CITIGROUP INC
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UNDERLYING SUPPLEMENT NO. 7

(To the prospectus and prospectus supplement each dated April 7, 2017)

Citigroup Global Markets Holdings Inc.

Medium-Term Senior Notes, Series N

Payments Due from Citigroup Global Markets Holdings Inc.

Fully and Unconditionally Guaranteed by Citigroup Inc.

Securities Linked to one or more Indices or Exchange-Traded Funds

Citigroup Global Markets Holdings Inc. may, from time to time, offer and sell securities linked to one or more indices (each, an “Index” and collectively, the “Indices”) or exchange-traded funds (each, a “Fund” and collectively, the “Funds”). This underlying supplement describes potential Indices and Funds to which the securities may be linked. This underlying supplement supplements the terms described in any pricing supplement that may reference it, any applicable product supplement and the accompanying prospectus supplement and prospectus. A separate pricing supplement will describe terms that apply to specific issuances of the securities, including any changes to the description of any relevant Index or Fund discussed below. If the terms described in the relevant pricing supplement are inconsistent with those described herein, the terms described in the relevant pricing supplement will control.

Investing in the securities involves risks not associated with an investment in conventional debt securities. See “Risk Factors” beginning on page 1 of this underlying supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the securities or determined if this underlying supplement, any pricing supplement that may reference it, any applicable product supplement and the accompanying prospectus supplement and prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The securities are not deposits or savings accounts but are unsecured senior debt obligations of Citigroup Global Markets Holdings Inc. Any payments due on the securities are fully and unconditionally guaranteed by Citigroup Inc. The securities and are not insured or guaranteed by the Federal Deposit Insurance Corporation or any other governmental agency or instrumentality.

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We are responsible for the information contained or incorporated by reference in this underlying supplement, the relevant pricing supplement, any relevant product supplement, the accompanying prospectus supplement and prospectus and in any related free writing prospectus we prepare or authorize. We have not authorized anyone to provide any other information with respect to the securities offered by the relevant pricing supplement or with respect to Citigroup Global Markets Holdings Inc. or Citigroup Inc. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. You should not assume that the information contained or incorporated by reference in this underlying supplement is accurate as of any date other than the date on the front of this document.

The relevant pricing supplement, this underlying supplement, any relevant product supplement and the accompanying prospectus supplement and prospectus do not constitute an offer to sell or a solicitation of an offer to buy the securities in any circumstances in which such offer or solicitation is unlawful.

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

Risk Factors

Your investment in the securities will involve certain risks. Investing in the securities is not equivalent to investing in any of the indices or funds described herein or any of their component securities, commodities or commodity futures contracts. **You should consider carefully the following discussion of risks as well as the discussion of risks included in the applicable pricing supplement and any applicable product supplement, together with the following discussion of additional risks, before you decide whether an investment in the securities is suitable for you.**

Risks Relating to Certain Equity Indices

Citigroup Inc. is currently a component of the Russell 1000® Index, the Russell 3000® Index, the S&P 500® Index, the S&P 100® Index, MSCI World Index℠, the Financial Services Select Sector Index, the S&P® Banks Select Industry™ Index and the Financial Select Sector Index but, to our knowledge, unless otherwise specified in the relevant pricing supplement, we are not currently affiliated with any other company that is a component of an Index.

Citigroup Inc. is currently a component of the Russell 1000® Index, the Russell 3000® Index, the S&P 500® Index, the S&P 100® Index, MSCI World Index℠, the Financial Services Select Sector Index, the S&P® Banks Select Industry™ Index and the Financial Select Sector Index, but, to our knowledge, unless otherwise specified in the relevant pricing supplement, we are not currently affiliated with any other company that is a component of an Index. As a result, we will not have any ability to control the actions of the other issuers that are components of any Index, including actions that could affect the value of the equity securities underlying an Index and, accordingly, the value of your securities. None of the money you pay us will go to the sponsor of any Index or any of the other issuers of the equity securities included in any Index, and no such sponsor or issuer will be involved in the offering of the securities in any way. Neither those issuers nor we will have any obligation to consider your interests as a holder of the securities in taking any corporate actions that might affect the value of any Index or of your securities. Additional information about whether we or our affiliates are a component of an Index may be disclosed in the relevant pricing supplement.

In the event that we become affiliated with any issuers that are components of an Index, we will have no obligation to consider your interests as a holder of the securities in taking any action with respect to such issuer that might affect the value of your securities.

For securities linked in whole or in part to the EURO STOXX® Banks Index, the S&P® Banks Select IndustryTM Index or the S&P® Regional Banks Select Industry™ Index, risks associated with the banking industry will affect the value of the securities.

All or substantially all of the equity securities included in the EURO STOXX® Banks Index, the S&P® Banks Select IndustryTM Index and the S&P® Regional Banks Select Industry™ Index are issued by companies whose primary line of business is directly associated with the banking industry. As a result, the value of the securities 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 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, 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 banking companies. Banks may also be subject to severe price competition. Competition among banking companies is high and failure to maintain or increase market share may result in lost market share.

These factors could affect the banking industry and could affect the value of the equity securities included in the EURO STOXX® Banks Index, the S&P® Banks Select IndustryTM Index or the S&P® Regional Banks Select Industry™ Index and the level of the EURO STOXX® Banks Index, the S&P® Banks Select IndustryTM Index or the S&P® Regional Banks Select Industry™ Index during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the Russell 2000® Index or the S&P SmallCap 600® Index, an investment in the securities 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.

For securities linked in whole or in part to the S&P® Biotechnology Select Industry™ Index, risks associated with the biotechnology industry will affect the value of the securities.

All or substantially all of the equity securities included in the S&P® Biotechnology Select Industry™ Index are issued by companies whose primary line of business is directly associated with the biotechnology industry. As a result, the value of the securities 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.

Biotechnology companies invest heavily in research and development, which may not necessarily lead to commercially successful products. These companies are also subject to increased governmental regulation, which may delay or inhibit the release of new products. Many biotechnology companies are dependent upon their ability to use and enforce intellectual property rights and patents. Any impairment of these rights may have adverse financial consequences. Biotechnology stocks, especially those of smaller, less-seasoned companies, tend to be more volatile than the overall market. Biotechnology companies can be significantly affected by technological change and obsolescence, product liability lawsuits and consequential high insurance costs.

These factors could affect the biotechnology industry and could affect the value of the equity securities included in the S&P® Biotechnology Select Industry™ Index and the level of the S&P® Biotechnology Select Industry™ Index during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the S&P® Metals & Mining Select Industry™ Index, risks associated with the metals and mining industry will affect the value of the securities.

