means that the FEZ Fund is not required to purchase all of the securities represented in the EURO STOXX 50[®] Index. Instead, the FEZ Fund may purchase a subset of the securities in the EURO STOXX 50[®] Index in an effort to hold a portfolio of securities with generally the same risk and return characteristics of the EURO STOXX 50[®] Index.

The EURO STOXX 50[®] Index is a theoretical financial calculation, while the FEZ Fund is an actual investment portfolio. The FEZ Fund seeks to track the performance of the EURO STOXX 50[®] Index as closely as possible (*i.e.*, achieve a high degree of correlation with the EURO STOXX 50[®] Index). However, the performance of the FEZ Fund and the EURO STOXX 50[®] Index will vary somewhat due to operating expenses, transaction costs, cash flows, regulatory requirements and operational inefficiencies.

SPDR[®] Index Shares Funds is a registered investment company that consists of numerous separate investment portfolios, including the FEZ Fund. Information provided to or filed with the SEC by the FEZ Fund 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 333-92106 and 811-21145, respectively, through the SEC’s website at <http://www.sec.gov>. For additional information regarding the FEZ Fund and SSGA FM, please see the FEZ Fund’s prospectus. In addition, information about the FEZ Fund and SSGA FM may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the FEZ Fund website at <https://www.spdrs.com/product/fund.seam?ticker=FEZ>. Information contained in the FEZ Fund’s website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

THE SPDR[®] GOLD TRUST

All information contained in this underlying supplement regarding the SPDR[®] Gold Trust (the “Gold Trust”), has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, the Gold Trust and World Gold Trust Services, LLC (“World Gold”), the sponsor of the Gold Trust. BNY Mellon Asset Servicing, a division of The Bank of New York Mellon, is the trustee of the Gold Trust, and HSBC Bank plc is the custodian of the Gold Trust. The Gold Trust is an investment trust. The Gold Trust trades under the ticker symbol “GLD” on the NYSE Arca, Inc.

The investment objective of the Gold Trust is to reflect the performance of the price of gold bullion, less the Gold Trust’s expenses. The Gold Trust holds gold bars. The Gold Trust issues shares in exchange for deposits of gold and distributes gold in connection with the redemption of shares. The shares of the Gold Trust are intended to offer investors an opportunity to participate in the gold market through an investment in securities. The ownership of the shares of the Gold Trust is intended to overcome certain barriers to entry in the gold market, such as the logistics of buying, storing and insuring gold.

The shares of the Gold Trust represent units of fractional undivided beneficial interest in and ownership of the Gold Trust, the primary asset of which is allocated (or secured) gold. The Gold Trust is not managed like a corporation or an active investment vehicle. The gold held by the Gold Trust will be sold only: (1) on an as-needed basis to pay the Gold Trust’s expenses, (2) in the event the Gold Trust terminates and liquidates its assets or (3) as otherwise required by law or regulation. Effective July 17, 2015, the Gold Trust’s only recurring fixed expense is World Gold’s fee which accrues daily at an annual rate equal to 0.40% of the daily net asset value of the Gold Trust, in exchange for World Gold assuming the responsibility to pay all ordinary fees and expenses of the Gold Trust.

Information provided to or filed with the Securities and Exchange Commission (the “SEC”) by the Gold Trust pursuant to the Securities Act of 1933, as amended, and the Securities Exchange Act of 1934, as amended, can be located by reference to SEC file numbers 333-153150 and 001-32356, respectively, through the SEC’s website at <http://www.sec.gov>. The Gold Trust is not a mutual fund or any other type of investment company within the meaning of the Investment Company Act of 1940, as amended, and is not subject to regulation thereunder. For additional information regarding the Gold Trust, please see the Gold Trust’s prospectus. In addition, information about the Gold Trust may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the public website of the Gold Trust maintained by the sponsor at <http://www.spdrgoldshares.com>. Information contained in the SPDR[®] Gold Trust website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

Gold

The price of gold is primarily affected by the global demand for and supply of gold. The market for gold bullion is global, and gold prices are subject to volatile price movements over short periods of time and are affected by numerous factors, including macroeconomic factors such as the structure of and confidence in the global monetary system, expectations regarding the future rate of inflation, the relative strength of, and confidence in, the U.S. dollar (the currency in which the price of gold is usually quoted), interest rates, gold borrowing and lending rates and global or regional economic, financial, political, regulatory, judicial or other events. Gold prices may be affected by industry factors such as industrial and jewelry demand as well as lending, sales and purchases of gold by the official sector, including central banks and other governmental agencies and multilateral institutions that hold gold. Additionally, gold prices may be affected by levels of gold production, production costs and short-term changes in supply and demand due to trading activities in the gold market. From time to time, above-ground inventories of gold may also influence the market. It is not possible to predict the aggregate effect of all or any combination of these factors. The price of gold has recently been, and may continue to be, extremely volatile.

THE SPDR[®] S&P 500[®] ETF TRUST

All information contained in this underlying supplement regarding the SPDR[®] S&P 500[®] ETF Trust (the “SPY Fund”) has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, State Street Bank and Trust Company (“SSBTC”), as trustee of the SPY Fund, and PDR Services LLC (“PDRS”), as sponsor of the SPY Fund. The SPY Fund is a unit investment trust that issues securities called “Units.” The SPY Fund trades on the NYSE Arca, Inc. under the ticker symbol “SPY.”

The SPY Fund’s objective is to provide investment results that, before expenses, correspond generally to the price and yield performance of the S&P 500[®] Index. For more information about the S&P 500[®] Index, please see “Equity Index Descriptions — S&P U.S. Indices” in this underlying supplement. The Trust holds only component stocks of the S&P 500[®] Index and cash and is not actively managed by traditional methods, which typically seek to outperform a benchmark index. To maintain the correspondence between the composition and weightings of the stocks held by the SPY Fund and the component stocks of the S&P 500[®] Index, SSBTC adjusts the holdings of the SPY Fund from time to time to conform to periodic changes in the identity and/or relative weightings of the component stocks. SSBTC aggregates certain of these adjustments and makes changes to the holdings of the SPY Fund at least monthly or more frequently in the case of significant changes to the S&P 500[®] Index.

The return of the SPY Fund may not match or achieve a high degree of correlation with the return of the S&P 500[®] Index because the total return generated by the SPY Fund’s portfolio of stocks and cash is reduced by the expenses of the SPY Fund and transaction costs incurred in adjusting the SPY Fund’s portfolio. In addition, it is possible that the SPY Fund may not always fully replicate the performance of the S&P 500[®] Index due to the unavailability of certain Index Securities in the secondary market or due to other extraordinary circumstances.

The SPY Fund is an investment company registered under the Investment Company Act of 1940, as amended. Units represent an undivided ownership interest in a portfolio of all, or substantially all, of the common stocks of the S&P 500[®] Index. Information provided to or filed with the SEC by the SPY Fund 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 033-46080 and 811-06125, respectively, through the SEC’s website at <http://www.sec.gov>. For additional information regarding the SPY Fund, SSBTC and PDRS, please see the SPY Fund’s prospectus. In addition, information about the SPY Fund, SSBTC and PDRS may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the SPY Fund website at <https://www.spdrs.com>. Information contained in the SPY Fund’s website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

THE SPDR[®] S&P[®] INDUSTRY ETFS

All information contained in this underlying supplement regarding the SPDR[®] S&P[®] Industry ETFs set forth in the table below (each, a “SPDR[®] S&P[®] Industry ETF” and collectively, the “SPDR[®] S&P[®] Industry ETFs”) has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, SPDR[®] Series Trust and SSGA Funds Management, Inc. (“SSGA FM”). Each SPDR[®] S&P[®] Industry ETF is an investment portfolio maintained and managed by SSGA FM, the investment adviser to the SPDR[®] S&P[®] Industry ETFs. Each SPDR[®] S&P[®] Industry ETF is an exchange-traded fund that trades on the NYSE Arca, Inc. under the ticker symbol set forth in the table below.

The SPDR[®] Series Trust is a registered investment company that consists of a separate investment portfolio for each SPDR[®] S&P[®] Industry ETF. Each SPDR[®] S&P[®] Industry ETF is an index fund that invests in a particular industry or group of industries represented by a S&P Select Industry as specified in the table below. The companies included in each Select Industry Index are selected on the basis of Global Industry Classification Standards and liquidity and market capitalization requirements from a universe of companies defined by the S&P[®] Total Market Index, a U.S. total market composite index. The investment objective of each Select Industry SPDR[®] Fund is to provide investment results that, before expenses, correspond generally to the total return performance of an index derived from a particular industry or group of industries, as represented by a specified Select Industry Index. For more information about the Select Industry Indices, please see “Equity Index Descriptions — The S&P Select Industry Indices” in this underlying supplement.

SPDR [®] S&P [®] Industry ETF	Ticker	Select Industry Index
SPDR [®] S&P [®] Homebuilders ETF	XHB	S&P [®] Homebuilders Select Industry™ Index
SPDR [®] S&P [®] Metals & Mining ETF	XME	S&P [®] Metals & Mining Select Industry™ Index
SPDR [®] S&P [®] Oil & Gas Exploration & Production ETF	XOP	S&P [®] Oil & Gas Exploration & Production Select Industry™ Index
SPDR [®] S&P [®] Regional Banking ETF	KRE	S&P [®] Regional Banks Select Industry™ Index

In seeking to track the performance of the relevant Select Industry Index, each SPDR[®] S&P[®] Industry ETF employs a “sampling” strategy, which means that the SPDR[®] S&P[®] Industry ETF is not required to purchase all of the securities represented in the relevant Select Industry Index. Instead, each SPDR[®] S&P[®] Industry ETF may purchase a subset of the securities in the relevant Select Industry Index in an effort to hold a portfolio of securities with generally the same risk and return characteristics of the relevant Select Industry Index. The quantity of holdings in each SPDR[®] S&P[®] Industry ETF will be based on a number of factors, including asset size of that SPDR[®] S&P[®] Industry ETF. Based on its analysis of these factors, SSGA FM may invest each SPDR[®] S&P[®] Industry ETF’s assets in a subset of securities in the relevant Select Industry Index or may invest that SPDR[®] S&P[®] Industry ETF’s assets in substantially all of the securities represented in the relevant Select Industry Index in approximately the same proportions as the relevant Select Industry Index.

The Select Industry Indices are theoretical financial calculations, while the SPDR[®] S&P[®] Industry ETFs are actual investment portfolios. Each SPDR[®] S&P[®] Industry ETF seeks to track the performance of its respective Select Industry Index as closely as possible (*i.e.*, achieve a high degree of correlation with the Select Industry Index). However, the performance of each SPDR[®] S&P[®] Industry ETFs and its respective Select Industry Index will vary somewhat due to operating expenses, transaction costs, cash flows, regulatory requirements and operational inefficiencies.

Information provided to or filed with the SEC by the SPDR[®] Series Trust 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 333-57793 and 811-08839, respectively, through the SEC’s website at <http://www.sec.gov>. For additional information regarding the SPDR[®] Series Trust, SSGA FM or the SPDR[®] S&P[®] Industry ETFs, please see the SPDR[®] Series Trust’s prospectus. In addition, information

about the SPDR[®] Series Trust, SSGA FM and the SPDR[®] S&P[®] Industry ETFs may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the SPDR[®] Series Trust website at <https://www.spdrs.com>. Information contained in the SPDR[®] Series Trust website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

THE UNITED STATES OIL FUND, LP

All information contained in this underlying supplement regarding the United States Oil Fund, LP (the "Oil Fund") has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, United States Commodity Funds LLC (the "general partner of the Oil Fund"). The units of the Oil Fund trade on the NYSE Arca, Inc. ("NYSE Arca") under the ticker symbol "USO."

The Oil Fund, a Delaware limited partnership, is a commodity pool that continuously issues common shares of beneficial interest that may be purchased and sold on the NYSE Arca. The general partner of the Oil Fund is a Delaware limited liability company. The general partner of the Oil Fund is registered as a commodity pool operator with the Commodity Futures Trading Commission and is a member of the National Futures Association. The general partner of the Oil Fund is also the investment adviser to the Oil Fund.

The investment objective of the Oil Fund is for the daily changes in percentage terms of the net asset value of the shares of the Oil Fund to reflect the changes in percentage terms of the spot price of light, sweet crude oil delivered to Cushing, Oklahoma as measured by the daily changes in the price of a specified short-term futures contract on light, sweet crude oil traded on the New York Mercantile Exchange (the "benchmark oil futures contract") that is the near month contract to expire, except when the near month contract is within two weeks of expiration, in which case it will be measured by the futures contract that is the next month contract to expire. The Oil Fund seeks to achieve its investment objective by investing primarily in futures contracts for light, sweet crude oil and other types of crude oil, diesel-heating oil, gasoline, natural gas and other petroleum-based fuels that are traded on the New York Mercantile Exchange, ICE Futures Exchange or other U.S. and foreign exchanges (collectively, "oil futures contracts") and other oil-related investments such as cash-settled options on Oil Futures Contracts, forward contracts for oil, cleared swap contracts and over-the-counter transactions that are based on the price of crude oil, heating oil, gasoline, natural gas and other petroleum-based fuels, oil futures contracts and indices based on the foregoing (collectively, "other oil interests"). Specifically, the Oil Fund seeks to achieve its investment objective by investing so that the average daily percentage change in its net asset value for any period of 30 successive valuation days will be within plus/minus ten percent (10%) of the average daily percentage change in the price of the benchmark oil futures contracts over the same period.