All or substantially all of the equity securities included in the S&P® Metals & Mining Select Industry™ Index are issued by companies whose primary line of business is directly associated with the metals and mining industry. As a result, the value of the securities 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.

Metals and mining companies can be significantly affected by events relating to international political and economic developments, energy conservation, the success of exploration projects, commodity prices, and tax and other government regulations. Investments in metals and mining companies may be speculative and may be subject to greater price volatility than investments in other types of companies. Risks of metals and mining investments include: changes in international monetary policies or economic and political conditions that can affect the supply of precious metals and consequently the value of metals and mining company investments; the United States or foreign governments may pass laws or regulations limiting metals investments for strategic or other policy reasons; and increased environmental or labor costs may depress the value of metals and mining investments.

These factors could affect the metals and mining industry and could affect the value of the equity securities included in the S&P® Metals & Mining Select Industry™ Index and the level of the S&P® Metals & Mining Select Industry™ Index during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the S&P® Oil & Gas Exploration & Production Select Industry™ Index, risks associated with the exploration of oil and gas will affect the value of the securities.

All or substantially all of the equity securities included in the S&P® Oil & Gas Exploration & Production Select Industry™ Index are issued by companies whose primary line of business is directly associated with the oil and gas exploration and production industry. As a result, the value of the securities 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.

Issuers in energy-related industries can be significantly affected by fluctuations in energy prices and supply and demand of energy fuels caused by geopolitical events, energy conservation or use of alternative fuel sources, the success of exploration projects, weather or meteorological events, taxes, increased governmental or environmental regulation, resource depletion, rising interest rates, declines in domestic or foreign production, accidents or catastrophic events, or terrorist threats or attacks, among others. 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 through exploration of new sources of supply, through the development of existing sources, through acquisitions, or through long-term contracts to acquire reserves. Factors adversely affecting producers, refiners, distributors, or others in the energy sector may affect adversely companies that service or supply those entities, either because demand for those services or products is curtailed, or those services or products come under price pressure.

Oil and gas companies develop and produce crude oil and natural gas and provide drilling and other energy resources production and distribution related services. Stock prices for these types of companies are affected by supply and demand both for their specific product or service and for energy products in general. The price of oil and gas, exploration and production spending, government regulation, world events and economic conditions will likewise affect the performance of these companies. Correspondingly, securities of companies in the energy field are subject to swift price and supply fluctuations caused by events relating to international politics, energy conservation, the success of exploration projects, and tax and other governmental regulatory policies. Weak demand for the companies' products or services or for energy products and services in general, as well as negative developments in these other areas, would adversely impact the S&P® Oil & Gas Exploration & Production Select Industry™ Index's performance. 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.

These factors could affect the oil and gas exploration and production industry and could affect the value of the equity securities included in the S&P® Oil & Gas Exploration & Production Select Industry™ Index and the level of the S&P® Oil & Gas Exploration & Production Select Industry™ Index during the term of the securities, which may adversely affect the value of your securities.

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

All or substantially all of the equity securities included in the Consumer Discretionary Select Sector Index are issued by companies whose primary line of business is directly associated with the consumer discretionary sector. As a result, the value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting this sector than a different investment linked to securities of a more broadly diversified group of issuers.

The success of consumer product manufacturers and retailers is tied closely to the performance of the overall domestic and global economy, interest rates, competition and consumer confidence. Success depends heavily on disposable household income and consumer spending. Also, companies in the consumer discretionary sector may be subject to severe competition, which may have an adverse impact on their respective profitability. Changes in demographics and consumer tastes can also affect the demand for, and success of, consumer products and services in the marketplace.

These factors could affect the consumer discretionary sector and could affect the value of the equity securities included in the Consumer Discretionary Select Sector Index and the level of the Consumer Discretionary Select Sector Index during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the Consumer Discretionary Select Sector Index, changes to the GICS® consumer discretionary sector expected in late September 2018 may adversely affect the value of the securities.

In November 2017, S&P Dow Jones Indices LLC and MSCI Inc. announced that, after the close of business on September 28, 2018, the GICS® consumer discretionary sector will be updated to (a) expand the internet & direct marketing retail industry to include companies providing online marketplaces for consumer products and services and e-commerce companies regardless of whether they hold inventory and (b) discontinue the media industry (which will be moved to the renamed GICS® communication services sector). The Consumer Discretionary Select Sector Index is designed to measure the performance of the GICS® consumer discretionary sector and is expected to reflect these changes to the GICS® consumer discretionary sector on or after that date. This change could adversely affect the performance of the Consumer Discretionary Select Sector Index and, in turn, the value of the securities.

For securities linked in whole or in part to the Consumer Staples Select Sector Index, risks associated with the consumer staples sector will affect the value of the securities.

All or substantially all of the equity securities included in the Consumer Staples Select Sector Index are issued by companies whose primary line of business is directly associated with the consumer staples sector. As a result, the value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting this sector than a different investment linked to securities of a more broadly diversified group of issuers.

Consumer staples companies are subject to government regulation affecting their products, which may negatively impact these companies' performance. 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 product companies may be strongly affected by consumer interest, marketing campaigns and other factors affecting supply and demand, including performance of the overall domestic and global economy, interest rates, competition and consumer confidence and spending.

These factors could affect the consumer staples sector and could affect the value of the equity securities included in the Consumer Staples Select Sector Index and the level of the Consumer Staples Select Sector Index during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the Energy Select Sector Index, risks associated with the energy sector will affect the value of the securities.

All or substantially all of the equity securities included in the Energy Select Sector Index 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 Index is concentrated in the energy sector, which means the Energy Select Sector Index 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.

These factors could affect the energy sector and could affect the value of the equity securities included in the Energy Select Sector Index and the level of the Energy Select Sector Index during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the Financial Select Sector Index, risks associated with the financial sector will affect the value of the securities.

All or substantially all of the equity securities included in the Financial Select Sector Index 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 Index is concentrated in the financial sector, which means the Financial Select Sector Index 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 financial 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.

These factors could affect the financial sector and could affect the value of the equity securities included in the Financial Select Sector Index and the level of the Financial Select Sector Index during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the Financial Select Sector Index, in September 2016, the Financial Select Sector Index ceased providing exposure to the real estate sector and this change in exposure could adversely affect the value of the securities.