Information provided to or filed with the SEC by the Oil Fund pursuant to the Securities Act of 1933, as amended, and the Securities Exchange Act of 1934, as amended, can be located by reference to SEC file numbers 333-153310 and 001-32834, respectively, through the SEC's website at <http://www.sec.gov>. The Oil Fund is not a mutual fund or any other type of investment company within the meaning of the Investment Company Act of 1940, as amended, and is not subject to regulation thereunder. For additional information regarding the Oil Fund and United States Commodity Funds LLC, please see the Oil Fund's prospectus. In addition, information about the Oil Fund may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the Oil Fund website at www.unitedstatesoilfund.com. Information contained in the Oil Fund website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

THE VANGUARD FTSE EMERGING MARKETS ETF

All information contained in this underlying supplement regarding the Vanguard FTSE Emerging Markets ETF has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, Vanguard International Equity Index Funds (the “Vanguard Investment Trust”) and The Vanguard Group, Inc. (“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, Inc. under the ticker symbol “VWO.”

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. The benchmark index is currently the FTSE Emerging Markets All Cap China A Transition Index (the “Interim Emerging Markets Index”). After a transition period of approximately 12 months that began on November 2, 2015, the Vanguard FTSE Emerging Markets ETF will track the performance of the FTSE Emerging Markets All Cap China A Inclusion Index (the “Target Emerging Markets Index”).

Prior to November 2, 2015, the Vanguard FTSE Emerging Markets ETF sought to track the performance of the FTSE Emerging Index, a market-capitalization weighted index representing the performance of large- and mid-cap companies in emerging markets. On November 2, 2015, the Vanguard FTSE Emerging Markets ETF ceased tracking the FTSE Emerging Index and began tracking the Interim Emerging Markets Index. Over a period of approximately 12 months, through gradually increasing exposure to small-capitalization stocks and China A-Shares to the FTSE Emerging Index, the Interim Emerging Markets Index will eventually replicate the Target Emerging Markets Index. China A-shares, which are securities of Chinese-incorporated companies that are quoted in Renminbi, can be traded only either by residents of the People’s Republic of China or under the qualified foreign institutional investor (“QFII”) rules and stock connect schemes. Following the transition period during which the Vanguard FTSE Emerging Markets ETF tracks the Interim Emerging Markets Index, the Vanguard FTSE Emerging Markets ETF will begin to track the Target Emerging Markets Index, which will be quota-adjusted by FTSE to take into account the quota amount allocated to foreign investors by the Chinese regulator. For more information about the Interim Emerging Markets Index and the Target Emerging Markets Index, see “— The FTSE Emerging Markets All Cap China A Transition Index” and “— The FTSE Emerging Markets All Cap China A Index” below.

During both the transition and final benchmark phases, the Vanguard FTSE Emerging Markets ETF will employ an indexing investment approach by investing substantially all (approximately 95%) of its assets in the common stocks included in the Interim Emerging Markets Index or Target Emerging Markets Index, as applicable, 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 Interim Emerging Markets Index or the Target Emerging Markets Index, as applicable.

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 underlying supplement or the relevant terms supplement.

The FTSE Emerging Markets All Cap China A Transition Index

All information in this underlying supplement regarding the Interim Emerging Markets Index including, without limitation, its make-up, method of calculation and changes in its components, has been derived from publicly available information, without independent verification. This 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 Interim Emerging Markets Index.

The Interim Emerging Markets Index is a market-capitalization weighted index representing the performance of large, mid and small-cap companies in emerging markets. The Interim Emerging Markets Index is composed of approximately 3,500 securities from 21 different countries.

The Interim Emerging Markets Index applies the same methodology as the FTSE Emerging Index, except that the Interim Emerging Markets Index includes small-capitalization stocks and China A-shares at a weighting equivalent to the aggregate QFII and/or Renminbi QFII (“RQFII”) approved quota for international investors. Over a period of approximately 12 months, through gradually increasing exposure to small-capitalization stocks and China A-Shares to the FTSE Emerging Index, the Interim Emerging Markets Index will eventually replicate the Target Emerging Markets Index. The China A-shares weighting will increase as total QFII and RQFII allocations increase. A built-in mechanism ensures that the allocation of China A-shares is adjusted proportional to the changes in the approved quota and is in line with the accessibility available to international investors. For more information about the FTSE Emerging Index, see “The FTSE Emerging Index” below.

The FTSE Emerging Markets All Cap China A Inclusion Index

All information in this underlying supplement regarding the Target Emerging Markets Index including, without limitation, its make-up, method of calculation and changes in its components, has been derived from publicly available information, without independent verification. This 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 Target Emerging Markets Index.

The Target Emerging Markets Index is a market-capitalization weighted index representing the performance of large-, mid- and small-cap companies in emerging markets. The Target Emerging Markets Index was launched on June 5, 2015, with a base date of December 31, 2005 and a base value of 1,000. The Target Emerging Markets Index will be composed of approximately 3,350 securities from 22 different countries.

The Target Emerging Markets Index will apply the same methodology as the Interim Emerging Markets Index.

The FTSE Emerging Index

All information in this underlying supplement regarding the FTSE Emerging Index including, without limitation, its make-up, method of calculation and changes in its components, has been derived from publicly available information, without independent verification. This 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 Emerging Index.

The FTSE Emerging Index is included in the FTSE Global Equity Index Series (each, a “FTSE GEIS Index” and together, the “FTSE GEIS Indices”). The FTSE Global Equity Index Series covers securities in 46 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 is the aggregate of the Advanced and Secondary Emerging segments of the FTSE Global Equity Index Series universe.

Country Inclusion Criteria

FTSE classifies countries included in its global indices into one of three categories: Developed, Advanced Emerging and Secondary Emerging. FTSE maintains a set of criteria to assess market status and minimum standards for each category for countries and markets to achieve in order to be eligible for that category. The minimum standards increase from Secondary Emerging to Advanced Emerging and from Advanced Emerging to Developed. A country will be classified under the category with the highest standards that it meets. FTSE conducts an annual review of all countries included in its global indices and those being considered for inclusion. A country's classification as Developed, Advanced Emerging or Secondary Emerging is dependent on the following criteria:

- Market and regulatory environment: formal stock market regulatory authorities actively monitor the market; fair and non-prejudicial treatment of minority shareholders; non or selective incidence of foreign ownership restrictions; no objection to or significant restrictions or penalties applied to the investment of capital or the repatriation of capital and income; free and well-developed equity market; free and well-developed foreign exchange market; no or simple registration process for foreign investors.
- Custody and settlement: rare incidence of failed trades in settlement; sufficient competition to ensure high quality custodian services; clearing and settlement times, stock lending is permitted; free delivery available for settlement; omnibus account facilities available to international investors.
- Dealing landscape: sufficient competition to ensure high-quality broker services; sufficient broad market liquidity to support sizeable global investment; implicit and explicit costs to be reasonable and competitive; off-exchange transactions permitted; efficient trading mechanism; market depth information/visibility and timely trade reporting process.

Once a country has met the required standards, it will be eligible for inclusion in the FTSE Global Equity Index Series. However, for a country index to be constructed and included in the FTSE Global Equity Index Series, it must have a minimum of 3 companies that pass the securities eligibility criteria and screens. 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 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.

FTSE conducts an annual review of all countries included in its global indices and those being considered for possible inclusion. Countries already in the indices will be assessed against the minimum standards for each category and prior to any reclassification or removal from the index will be placed on a watch-list. Countries not in the index will be assessed against the minimum standards for each category and, if appropriate, will be added to the watch list for possible future inclusion to one of the categories. In conducting the annual review, FTSE will consult the FTSE Country Classification Advisory Committee. In March and September of each year, FTSE will publish a watch list of countries being monitored for possible promotion or demotion. FTSE releases the results of its annual review in September of each year. FTSE will normally give at least six months' notice before changing the classification of any country. Countries may be added to the indices at any time after a prior announcement. New regional indices may be added at any time after a prior announcement. Companies in the newly added countries will be reviewed in line with the relevant semi-annual regional review and any changes implemented after a prior announcement.

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 recognized 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. Shares that have been listed but do not form part of a company's current issued share capital, such as treasury shares and shares pending issuance to an employee scheme, will be excluded from the full market capitalization calculation.

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 \$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 U.S. dollars. The \$2 billion threshold may be adjusted annually in December, by the FTSE Russell 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 Emerging Index may consist of individual securities denominated in a range of currencies, necessitating the conversion of stock prices to a common currency using the following formula:

$$CI_{j,t}^{\$} = \frac{\sum_{i=1}^n p_{i,t} \times s_{i,t} \times f_{i,t} \times e_{i,t}^{\$}}{Divisor_{j,t}^{\$}} \quad i \in j$$

Where

$CI_{j,t}^{\$}$ is the U.S. dollar capital index of country j on day t

n is the number of index constituents

$p_{i,t}$ is the price of stock i in local currency on day t

$s_{i,t}$ is the shares in issue of stock i on day t

$f_{i,t}$ is the free float percentage of ordinary shares in issue of stock i on day t

$e_{i,t}^{\$}$ is the exchange rate to U.S. dollar of stock i on day 1

The currency effect is removed by holding exchange rates constant at the previous day's level using the following formula:

$$Divisor_{j,t}^L = \sum_{i=1}^n p_{i,t}^* \times s_{i,t} \times f_{i,t} \times e_{i,t-1}^L \quad i \in j$$

Where

$p_{i,t}^*$: is the price of stock i on day t-1 adjusted for corporate actions effective on day t

The U.S. dollar index may also be derived as:

$$CI_{j,t}^{\$} = CI_{j,t}^x \times e_{x,t=0}^{\$} / e_{x,t}^{\$}$$

Where $CI_{j,t}^x$ is country index j expressed in another currency (x) and $e_{x,t=0}^{\$}$ is the currency x to U.S. dollar exchange rate on the index base date. Note the exchange rate is expressed in units of x per dollar. Similarly, a pound sterling index may be derived as:

$$CI_{j,t}^{\pounds} = CI_{j,t}^x \times e_{x,t=0}^{\pounds} / e_{x,t}^{\pounds}$$

or

$$CI_{j,t}^{\pounds} = CI_{j,t}^{\$} \times e_{\$,t=0}^{\pounds} / e_{\$,t}^{\pounds}$$

Where $e_{\$,t}^{\pounds}$ is the number of U.S. dollars per pound sterling at time t.

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 lock-in 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. If a company changes its foreign ownership restriction, the change will be implemented at the subsequent quarterly review

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 they pass index eligibility screens in their own right and 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 monthly median of daily trading volume. For each month, the daily trade total for each security is calculated as a percentage of the shares in issue for that day adjusted by the free float at the review cutoff date. These daily values are then ranked in descending order and the median is taken by selecting the value for 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 trading volume for that month.

- A non-constituent that 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 that does not turnover at least 0.04% of its outstanding shares (after the application of any free float weightings) based on its median daily trading volume per month for at least eight of the twelve months prior to a full market review will be removed.
- New issues that 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 trading volume each month, on a pro-rata basis since their listing, unless added under fast entry rule provisions.
- In the event that a company fails the liquidity 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 time zone in which 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 Russell Regional Equity Advisory Committees, 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. Non-negotiable shares are included in the calculation of the full market capitalization for Chinese companies. 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 a FTSE Index:

- 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 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. Individual securities will be tested against the relevant regional levels.

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 Entry Rule

Non-constituent securities may be added to a FTSE Index in between semiannual review dates if it meets either of the following:

- Large Cap inclusion level: Full market capitalization of the smallest company that falls wholly within the top 68% of the Index Universe by full market capitalization of the respective region when ranked according to the procedure outline above under “— Periodic Review of Index Constituents.”
- Mid Cap inclusion level: Full market capitalization of the smallest company that falls wholly within the top 86% of the Index Universe by full market capitalization of the respective region when ranked according to the procedure outline above under “— Periodic Review of Index Constituents.” Shares being offered as a greenshoe (over allotment option) will be excluded from the investable market capitalization calculation.

For a security to be considered for fast entry, it will have to meet both a full market capitalization threshold at company level and an investable market capitalization threshold at security level. The full market capitalization threshold is defined as 1.5 times the Mid Cap inclusion level above. For example, if the 86% Mid Cap inclusion level is \$10 billion, the full market capitalization fast entry threshold at company level will be \$10 billion multiplied by 1.5, which is \$15 billion. The investable market capitalization threshold is defined as 0.5 times the Mid Cap inclusion level. For example, if the 86% Mid Cap inclusion level is \$10 billion, the investable market capitalization fast entry threshold at security level will be \$10 billion multiplied by 0.5, which is \$5 billion.

Where a security passes both the full market capitalization and investable market capitalization test, it will be assigned to the Large Cap index subject to its full market capitalization breaching the Large Cap inclusion level above, otherwise it will be assigned to the Mid Cap index.

The fast entry level thresholds for each region will be set at the time of the semiannual review in March and September and will be published by FTSE Russell. In June and December the fast entry levels thresholds will be adjusted up to 11 May or 11 November (previous trading day's data will be taken if any of these dates are on a non-trading day), as appropriate, to reflect the performance of the region in the FTSE Global Equity Index Series as a whole, and an updated figure will be published by FTSE Russell.

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.

THE VANGUARD TOTAL STOCK MARKET ETF

All information contained in this underlying supplement regarding the Vanguard Total Stock Market ETF has been derived from publicly available information, without independent verification. This 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 Total Stock Market ETF is an investment portfolio of the Vanguard Trust. Vanguard is the investment adviser to the Vanguard Total Stock Market ETF. The Vanguard Total Stock Market ETF is an exchange-traded fund that trades on the NYSE Arca, Inc. (“NYSE Arca”) under the ticker symbol “VTI.”