On September 19, 2016, the Financial Select Sector Index was reconstituted to eliminate the stocks of real estate management and development companies and real estate investment trusts ("REITs") (other than mortgage REITs) ("real estate stocks"). As of September 19, 2016, the Financial Select Sector Index no longer provides exposure to real estate stocks. Consequently, the Financial Select Sector Index is less diversified, and is more concentrated in the financial sector, than it was before this change to its composition. This change could adversely affect the performance of the Financial Select Sector Index and, in turn, the value of the securities.

For securities linked in whole or in part to the Health Care Select Sector Index, risks associated with the health care sector will affect the value of the securities.

All or substantially all of the equity securities included in the Health Care Select Sector Index are issued by companies whose primary line of business is directly associated with the health care sector. As a result, the value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting this sector than a different investment linked to securities of a more broadly diversified group of issuers.

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 also 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.

These factors could affect the health care sector and could affect the value of the equity securities included in the Health Care Select Sector Index and the level of the Health Care Select Sector Index during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the Industrial Select Sector Index, risks associated with the industrial sector will affect the value of the securities.

All or substantially all of the equity securities included in the Industrial Select Sector Index are issued by companies whose primary line of business is directly associated with the industrial sector. As a result, the value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting this sector than a different investment linked to securities of a more broadly diversified group of issuers.

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.

These factors could affect the industrial sector and could affect the value of the equity securities held by the Industrial Select Sector Index and the level of the Industrial Select Sector Index during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the Materials Select Sector Index, risks associated with the materials sector will affect the value of the securities.

All or substantially all of the equity securities included in the Materials Select Sector Index are issued by companies whose primary line of business is directly associated with the materials sector. As a result, the value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting this sector than a different investment linked to securities of a more broadly diversified group of issuers.

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.

These factors could affect the materials sector and could affect the value of the equity securities included in the Materials Select Sector Index and the level of the Materials Select Sector Index during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the Real Estate Select Sector Index, risks associated with the real estate sector will affect the value of the securities.

All or substantially all of the equity securities included in the Real Estate Select Sector Index are issued by companies whose primary line of business is directly associated with the real estate sector. As a result, the value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting this sector than a different investment linked to securities of a more broadly diversified group of issuers. There are special risks associated with investment in securities of companies engaged in real property markets, including, without limitation REITs and real estate operating companies.

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. An investment in a real property company is subject to additional risks, such as poor performance by the manager of the real property company, adverse changes in tax laws, difficulties in valuing and disposing of real estate, and the effect of general declines in stock prices. 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. Also, the organizational documents of a real property company may contain provisions that make changes in control of the company difficult and time-consuming.

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, as well as defaults by borrowers and self-liquidation. 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 with protecting its investments. In addition, a REIT could possibly fail to qualify for favorable tax treatment under the Internal Revenue Code, or to maintain its exemptions from registration under the 1940 Act, which could have adverse consequences for the Real Estate Select Sector Index. Investments in REITs are also subject to the risks affecting equity markets generally.

These factors could affect the real estate sector and could affect the value of the equity securities included in the Real Estate Select Sector Index and the level of the Real Estate Select Sector Index during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the Technology Select Sector Index, risks associated with the technology sector will affect the value of the securities.

All or substantially all of the equity securities included in the Technology Select Sector Index are issued by companies whose primary line of business is directly associated with the technology sector. As a result, the value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting this sector than a different investment linked to securities of a more broadly diversified group of issuers.

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.

These factors could affect the technology sector and could affect the value of the equity securities included in the Technology Select Sector Index and the level of the Technology Select Sector Index during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the Technology Select Sector Index, changes to the GICS® telecommunication services sector expected in late September 2018 may adversely affect the value of the securities.

In November 2017, S&P Dow Jones and MSCI announced that, after the close of business on September 28, 2018, the GICS® telecommunication services sector will be broadened and renamed the communication services sector to include companies that facilitate communication and offer related content and information through various media, resulting in the addition of three GICS® industries within the renamed communication services sector: media; entertainment; and interactive media & services. The Technology Select Sector Index is designed to measure the performance of the GICS® information technology sector and telecommunication services sector and is expected to reflect these changes to the GICS® telecommunication services sector on or after that date. This change could adversely affect the performance of the Technology Select Sector Index and, in turn, the value of the securities.

For securities linked in whole or in part to the Utilities Select Sector Index, risks associated with the utilities sector will affect the value of the securities.

All or substantially all of the equity securities included in the Utilities Select Sector Index are issued by companies whose primary line of business is directly associated with the utilities sector. As a result, the value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting this sector than a different investment linked to securities of a more broadly diversified group of issuers.

Utility companies are affected by supply and demand, operating costs, government regulation, environmental factors, liabilities for environmental damage and general civil liabilities and rate caps or rate changes. Although rate changes of a regulated 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.

These factors could affect the utilities sector and could affect the value of the equity securities included in the Utilities Select Sector Index and the level of the Utilities Select Sector Index during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to S&P MidCap 400® Index, an investment in the securities 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.

Risks Relating to Certain Commodity Indices

We and our 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.

We and our 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 securities 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 securities.

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

Because the Bloomberg Commodity Index^{SM} and the Bloomberg Commodity Index 3 Month Forward^{SM} 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 Index^{SM} each reflect the return on exchange-traded futures contract on a single physical commodity, securities 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 Index^{SM} and the Bloomberg Commodity Index 3 Month Forward^{SM} 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 Index^{SM} are each limited to a single commodity. An investment in the securities may therefore carry risks similar to a concentrated securities investment in a limited number of industries or sectors or in a single commodity.

For securities 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 securities. 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 securities into consideration at any time.

For securities 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 Index℠. In contrast to the S&P GSCI™ and Bloomberg Commodity Index℠, 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 Index℠ 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 Index℠, 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 securities linked to an 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

Citigroup Inc. is currently one of the issuers of equity securities held by the Financial Select Sector SPDR® Fund, the SPDR® S&P® Bank ETF, the SPDR® S&P 500® ETF Trust, the iShares® Russell 3000 ETF and the Vanguard Total Stock Market ETF but, to our knowledge, unless otherwise specified in the relevant pricing supplement, we are not currently affiliated with any other company the equity securities of which are held by any other Fund.

Citigroup Inc. is currently one of the companies that make up the Financial Select Sector SPDR® Fund and the SPDR® S&P 500® ETF Trust, but, unless otherwise specified in the relevant pricing supplement, to our knowledge, we are not currently affiliated with any other issuers the equity securities of which are held by a Fund. As a result, we will not have any ability to control the actions of the other issuers of such equity securities, including actions that could affect the value of the equity securities underlying an Index and, accordingly, your securities. None of the money you pay us will go to the investment adviser of any Fund or any of the other issuers of the equity securities held by any Fund, and none of those issuers will be involved in the offering of the securities in any way. Neither those issuers nor we will have any obligation to consider your interests as a holder of the securities in taking any corporate actions that might affect the value of your securities. Additional information about whether we or our affiliates are one of the companies held by a Fund may be disclosed in the relevant pricing supplement.