The Vanguard Total Stock Market ETF seeks to track the performance of a benchmark index that measures the investment return of the overall stock market, which is currently the CRSP U.S. Total Market Index. For more information about the CRSP U.S. Total Market Index, please see “The CRSP U.S. Total Market Index” below.

The Vanguard Total Stock Market ETF employs an indexing investment approach designed to track the performance of the CRSP U.S. Total Market Index. The Vanguard Total Stock Market ETF uses the sampling method of indexing, meaning that it holds a broadly diversified collection of securities that, in the aggregate, approximates the full CRSP U.S. Total Market Index in terms of key characteristics. These key characteristics include industry weightings and market capitalization, as well as certain financial measures, such as price/earnings ratio and dividend yield.

The Vanguard Total Stock Market ETF may invest in foreign securities to the extent necessary to carry out its investment strategy of holding a representative sample of the stocks that make up the CRSP U.S. Total Market Index. It is not expected that any Vanguard Total Stock Market ETF will invest more than 5% of its assets in foreign securities. To track the CRSP U.S. Total Market Index as closely as possible, the Vanguard Total Stock Market ETF attempts to remain fully invested in stocks. To help stay fully invested and to reduce transaction costs, the Vanguard Total Stock Market ETF may invest, to a limited extent, in derivatives, including stock futures. The Vanguard Total Stock Market 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 Total Stock Market ETF will not use derivatives for speculation or for the purpose of leveraging (magnifying) investment returns. The Vanguard Total Stock Market ETF’s daily cash balance may be invested in one or more money-market funds sponsored by Vanguard. The Vanguard Total Stock Market ETF may temporarily depart from its normal investment policies and strategies when the advisor believes that doing so is in the Vanguard Total Stock Market ETF’s best interest, so long as the alternative is consistent with the Vanguard Total Stock Market ETF’s investment objective.

The Vanguard Trust is a registered investment company that consists of numerous separate investment portfolios, including the Vanguard Total Stock Market 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 002-56846 and 811-02652, respectively, through the SEC’s website at <http://www.sec.gov>. For additional information regarding the Vanguard Trust, Vanguard and the Vanguard Total Stock Market ETF, please see the Vanguard Total Stock Market ETF’s prospectus. In addition, information about Vanguard and the Vanguard Total Stock Market 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 underlying supplement or the relevant terms supplement.

The CRSP U.S. Total Market Index

All information contained in this underlying supplement regarding the CRSP U.S. Total Market Index, including, without limitation, its make-up, method of calculation and changes in its components, has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, the Center for Research in Security Prices (“CRSP”). The CRSP U.S. Total Market Index is calculated, maintained and published by CRSP. CRSP has no obligation to continue to publish, and may discontinue the publication of, the CRSP U.S. Total Market Index.

The CRSP U.S. Total Market Index is reported by Bloomberg L.P. under the ticker symbol “CRSPTMT.”

The CRSP U.S. Total Market Index is designed to represent investable U.S. equity securities. The CRSP U.S. Total Market Index generally encompasses listed equity securities, including common stocks and real estate investment trusts (“REITs”) of U.S.-incorporated or U.S.-headquartered companies traded on the New York Stock Exchange (“NYSE”), NYSE MKT, NASDAQ or NYSE Arca exchanges.

Index Composition

Eligible Universe. To be eligible for the CRSP U.S. Total Market Index, the securities must meet the following criteria:

- the securities must be listed on NYSE, NYSE MKT, NASDAQ or NYSE Arca;
- the securities must be common stock, REITs, shares of beneficial interest (excluding funds) or Berkshire Hathaway A & B shares; and
- the company issuing the securities must generally be currently incorporated or headquartered in the U.S.; however, securities of companies located in U.S. territories, tax havens and domiciles of convenience may also be considered for inclusion in the CRSP U.S. Total Market Index based on factors including the percentage of U.S. revenue and asset location, U.S. employees, the primary exchange, inclusion in domestic portfolios, market input and the stated geographic business focus in company documents.

Eligibility status is reviewed quarterly at ranking. Data for the review is collected as of the previous quarter end. Any security that has been included in or removed from the CRSP U.S. Total Market Index will retain that status for one year, unless there is a fundamental change in the security’s characteristics. After one year, the security’s eligibility status will be reevaluated.

Investability Screens. Once the eligible securities are identified, investability screens are applied quarterly on the ranking date (the first Friday of each of March, June, September and December) to determine the constituents of the CRSP U.S. Total Market Index as of the following reconstitution date (the third Friday of each of March, June, September and December), as follows:

- minimum total market capitalization: the company must have more than \$15 million total market capitalization;
- float shares requirement: the number of a company’s float shares, those readily available for trading, must be greater than 12.5% of the total shares outstanding;
- minimum trading volume: the average of the adjusted trading volume over the last 125 days divided by float shares on the ranking date must be at least 0.001; and
- consecutive trading days requirement: the securities must not have a sequence of 10 consecutive non-trading days during the previous quarter.

In addition, initial public offerings (IPOs) that have traded regular-way for at least 20 trading days, or that are within the top 85% (ranked by total market capitalization) of the eligible securities, have traded regular-way for at least 5 trading days and have float shares that are at least 10% of their total shares outstanding, are included.

Current constituents of the CRSP U.S. Total Market Index are removed from the CRSP U.S. Total Market Index if, at ranking:

- minimum total market capitalization: the company has less than \$10 million total market capitalization;

- float shares requirement: the number of a company's float shares is less than 10.0% of the total shares outstanding;
- minimum trading volume: the average of the adjusted trading volume over the last 125 days divided by float shares on the ranking date falls below 0.0008 for two consecutive quarters; or
- consecutive trading days requirement: the securities has a sequence of 10 consecutive non-trading days during the previous quarter.

Index Calculation

The CRSP U.S. Total Market Index is weighted by float-adjusted market capitalization, rather than total shares outstanding, reflecting the availability of shares from the perspective of U.S. domestic investors. Float-adjusted market capitalization is equal to float shares outstanding times price. The estimate of readily available shares (free float) is calculated by subtracting the number of restricted shares (*i.e.*, shares owned by insiders and inactive shareholders) from the total number of shares issued for a particular company. Restricted shares include but are not limited to shares held by board members, directors and executives (insiders), government holdings, employee-held shares, shares held by corporations not actively managing money and other unavailable shares.

Index Levels

An index level is the value of an investment relative to its value at one fixed point in time. Index levels allow convenient comparison of the relative performance of the different portfolios or asset classes. For the CRSP U.S. Total Market Index, the initial level was set to 1,000 on April 1, 2011. The following formula is used to calculate the index level on day t :

$$\text{Index Level Total Return}_t = \text{Index Level Total Return}_{t-1} \left(\frac{\text{Index Level}_t + \text{Dividend Points}_t}{\text{Index Level}_{t-1}} \right)$$

where

$$\text{Index Level}_t = \frac{\text{Index Market Value}_t}{\text{Divisor}_t}$$

$$\text{Dividend Points}_t = \frac{\text{Dividend Amount}_t}{\text{Divisor}_t}$$

$$\text{Divisor}_{\text{initial}} = \frac{\text{Index market value at inception}}{1,000}$$

$$\text{Divisor}_t = \text{Divisor}_{t-1} \left(\frac{\text{Start of Day Index Market Value}_t}{\text{End of Day Index Market Value}_{t-1}} \right)$$

Start-of-day Price

Start-of-day prices are derived by applying all known distribution values and split factors to the previous end-of-day price according to the formula below.

$$p(t') = \frac{p(t-1)}{f(t)} - v(t)$$

$p(t')$ = start-of-day price on day t

$p(t-1)$ = end-of-day price on previous trading day

$f(t)$ = split factor applicable on day t

$v(t)$ = value of non-ordinary payments available for start-of-day adjustment

Index Maintenance

Holdings of securities in the CRSP U.S. Total Market Index may be changed due to shares outstanding or float changes resulting from splits and reverse splits; secondary offerings; mergers and acquisitions; rights offerings; and changes based on corporate filings.

If a corporate action or shares event is not final or known before 1:30 p.m. Central Time, it will not change holdings in the CRSP U.S. Total Market Index for the next day. However, if CRSP receives a late (after 2:30 p.m. Eastern Time) cap-neutral shares change announcement, such as a split or stock dividend, index shares changes will be effective the next business day.

Splits and Reverse Splits. Holdings are increased or decreased on the ex-date by the same ratio as the split factor, regardless of the magnitude of the split.

Secondary Offerings. Changes in index holdings resulting from primary or secondary equity offerings representing at least 5% of the security's number of shares held in the CRSP U.S. Total Market Index (CRSP index holdings) are implemented as of the close of the first trading day of the new shares. Increases in the number of shares due to primary or secondary equity offerings are generally implemented as of the close of the first trading day of the new shares (two trading days after the issue is priced) if all necessary information is available before 1:30 pm CT the day after the issue is priced and the 5% threshold is met. Otherwise, the event is implemented on the next regularly scheduled ranking date.

Mergers and Acquisitions. If an acquisition results in an increase of the shares outstanding or float shares of the acquiring company, then its holdings are increased on the effective date.

Rights Offerings. Shares outstanding and float shares are not changed directly by a rights offering, but any changes are applied as they appear in updates from CRSP's data vendors.

Changes Reported in Corporate Filings. Any shares outstanding or float shares changes not directly attributed to a single corporate action on a single day (e.g., buybacks, exercised options, rights offerings, and unreported secondary offerings) but reported in corporate filings are applied at the quarterly ranking. New shares outstanding or float shares amounts are applied at the next quarterly ranking and review process.

Exchange Delistings and Drops

Delists Unrelated to Corporate Actions. A security that delists from an exchange unrelated to a corporate action (voluntary and/or regulatory delists), such as due to company preference or to not maintaining regulatory compliance, is removed from the CRSP U.S. Total Market Index after the close of the last day of trading on the exchange, or on the next trading day if CRSP receives late notification (after 1:30 p.m. CT) of the delist. If a closing price is not available from the exchange at the time of delisting, the security will remain in the CRSP U.S. Total Market Index for up to 10 additional days. If, on the eleventh trading day after the primary exchange delisting, there is no volume on either the security's primary exchange or a secondary exchange, then the security is removed at a price of zero.

Delists due to Mergers and Acquisitions. A security that delists due to an exchange of its stock as part of a merger or acquisition is removed from the CRSP U.S. Total Market Index. If the merger or acquisition event is finalized before 1:30 p.m. CT on the last day before the effective date of the action, the security is removed at the end of that day. If the merger or acquisition event is finalized after 1:30 p.m. CT on the last day before the effective date of the action, then the security is kept in the CRSP U.S. Total Market Index until the exchange confirms the security's delisting.

Delists due to Bankruptcy. In the event that a company declares bankruptcy, CRSP will continue to hold its securities in the CRSP U.S. Total Market Index as long as each security remains listed on its exchange. The securities will be reviewed at ranking using the same investability and eligibility screens. When a company's bankruptcy results in a security's removal from its exchange, the security will be removed from the CRSP U.S. Total Market Index after the close of the last day of trading on its exchange. If the delist due to bankruptcy is confirmed after 1:30 p.m. CT on a day when the affected security is still trading on its exchange, or it is suspended from trading on the day before delisting, the security will be kept in the CRSP U.S. Total Market Index until a final valuation can be assigned to the security, according to the following criteria:

- If trading continues on a secondary exchange, then the security is removed from the CRSP U.S. Total Market Index effective after the close of the first day of trading on the secondary exchange.
- If trading does not continue on a secondary exchange, then the security is removed as soon as final payments are announced, using the same rules as for delisting due to merger or acquisition.
- If trading does not continue on a secondary exchange and no final payments are announced by the tenth day after delisting (on a primary exchange), the security is removed on the eleventh day and valued at the total of any partial payments announced up to that time.

Delists due to Liquidation. When a company announces its intention to delist from an exchange due to liquidation, the security will be removed from the CRSP U.S. Total Market Index after the close of the last day of trading on its exchange. If the delisting is confirmed after 1:30 p.m. CT on the last day of trading, the security will be kept in the CRSP U.S. Total Market Index until a final valuation can be assigned to the security, according to the following criteria:

- If trading continues on a secondary exchange, then the security is removed from the CRSP U.S. Total Market Index effective after the close of the first day of trading on the secondary exchange.
- If trading does not continue on a secondary exchange then the security is removed as soon as final liquidation payments are announced, using the same rules as for delisting due to merger or acquisition.
- If trading does not continue on a secondary exchange and no final liquidation payments are announced by the tenth day after delisting, the security is removed on the eleventh day and valued at the total of any partial payments announced up to that time.

Initial Public Offerings. If the IPO's market capitalization is within top 85% market capitalization of all securities that meet the eligibility criteria described above, it is added to an index on the sixth trading day. All other IPOs that have traded for at least 20 trading days at ranking will be considered for index inclusion on the next reconstitution date. If a pre-existing company issues a new share class independent of any distributions, then the new security is treated as an IPO.

Cash Payments and Dividends. Cash dividends are corporate actions in which a shareholder receives cash for each share held and are typically scheduled at regular intervals. There is no adjustment to a security's start-of-day price for payments received as cash dividends.

Cash received as a return of capital is treated like a non-ordinary distribution. The security's start-of-day price will be adjusted by the amount of the payment on the ex-date.

Cash received as a special dividend is also considered to be a non-ordinary distribution. The security's start-of-day price will be adjusted by the amount of the dividend on the ex-date.