In the event we become affiliated with any issuers the equity securities of which are held by a Fund, we will have no obligation to consider your interests as a holder of the securities in taking any action with respect to such issuer that might affect the price of the Fund or the value of your securities.

For securities linked in whole or in part to the iShares® Nasdaq Biotechnology ETF, an investment in the securities will be subject to risks associated with the biotechnology and pharmaceutical industries.

All or substantially all of the equity securities held by the iShares® Nasdaq Biotechnology ETF are issued by companies whose primary line of business is directly associated with the biotechnology or pharmaceutical industry. As a result, the value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting these industries than a different investment linked to securities of a more broadly diversified group of issuers.

Companies in the biotechnology industry spend heavily on research and development, and their products or services may not prove commercially successful or may become obsolete quickly. The biotechnology industry is subject to a significant amount of governmental regulation, and changes in governmental policies and the need for regulatory approvals may have a material adverse effect on this industry. Companies in the biotechnology industry are subject to risks of new technologies and competitive pressures and are heavily dependent on patents and intellectual property rights. The loss or impairment of these rights may adversely affect the profitability of these companies.

Companies in the pharmaceutical industry are subject to competitive forces that may make it difficult to raise prices of their products and, in fact, may result in price discounting. The profitability of some companies in the pharmaceutical industry may be dependent on a relatively limited number of products. In addition, their products can become obsolete due to industry innovation, changes in technologies or other market developments. Many new products in the pharmaceutical industry are subject to government approvals, regulation and reimbursement rates. The process of obtaining government approvals may be long and costly. Many companies in the pharmaceutical industry are heavily dependent on patents and intellectual property rights. The loss or impairment of these rights may adversely affect the profitability of these companies. Companies in the pharmaceutical industry may be subject to extensive litigation based on product liability and similar claims.

These factors could affect these industries and could affect the value of the equity securities held by the iShares® Nasdaq Biotechnology ETF and the price of the iShares® Nasdaq Biotechnology ETF during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the iShares® Russell 2000 ETF, an investment in the securities 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. These companies tend to be less well-established than large market capitalization companies. Small capitalization companies may be less able to withstand adverse economic, market, trade and competitive conditions relative to larger 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 securities linked in whole or in part to the iShares® U.S. Real Estate ETF, an investment in the securities is subject to risks associated with real estate companies.

All or substantially all of the equity securities held by the iShares® U.S. Real Estate ETF are issued by companies that invest in real estate, which we refer to as real estate companies, such as real estate investment trusts ("REITs") or real estate holding companies. As a result, the value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting these companies than a different investment linked to securities of a more broadly diversified group of issuers. The iShares® U.S. Real Estate ETF invests in companies that invest in real estate, which we refer to as real estate companies, such as REITs or real estate holding companies, which expose investors to the risks of owning real estate directly, as well as to risks that relate specifically to the way in which real estate companies are organized and operated. Real estate is highly sensitive to general and local economic conditions and developments and is characterized by intense competition and periodic overbuilding. Many real estate companies, including REITs, utilize leverage (and some may be highly leveraged), which increases investment risk and the risk normally associated with debt financing, and could potentially magnify the iShares® U.S. Real Estate ETF's losses. The U.S.

residential and commercial real estate markets may, in the future, experience and have, in the past, experienced a decline in value, with certain regions experiencing significant losses in property values. Exposure to such real estate may adversely affect the iShares® U.S. Real Estate ETF's performance. Specific risks relevant to investment in real estate companies include:

Concentration Risk. Real estate companies may own a limited number of properties and concentrate their investments in a particular geographic region, industry or property type. Economic downturns affecting a particular region, industry or property type may lead to a high volume of defaults within a short period.

Equity REITs Risk. Certain REITs may make direct investments in real estate. These REITs are often referred to as "Equity REITs." Equity REITs invest primarily in real properties and may earn rental income from leasing those properties. Equity REITs may also realize gains or losses from the sale of properties. Equity REITs will be affected by conditions in the real estate rental market and by changes in the value of the properties they own. A decline in rental income may occur because of extended vacancies, limitations on rents, the failure to collect rents, increased competition from other properties or poor management. Equity REITs also can be affected by rising interest rates. Rising interest rates may cause investors to demand a high annual yield from future distributions that, in turn, could decrease the market prices for such REITs and for the properties held by such REITs. In addition, rising interest rates also increase the costs of obtaining financing for real estate projects. Because many real estate projects are dependent upon receiving financing, this could cause the value of the Equity REITs in which the iShares® U.S. Real Estate ETF invests to decline.

Interest Rate Risk. Rising interest rates could result in higher costs of capital for real estate companies, which could negatively affect a real estate company's ability to meet its payment obligations. Declining interest rates could result in increased prepayment on loans and require redeployment of capital in less desirable investments.

Leverage Risk. Real estate companies may use leverage (and some may be highly leveraged), which increases investment risk and the risks normally associated with debt financing and could adversely affect a real estate company's operations and market value in periods of rising interest rates. Financial covenants related to a real estate company's leveraging may affect the ability of the real estate company to operate effectively. In addition, investments may be subject to defaults by borrowers and tenants. Leveraging may also increase repayment risk.

Liquidity Risk. Investing in real estate companies may involve risks similar to those associated with investing in small-capitalization companies. Real estate company securities may be volatile. There may be less trading in real estate company shares, which means that purchase and sale transactions in those shares could have a magnified impact on share price, resulting in abrupt or erratic price fluctuations. In addition, real estate is relatively illiquid and, therefore, a real estate company may have a limited ability to vary or liquidate its investments in properties in response to changes in economic or other conditions.

Loan Foreclosure Risk. Real estate companies may foreclose on loans that the real estate company originated and acquired. Foreclosure may generate negative publicity for the underlying property that affects its market value. In addition to length and expense, foreclosure proceedings may not fully uphold the validity of all of the terms of the applicable loan.

Operational Risk. Real estate companies are dependent upon management skills and may have limited financial resources. Real estate companies are generally not diversified and may be subject to heavy cash flow dependency, default by borrowers and self-liquidation. In addition, transactions between real estate companies and their affiliates may be subject to conflicts of interest, which may adversely affect a real estate company's shareholders. A real estate company may also have joint ventures in certain of its properties and, consequently, its ability to control decisions relating to such properties may be limited.