A special dividend that allows the shareholder to elect to receive cash and/or stock with the proration determined after the ex-date is handled as follows: the security's start-of-day price (ex-date) will be adjusted by the cash value of the total special dividend known on the day before the ex-date. Index

holdings will be adjusted as soon as practicable after the proration is disseminated via an official company press release.

Index Announcement Policy

Ranking Procedure and Results. Announcements regarding ranking procedures and results are made available to index subscribers via the CRSP secure index website at 6:00 a.m. CT on the first trading day following the ranking day (*i.e.*, the first trading day after the first Friday of March, June, September and December).

Two months' notice will be given prior to making a change in the ranking schedule.

Corporate Actions. All changes resulting from corporate actions that affect the constituents of the CRSP U.S. Total Market Index are announced when an effective date is known. Once all details for the change have been finalized, CRSP will send a confirmed announcement to its clients prior to the effective date. Should a corporate action be cancelled after it has been announced, CRSP will announce this as early as possible. Similarly, should a modification or correction be needed to an event that was previously announced as "confirmed," CRSP will announce the modification or correction as early as possible.

Exchange Closures. If the primary exchanges close or cancel trading due to unforeseen circumstances, CRSP will not produce index results for that day. The index levels will continue from the last complete day of trading. If the closing is known at least one day in advance, corporate actions originally declared effective for the closed day or days will be made effective on the day when the markets reopen. Index holdings will be carried forward from the end of the day prior to the closed date. Scheduled index notifications will occur on the trading day before the closing.

All corporate actions declared effective on a closed day or the first day after reopening that impact the security universe will be re-dated to the day after trading resumes. Changes to index holdings will take place after the close of the day trading resumes.

THE WISDOMTREE JAPAN HEDGED EQUITY FUND

All information contained in this underlying supplement regarding the WisdomTree Japan Hedged Equity Fund (the “DXJ ETF”) has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, the WisdomTree Trust and WisdomTree Asset Management, Inc. (“WisdomTree”). The DXJ ETF is an investment portfolio managed by WisdomTree, the investment adviser to the DXJ ETF and by Mellon Capital Management Corporation (“Mellon Capital”), the sub-adviser to the DXJ ETF. The DXJ ETF is an exchange-traded fund that trades on the NYSE Arca, Inc. (“NYSE Arca”) under the ticker symbol “DXJ.”

The DXJ ETF seeks investment results that generally correspond to the price and yield performance, before fees and expenses, of the WisdomTree Japan Hedged Equity Index. For more information about the WisdomTree Japan Hedged Equity Index, please see “— The WisdomTree Japan Hedged Equity Index” below.

The DXJ ETF employs a “passive management” — or indexing — investment approach designed to track the performance of the WisdomTree Japan Hedged Equity Index. The DXJ ETF attempts to invest all, or substantially all, of its assets in the component securities that make up the WisdomTree Japan Hedged Equity Index and investments that have economic characteristics that are substantially identical to the economic characteristics of those component securities. The DXJ ETF generally uses a representative sampling strategy to achieve its investment objective, meaning it generally will invest in a sample of the component securities in the WisdomTree Japan Hedged Equity Index whose risk, return and other characteristics closely resemble the risk, return and other characteristics of the WisdomTree Japan Hedged Equity Index as a whole.

To mitigate the currency risk resulting from the DXJ ETF’s exposure to the Japanese yen, the DXJ ETF may enter into forward currency contracts or futures contracts. The amount of forward contracts and futures contracts in the DXJ ETF is based on the aggregate exposure of the DXJ ETF and the WisdomTree Japan Hedged Equity Index to the Japanese yen. This currency mitigation approach may not perfectly offset the actual fluctuations between the Japanese yen and the U.S. dollar and as a result, may not eliminate the currency risk resulting from the DXJ ETF’s exposure to the Japanese yen. A decline in the value of the Japanese yen relative to the U.S. dollar could result in a decline in the value of the DXJ ETF.

The WisdomTree Trust is a registered investment company that consists of numerous separate investment portfolios. Information provided to or filed with the SEC by the WisdomTree Trust 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 333-132380 and 811-21864, respectively, through the SEC’s website at <http://www.sec.gov>. For additional information regarding the WisdomTree Trust, WisdomTree, Mellon Capital and the DXJ ETF, please see the DXJ ETF’s prospectus. In addition, information about the DXJ ETF, WisdomTree and Mellon Capital may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the DXJ ETF’s website at <http://www.wisdomtree.com/etfs>. Information contained in the DXJ ETF’s website is not incorporated by reference in, and should not be considered a part of, this underlying supplement or the relevant terms supplement.

The WisdomTree Japan Hedged Equity Index

All information contained in this underlying supplement regarding the the WisdomTree Japan Hedged Equity Index, including, without limitation, its make-up, method of calculation and changes in its components, has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, the WisdomTree Investments, Inc. (“WTI”). The WisdomTree Japan Hedged Equity Index is calculated, maintained and published by WTI. WTI has no obligation to continue to publish, and may discontinue the publication of, the WisdomTree Japan Hedged Equity Index.

The WisdomTree Japan Hedged Equity Index is reported by Bloomberg L.P. under the ticker symbol “WTIDJH.”

The WisdomTree Japan Hedged Equity Index is designed to provide exposure to the Japanese equity markets while at the same time attempting to mitigate exposure to fluctuations of the Japanese yen relative to the U.S. dollar. The WisdomTree Japan Hedged Equity Index consists of dividend-paying companies incorporated in Japan and traded on the Tokyo Stock Exchange that derive less than 80% of their revenue from sources in Japan. By excluding companies that derive 80% or more of their revenue from Japan, the WisdomTree Japan Hedged Equity Index is concentrated on dividend-paying companies with a more significant global revenue base. The WisdomTree Japan Hedged Equity Index is a currency-hedged version of the WisdomTree Japan Dividend Index (the “WJD Index”), and the selection and weighting methodology for the WisdomTree Japan Hedged Equity Index is identical to the selection and weighting methodology used for the WJD Index.

Selection Criteria

To be eligible for inclusion in the WisdomTree Japan Hedged Equity Index, component companies must be incorporated in Japan and meet the following eligibility requirements established by WTI: (i) payment of at least \$5 million in cash dividends on common shares in the annual cycle prior to the annual rebalance of the WisdomTree Japan Hedged Equity Index; (ii) market capitalization of at least \$100 million as of the “International Screening Date” (the date after the close of trading on the last trading day in September); (iii) average daily dollar volume of at least \$100,000 for the three months preceding the International Screening Date; and (iv) trading of at least 250,000 shares per month for each of the six months preceding the International Screening Date.

Index Calculation

The WisdomTree Japan Hedged Equity Index is a currency-hedged version of the WJD Index. The index values of the WJD Index are calculated by aggregating the sum of the product of number of stocks in the WisdomTree Japan Hedged Equity Index for a component company, the price of such stock and the cross rate of the Japanese yen against the U.S. dollar. This value is then adjusted by a divisor. By adjusting the divisor, the index value retains its continuity before and after changes in the market capitalization of the WisdomTree Japan Hedged Equity Index due to changes in composition, weighting or corporate actions.

The WJD Index is calculated every weekday. If trading is suspended while the exchange the component company trades on is still open, the last traded price for that stock is used for all subsequent computations of the WJD Index until trading resumes. If trading is suspended before the opening, the adjusted closing price of the stock from the previous day is used to calculate the WJD Index. Until a particular stock opens, its adjusted closing price from the previous day is used in the computation of the WJD Index.

The WisdomTree Japan Hedged Equity Index is designed to approximate the investable return available to U.S.-based investors that attempts to mitigate currency fluctuations as a source of the international index return.

The WisdomTree Japan Hedged Equity Index is calculated on a daily basis and it uses to a WM/Reuters 1-month forward rate to mitigate the effects of currency fluctuations. The precise calculation for the daily hedged currency index is as follows:

$$WT_Hedged_1 = WT_Hedged_0 * \left(\frac{WT_Unhedged_1}{WT_Unhedged_0} + HedgeRet_1 \right)$$

$$\text{HedgeRet}_1 = \frac{\text{Spot Rate}_{m0}}{\text{Forward Rate}_{m0}} - \frac{\text{Spot Rate}_{m0}}{\text{Spot Rate}_{md} + \left(\frac{D-d}{D}\right) * (\text{Forward Rate}_{md} - \text{Spot Rate}_{md})}$$

Where:

- Forward Rate = WM/Reuters 1-month forward rate in foreign currency per U.S. dollar
- Spot Rate = Spot Rate in foreign currency per U.S. dollar.
- For each month m , there are $d = 1, 2, 3, \dots, D$ calendar days so “ md ” is *day d for month m* and “ $m0$ ” is the *last day of month $m-1$* .
- D = total number of days in *month m*

Weighting

The WisdomTree Japan Hedged Equity Index is a modified capitalization-weighted index that employs a transparent weighting formula to magnify the effect that dividends play in the total return of the WisdomTree Japan Hedged Equity Index. Companies are weighted in the WisdomTree Japan Hedged Equity Index based on annual cash dividends paid. The initial weight of a component in the WisdomTree Japan Hedged Equity Index at the annual rebalance is derived by multiplying the U.S. dollar value of the company’s annual gross dividend per share by the number of common shares outstanding for that company (the “Cash Dividend Factor”). The Cash Dividend Factor is calculated for every component in the WisdomTree Japan Hedged Equity Index and then summed. The weight of each component, at the International Weighting Date, is equal to its Cash Dividend Factor divided by the sum of all Cash Dividend Factors for all the components in the WisdomTree Japan Hedged Equity Index. The dividend stream of any constituents with dividend yields greater than 12% will be capped at such constituents’ market capitalization multiplied by 12%. Special dividends are not included in the computation of weights of the WisdomTree Japan Hedged Equity Index. The International Weighting Date is the date on which component weights are set and it occurs immediately after the close of trading on the second Friday of June. New component weights take effect before the opening of trading on the first Monday following the third Friday of October (the “International Reconstitution Date”).

At the time of the annual rebalance of the WisdomTree Japan Hedged Equity Index, the maximum weight of any single security in the WisdomTree Japan Hedged Equity Index is capped at 5% and the maximum weight of any one sector in the WisdomTree Japan Hedged Equity Index is capped at 25%. In response to market conditions, security and sector weights may fluctuate above the specified cap between annual rebalance of the WisdomTree Japan Hedged Equity Index dates. WTI, as index provider, currently uses Standard & Poor’s Global Industry Classification Standards (“S&P GICS[®]”) to define companies in each sector. A sector is composed of multiple industries. For example, the energy sector is composed of companies in, among others, the natural gas, oil and petroleum industries.

The weighting of the WisdomTree Japan Hedged Equity Index will be modified in the event of the following weighting modification events:

- The maximum weight of any individual component security is capped at 5% on the annual rebalance prior to the introduction of sector caps. The weights may fluctuate above the specified caps during the year, but will be reset at each annual rebalance date.
- Where a sector achieves a weight that is greater than or equal to 25% of the WisdomTree Japan Hedged Equity Index, weight of companies will be proportionally reduced to 25% as of the annual screening date.
- Where the collective weight of the component securities of the WisdomTree Japan Hedged Equity Index whose individual current weights are greater than or equal to 5.0% of the WisdomTree Japan Hedged Equity Index is greater than or equal to 50.0% of the

WisdomTree Japan Hedged Equity Index, the weightings in those component securities will be reduced so that their collective weight equals 40.0% of the WisdomTree Japan Hedged Equity Index at the close of the current calendar quarter. All other components in the WisdomTree Japan Hedged Equity Index will also be rebalanced to reflect their relative weights before the adjustment.

Dividend Treatment

Normal dividend payments are reinvested and accounted for in the calculation of the index value of the WisdomTree Japan Hedged Equity Index. However, special dividends that are not reinvested in the WisdomTree Japan Hedged Equity Index require index divisor adjustments.

Maintenance of the WisdomTree Japan Hedged Equity Index

Index maintenance includes monitoring and implementing the adjustments for company deletions, stock splits, stock dividends, spins-offs, or other corporate actions. Some corporate actions, such as stock splits, stock dividends, and rights offerings require changes in the number of stocks of such constituent included in the WisdomTree Japan Hedged Equity Index and the stock prices of the component companies in the WisdomTree Japan Hedged Equity Index. Some corporate actions, such as stock issuances, stock buybacks, warrant issuances, increases or decreases in dividend per share between reconstitutions, do not require changes in the number of stocks of such constituent included in the WisdomTree Japan Hedged Equity Index or in the stock prices of the component companies in the WisdomTree Japan Hedged Equity Index. Other corporate actions, such as special dividends and entitlements, may require index divisor adjustments. Any corporate action, whether it requires index divisor adjustments or not, will be implemented after the close of trading on the day prior to the ex-date of such corporate actions. Whenever possible, changes to the components of the WisdomTree Japan Hedged Equity Index, such as deletions as a result of corporate actions, will be announced at least two business days prior to their implementation date.

Index Divisor Adjustments

Changes in the market capitalization of the WisdomTree Japan Hedged Equity Index due to changes in composition, weighting or corporate actions result in a divisor change to maintain the continuity of the WisdomTree Japan Hedged Equity Index. Corporate actions that require divisor adjustments will be implemented prior to the opening of trading on the effective date. In certain instances where information is incomplete, or the completion of an event is announced too late to be implemented prior to the ex-date, the implementation will occur as of the close of the following day or as soon as practicable thereafter. For corporate actions not described herein, or combinations of different types of corporate events and other exceptional cases, WTI reserves the right to determine the appropriate implementation method.