Property Risk. Real estate companies may be subject to risks relating to functional obsolescence or reduced desirability of properties; extended vacancies due to economic conditions and tenant bankruptcies; catastrophic events such as earthquakes, hurricanes, tornadoes and terrorist acts; eminent domain seizures; and casualty or condemnation losses. Real estate income and values also may be greatly affected by demographic trends, such as population shifts, changing tastes and values, increasing vacancies or declining rents resulting from legal, cultural, technological, global or local economic developments.

Regulatory Risk. Real estate income and values may be adversely affected by applicable domestic and foreign laws (including tax laws). Government actions, such as tax increases, zoning law changes or environmental regulations also may have a major impact on real estate.

Repayment Risk. The prices of real estate company securities may drop because of the failure of borrowers to repay their loans, poor management, or the inability to obtain financing either on favorable terms or at all. If the properties do not generate sufficient income to meet operating expenses, including, where applicable, debt service, ground lease payments, tenant improvements, third-party leasing commissions and other capital expenditures, the income and ability of the real estate companies to make payments of interest and principal on their loans will be adversely affected.

U.S. Tax Risk. Certain U.S. real estate companies are subject to special U.S. federal tax requirements. A REIT that fails to comply with such tax requirements may be subject to U.S. federal income taxation, which may affect the value of the REIT and the characterization of the REIT's distributions. The U.S. federal tax requirement that a REIT distributes substantially all of its net income to its shareholders may result in the REIT having insufficient capital for future expenditures. A REIT that successfully maintains its qualification may still become subject to U.S. federal, state and local taxes, including excise, penalty, franchise, payroll, mortgage recording, and transfer taxes, both directly and indirectly through its subsidiaries.

These factors could affect real estate companies and could affect the value of the equity securities held by the iShares® U.S. Real Estate ETF and the price of the iShares® U.S. Real Estate ETF during the term of the securities, which may adversely affect the value of your securities.

For securities 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 securities.

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. As a result, the value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting this sector than a different investment linked to securities of a more broadly diversified group of issuers.

The success of consumer product manufacturers and retailers is tied closely to the performance of the overall domestic and global economy, interest rates, competition and consumer confidence. Success depends heavily on disposable household income and consumer spending. Also, companies in the consumer discretionary sector may be subject to severe competition, which may have an adverse impact on their respective profitability. Changes in demographics and consumer tastes can also affect the demand for, and success of, consumer products and services in the marketplace.

These factors could affect the consumer discretionary sector and could affect the value of the equity securities held by the Consumer Discretionary Select Sector SPDR® Fund and the price of the Consumer Discretionary Select Sector SPDR® Fund during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the Consumer Discretionary Select Sector SPDR® Fund, changes to the underlying index for the Consumer Discretionary Select Sector SPDR® Fund expected in late September 2018 may adversely affect the value of the securities.

In November 2017, S&P Dow Jones Indices LLC and MSCI Inc. announced that, after the close of business on September 28, 2018, the GICS® consumer discretionary sector will be updated to (a) expand the internet & direct marketing retail industry to include companies providing online marketplaces for consumer products and services and e-commerce companies regardless of whether they hold inventory and (b) discontinue the media industry (which will be moved to the renamed GICS® communication services sector). The underlying index for the Consumer Discretionary Select Sector SPDR® Fund, the Consumer Discretionary Select Sector Index is designed to measure the performance of the GICS® consumer discretionary sector and is expected to reflect these changes to the GICS® consumer discretionary sector on or after that date. As a result, the Consumer Discretionary Select Sector SPDR® Fund is expected to change its holdings on or after that date to reflect the changes to its underlying index. This change could adversely affect the performance of the Consumer Discretionary Select Sector SPDR® Fund and, in turn, the value of the securities.

For securities 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 securities.

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. As a result, the value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting this sector than a different investment linked to securities of a more broadly diversified group of issuers.

Consumer staples companies are subject to government regulation affecting their products, which may negatively impact these companies' performance. 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 product companies may be strongly affected by consumer interest, marketing campaigns and other factors affecting supply and demand, including performance of the overall domestic and global economy, interest rates, competition and consumer confidence and spending.

These factors could affect the consumer staples sector and could affect the value of the equity securities held by the Consumer Staples Select Sector SPDR® Fund and the price of the Consumer Staples Select Sector SPDR® Fund during the term of the securities, which may adversely affect the value of your securities.

For securities 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 securities.

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.

These factors could affect the energy sector and could affect the value of the equity securities held by the Energy Select Sector SPDR® Fund and the value of the Energy Select Sector SPDR® Fund during the term of the securities, which may adversely affect the value of your securities.

For securities 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 securities.

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 financial 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.

These factors could affect the financial sector and could affect the value of the equity securities held by the Financial Select Sector SPDR® Fund and the value of the Financial Select Sector SPDR® Fund during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the Financial Select Sector SPDR® Fund, in September 2016, the Financial Select Sector SPDR® Fund ceased providing exposure to the real estate sector and this change in exposure could adversely affect the value of the securities.

The Financial Select Sector SPDR® Fund seeks to track the Financial Select Sector Index. On September 19, 2016, the Financial Select Sector Index was reconstituted to eliminate the stocks of real estate management and development companies and real estate investment trusts (“REITs”) (other than mortgage REITs) (“real estate stocks”). In order to implement a corresponding change to its portfolio, the Financial Select Sector SPDR® Fund exchanged its real estate stocks for shares of the Real Estate Select Sector SPDR® Fund and then distributed those shares to its holders as a special share distribution with an ex-date of September 19, 2016. As of September 19, 2016, the Financial Select Sector SPDR® Fund no longer holds real estate stocks. The Financial Select Sector SPDR® Fund now tracks the performance of only those financial company stocks that remain in the Financial Select Sector Index following its reconstitution, which exclude real estate stocks. Consequently, the Financial Select Sector SPDR® Fund is less diversified, and is more concentrated in the financial sector, than it was before this change to its portfolio.

The net asset value of the shares of the Real Estate Select Sector SPDR® Fund distributed for each share of the Financial Select Sector SPDR® Fund represented approximately 18.8% of the net asset value of the Fund as of September 16, 2016. Accordingly, the changes to the Financial Select Sector SPDR® Fund described above represent a significant change in the nature of the Fund and its holdings. These changes could adversely affect the performance of the Financial Select Sector SPDR® Fund and, in turn, the value of the securities.

For securities 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 securities.

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. As a result, the value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting this sector than a different investment linked to securities of a more broadly diversified group of issuers.

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 also 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.

These factors could affect the health care sector and could affect the value of the equity securities held by the Health Care Select Sector SPDR® Fund and the price of the Health Care Select Sector SPDR® Fund during the term of the securities, which may adversely affect the value of your securities.

For securities 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 securities.

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. As a result, the value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting this sector than a different investment linked to securities of a more broadly diversified group of issuers.

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.

These factors could affect the industrial sector and could affect the value of the equity securities held by the Industrial Select Sector SPDR® Fund and the price of the Industrial Select Sector SPDR® Fund during the term of the securities, which may adversely affect the value of your securities.

For securities 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 securities.

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. As a result, the value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting this sector than a different investment linked to securities of a more broadly diversified group of issuers.

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.

These factors could affect the materials sector and could affect the value of the equity securities held by the Materials Select Sector SPDR® Fund and the price of the Materials Select Sector SPDR® Fund during the term of the securities, which may adversely affect the value of your securities.

For securities 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 securities.

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. As a result, the value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting this sector than a different investment linked to securities of a more broadly diversified group of issuers. There are special risks associated with investment in securities of companies engaged in real property markets, including, without limitation REITs and real estate operating companies.

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. An investment in a real property company is subject to additional risks, such as poor performance by the manager of the real property company, adverse changes in tax laws, difficulties in valuing and disposing of real estate, and the effect of general declines in stock prices. 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. Also, the organizational documents of a real property company may contain provisions that make changes in control of the company difficult and time-consuming. As a shareholder in a real property company, the Real Estate Select Sector SPDR® Fund would bear their ratable shares of the real property company's expenses and would at the same time continue to pay their own fees and expenses.

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, as well as defaults by borrowers and self-liquidation. 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 with protecting its investments. In addition, a REIT could possibly fail to qualify for favorable tax treatment under the Internal Revenue Code, or to maintain its exemptions from registration under the 1940 Act, which could have adverse consequences for the Real Estate Select Sector SPDR® Fund. Investments in REITs are also subject to the risks affecting equity markets generally.

These factors could affect the real estate sector and could affect the value of the equity securities held by the Real Estate Select Sector SPDR® Fund and the price of the Real Estate Select Sector SPDR® Fund during the term of the securities, which may adversely affect the value of your securities.

For securities 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 securities.

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. As a result, the value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting this sector than a different investment linked to securities of a more broadly diversified group of issuers.

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.

These factors could affect the technology sector and could affect the value of the equity securities held by the Technology Select Sector SPDR® Fund and the price of the Technology Select Sector SPDR® Fund during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the Technology Select Sector SPDR® Fund, changes to the underlying index for the Technology Select Sector SPDR® Fund expected in late September 2018 may adversely affect the value of the securities.

In November 2017, S&P Dow Jones and MSCI announced that, after the close of business on September 28, 2018, the GICS® telecommunication services sector will be broadened and renamed the communication services sector to include companies that facilitate communication and offer related content and information through various media, resulting in the addition of three GICS® industries within the renamed communication services sector: media; entertainment; and interactive media & services. The underlying index for the Technology Select Sector SPDR® Fund, the Technology Select Sector Index is designed to measure the performance of the GICS® information technology sector and telecommunication services sector and is expected to reflect these changes to the GICS® telecommunication services sector on or after that date. As a result, the Technology Select Sector SPDR® Fund is expected to change its holdings on or after that date to reflect the changes to its underlying index. This change could adversely affect the performance of the Technology Select Sector SPDR® Fund and, in turn, the value of the securities.

For securities 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 securities.

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. 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 sector than a different investment linked to securities of a more broadly diversified group of issuers.

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 securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the SPDR® Gold Trust, the performance and market value of the SPDR® Gold Trust, particularly during periods of market volatility, may not correlate with the performance of the SPDR® Gold Trust's underlying commodity as well as the net asset value per share.

The SPDR® Gold Trust does not fully replicate the performance of gold, its "Underlying Commodity," due to the fees and expenses charged by the SPDR® Gold Trust or by restrictions on access to its Underlying Commodity due to other circumstances. The SPDR® Gold Trust does not generate any income, and as the SPDR® Gold Trust regularly sells its Underlying Commodity to pay for ongoing expenses, the amount of its Underlying Commodity represented by each share gradually declines over time. The SPDR® Gold Trust sells its Underlying Commodity 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 its Underlying Commodity. The sale by SPDR® Gold Trust of its Underlying Commodity to pay expenses at a time of low prices for its Underlying Commodity could adversely affect the value of the securities. Additionally, there is a risk that part or all of the SPDR® Gold Trust's holdings in its Underlying Commodity could be lost, damaged or stolen due to war, terrorism, theft, natural disaster or otherwise. All of these factors may lead to a lack of correlation between the performance of the SPDR® Gold Trust and its Underlying Commodity. In addition, because the shares of the SPDR® Gold Trust are traded on a securities exchange 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.

During periods of market volatility, the SPDR® Gold Trust's Underlying Commodity may be unavailable in the secondary market, market participants may be unable to calculate accurately the net asset value per share of the SPDR® Gold Trust and the liquidity of the SPDR® Gold Trust may be adversely affected. This kind of market volatility may also disrupt the ability of market participants to create and redeem shares of the SPDR® Gold Trust. Further, market volatility may adversely affect, sometimes materially, the prices at which market participants are willing to buy and sell shares of the SPDR® Gold Trust. As a result, under these circumstances, the market value of shares of the SPDR® Gold Trust may vary substantially 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 may not correlate with the performance of its Underlying Commodity as well as the net asset value per share of the SPDR® Gold Trust, which could materially and adversely affect the value of the securities in the secondary market and/or reduce any payment on the securities.

For securities 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 securities and your return on your investment in the securities. 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, especially those of unexpected nature. 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 securities linked in whole or in part to the SPDR® Gold Trust, economic or political events or crises, especially those of unexpected nature, 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 securities.

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 securities. 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 securities.

For securities 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 securities 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. The LBMA, or an independent service provider appointed by the LBMA, may alter, discontinue or suspend calculation or dissemination of the LBMA gold price, which could adversely affect the value of the securities. The LBMA, or an independent service provider appointed by the LBMA, will have no obligation to consider your interests in calculating or revising the LBMA gold price.

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

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 securities.

For securities linked in whole or in part to the SPDR® Gold Trust, single commodity prices, such as gold prices, tend to be more volatile than, and may not correlate with, the prices of commodities generally.

The SPDR® Gold Trust is linked to a single commodity and not to a diverse basket of commodities or a broad-based commodity index. The SPDR® Gold Trust's Underlying Commodity may not correlate to the price of commodities generally and may diverge significantly from the prices of commodities generally. As a result, the securities carry greater risk and may be more volatile than securities linked to the prices of more commodities or a broad-based commodity index.

For securities linked in whole or in part to the SPDR® S&P® Bank ETF or the SPDR® S&P® Regional Banking ETF, risks associated with the banking industry will affect the value of the securities.

All or substantially all of the equity securities held by the SPDR® S&P® Bank ETF and the SPDR® S&P® Regional Banking ETF are issued by companies whose primary line of business is directly associated with the banking industry. As a result, the value of the securities 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 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, 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 banking companies. Banks may also be subject to severe price competition. Competition among banking companies is high and failure to maintain or increase market share may result in lost market share.

These factors could affect the banking industry and could affect the value of the equity securities held by the SPDR® S&P® Bank ETF and the SPDR® S&P® Regional Banking ETF and the prices of the SPDR® S&P® Bank ETF and the SPDR® S&P® Regional Banking ETF during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the SPDR® S&P® Biotech ETF, risks associated with the biotechnology industry will affect the value of the securities.

All or substantially all of the equity securities held by the SPDR® S&P® Biotech ETF are issued by companies whose primary line of business is directly associated with the biotechnology industry. As a result, the value of the securities 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.

Biotechnology companies invest heavily in research and development, which may not necessarily lead to commercially successful products. These companies are also subject to increased governmental regulation, which may delay or inhibit the release of new products. Many biotechnology companies are dependent upon their ability to use and enforce intellectual property rights and patents. Any impairment of these rights may have adverse financial consequences. Biotechnology stocks, especially those of smaller, less-seasoned companies, tend to be more volatile than the overall market. Biotechnology companies can be significantly affected by technological change and obsolescence, product liability lawsuits and consequential high insurance costs.

These factors could affect the biotechnology industry and could affect the value of the equity securities held by the SPDR® S&P® Biotech ETF and the price of the SPDR® S&P® Biotech ETF during the term of the securities, which may adversely affect the value of your securities.

For securities 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 securities.

All or substantially all of the equity securities held by the SPDR® S&P® Homebuilders ETF are issued by companies whose primary line of business is directly associated with the homebuilding industry. As a result, the value of the securities 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.

Homebuilding companies can be significantly affected by the national, regional and local real estate markets. This industry is also sensitive to interest rate fluctuations which can cause changes in the availability of mortgage capital and directly affect the purchasing power of potential homebuyers. The building industry can be significantly affected by changes in government spending, consumer confidence, demographic patterns and the level of new and existing home sales.

These factors could affect the homebuilding industry and could affect the value of the equity securities held by the SPDR® S&P® Homebuilders ETF and the price of the SPDR® S&P® Homebuilders ETF during the term of the securities, which may adversely affect the value of your securities.

For securities 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 securities.

All or substantially all of the equity securities held by the SPDR® S&P® Metals & Mining ETF are issued by companies whose primary line of business is directly associated with the metals and mining industry. As a result, the value of the securities 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.

Metals and mining companies can be significantly affected by events relating to international political and economic developments, energy conservation, the success of exploration projects, commodity prices, and tax and other government regulations. Investments in metals and mining companies may be speculative and may be subject to greater price volatility than investments in other types of companies. Risks of metals and mining investments include: changes in international monetary policies or economic and political conditions that can affect the supply of precious metals and consequently the value of metals and mining company investments; the United States or foreign governments may pass laws or regulations limiting metals investments for strategic or other policy reasons; and increased environmental or labor costs may depress the value of metals and mining investments.

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 securities, which may adversely affect the value of your securities.

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

All or substantially all of the equity securities held by the SPDR® S&P® Oil & Gas Exploration & Production ETF are issued by companies whose primary line of business is directly associated with the oil and gas exploration and production industry. As a result, the value of the securities 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.

Issuers in energy-related industries can be significantly affected by fluctuations in energy prices and supply and demand of energy fuels caused by geopolitical events, energy conservation or use of alternative fuel sources, the success of exploration projects, weather or meteorological events, taxes, increased governmental or environmental regulation, resource depletion, rising interest rates, declines in domestic or foreign production, accidents or catastrophic events, or terrorist threats or attacks, among others. 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 through exploration of new sources of supply, through the development of existing sources, through acquisitions, or through long-term contracts to acquire reserves. Factors adversely affecting producers, refiners, distributors, or others in the energy sector may affect adversely companies that service or supply those entities, either because demand for those services or products is curtailed, or those services or products come under price pressure.

Oil and gas companies develop and produce crude oil and natural gas and provide drilling and other energy resources production and distribution related services. Stock prices for these types of companies are affected by supply and demand both for their specific product or service and for energy products in general. The price of oil and gas, exploration and production spending, government regulation, world events and economic conditions will likewise affect the performance of these companies. Correspondingly, securities of companies in the energy field are subject to swift price and supply fluctuations caused by events relating to international politics, energy conservation, the success of exploration projects, and tax and other governmental regulatory policies. Weak demand for the companies' products or services or for energy products and services in general, as well as negative developments in these other areas, would adversely impact the SPDR® S&P® Oil & Gas Exploration & Production ETF's performance. 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.

These factors could affect the oil and gas exploration and production industry and could affect the value of the equity securities held by the SPDR® S&P® Oil & Gas Exploration & Production ETF and the price of the SPDR® S&P® Oil & Gas Exploration & Production ETF during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the United States Oil Fund, LP, the performance and market value of the United States Oil Fund, LP, particularly during periods of market volatility, may not correlate with the performance of its Underlying Commodity or its benchmark oil futures contract as well as the net asset value per share.

The United States Oil Fund, LP does not fully replicate the performance of its Underlying Commodity or its benchmark oil futures contract (each as defined under "Fund Descriptions — The United States Oil Fund, LP" below). The United States Oil Fund, LP does not hold its Underlying Commodity directly and investing primarily in futures contracts for its Underlying Commodity, oil futures contracts and other oil interests. In addition, the performance of the United States Oil Fund, LP will reflect its expenses and transaction costs, including those incurred in connection with its trading activities. All of these factors may lead to a lack of correlation between the performance of the United States Oil Fund, LP and its Underlying Commodity and its benchmark oil futures contract.

The investment objective of the United States Oil Fund, LP is for the daily changes in percentage terms of the net asset value of its shares to reflect the daily changes in percentage terms of its Underlying Commodity, as measured by the daily changes in the price of its benchmark oil futures contract, less its expenses. The United States Oil Fund, LP's investment objective is not for its net asset value or market price of its shares to equal, in dollar terms, the spot price of light, sweet crude oil or any particular futures contract based on light, sweet crude oil, nor is the United States Oil Fund, LP's investment objective for the percentage change in its net asset value to reflect the percentage change of the price of any particular futures contract as measured over a time period greater than one day. There is the risk that the daily changes in the price of the United States Oil Fund, LP's shares on a percentage basis will not closely track the daily changes in the spot price of light, sweet crude oil on a percentage basis. This could happen if the price of United States Oil Fund, LP s shares traded on its primary exchange does not correlate closely with the net asset value per share of the United States Oil Fund, LP; the changes in net asset value per share of the United States Oil Fund, LP do not correlate closely with the changes in the price of the benchmark oil futures contract; or the changes in the price of the benchmark oil futures contract do not closely correlate with the changes in the cash or spot price of crude oil. In addition, disruptions in the market for light, sweet crude oil, the imposition of position or accountability limits by regulators or exchanges or other extraordinary circumstances may impact the variance between the performances of the United States Oil Fund, LP and its benchmark oil futures contract. Further, the correlation between the prices of the benchmark oil futures contract and the spot price of the Underlying Commodity may at time be only approximate. The degree of imperfection of correlation depends upon circumstance such as variations in the speculative oil market, supply of and demand for oil futures contracts (including the benchmark oil futures contract) and other oil-related investments, and technical influences in oil futures trading. Finally, because the shares of the United States Oil Fund, LP are traded on a securities exchange and are subject to market supply and investor demand, the market value of one share of the United States Oil Fund, LP may differ from the net asset value per share of the United States Oil Fund, LP.

During periods of market volatility, the United States Oil Fund, LP's benchmark oil futures contract may be unavailable in the secondary market, market participants may be unable to calculate accurately the net asset value per share of the United States Oil Fund, LP and the liquidity of the United States Oil Fund, LP may be adversely affected. This kind of market volatility may also disrupt the ability of market participants to create and redeem shares of the United States Oil Fund, LP. Further, market volatility may adversely affect, sometimes materially, the prices at which market participants are willing to buy and sell shares of the United State Oil Fund, LP. As a result, under these circumstances, the market value of shares of the United State Oil Fund, LP may vary substantially from the net asset value per share of the United State Oil Fund, LP. For all of the foregoing reasons, the performance of the United State Oil Fund, LP may not correlate with the performance of its Underlying Commodity or its benchmark oil futures contract as well as the net asset value per share of the United State Oil Fund, LP, which could materially and adversely affect the value of the securities in the secondary market and/or reduce any payment on the securities.

For securities linked in whole or in part to the United States Oil Fund, LP, the market price of crude oil will affect the value of the securities.

Because the securities are linked in whole or in part to the performance of the United States Oil Fund, LP, which invests primarily in futures contracts on light, sweet crude oil, we expect that generally the market value of the securities will depend in part on the market price of crude oil. The price of crude oil is primarily affected by the global demand for and supply of crude oil, but is also influenced significantly from time to time by speculative actions and by currency exchange rates. Crude oil prices are volatile and subject to dislocation. Demand for refined petroleum products by consumers, as well as the agricultural, manufacturing and transportation industries, affects the price of crude oil. Crude oil's end-use as a refined product is often as transport fuel, industrial fuel and in-home heating fuel. Potential for substitution in most areas exists, although considerations, including relative cost, often limit substitution levels. Because the precursors of demand for petroleum products are linked to economic activity, demand will tend to reflect economic conditions. Demand is also influenced by government regulations, such as environmental or consumption policies. In addition to general economic activity and demand, prices for crude oil are affected by political events, labor activity and, in particular, direct government intervention (such as embargos) or supply disruptions in major oil producing regions of the world. Such events tend to affect oil prices worldwide, regardless of the location of the event. Supply for crude oil may increase or decrease depending on many factors. These include production decisions by the Organization of the Petroleum Exporting Countries ("OPEC") and other crude oil producers. Crude oil prices are determined with significant influence by OPEC. OPEC has the potential to influence oil prices worldwide because its members possess a significant portion of the world's oil supply. In the event of sudden disruptions in the supplies of oil, such as those caused by war, natural events, accidents or acts of terrorism, prices of oil futures contracts could 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 oil, the introduction of new or previously withheld supplies into the market or the introduction of substitute products or commodities. Crude oil prices may also be affected by short-term changes in supply and demand because of trading activities in the oil market and seasonality (*e.g.*, weather conditions such as hurricanes). It is not possible to predict the aggregate effect of all or any combination of these factors.

For securities linked in whole or in part to the United States Oil Fund, LP, the United States Oil Fund, LP may be more volatile and more susceptible to price fluctuations of commodity futures contracts than an index or fund that provides broad commodity exposure.

In contrast to an index or fund that includes or holds contracts on crude oil and non-crude oil commodities, the United States Oil Fund, LP primarily invests on contracts only on crude oil. As a result, price volatility in the contracts held by the United States Oil Fund, LP will likely have a greater impact on the United State Oil Fund, LP than it would on an index or fund with broad commodity exposure. In addition, because the United State Oil Fund, LP omits principal market sectors composing the commodity market, it will be less representative of the economy and commodity markets as a whole and will therefore not serve as a reliable benchmark for commodity market performance generally.

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

All or substantially all of the equity securities held by the VanEck Vectors® Gold Miners ETF are issued by companies whose primary line of business is directly associated with the gold and/or silver mining industries. As a result, the value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting these industries than a different investment linked to securities of a more broadly diversified group of issuers.

Investments related to gold and silver are considered speculative and are affected by a variety of factors. Competitive pressures may have a significant effect on the financial condition of gold mining and silver mining companies. Also, gold and silver mining companies are highly dependent on the price of gold bullion and silver bullion, respectively, but may also be adversely affected by a variety of worldwide economic, financial and political factors. Therefore, the securities of companies involved in the gold or silver mining industry may under- or over-perform commodities themselves over the short-term or long-term. Gold bullion and silver bullion prices may fluctuate substantially over short periods of time, even during periods of rising prices, so the VanEck Vectors® Gold Miners ETF's share price may be more volatile than other types of investments.

A drop in the price of gold and/or silver bullion would particularly adversely affect the profitability of small- and medium-capitalization mining companies and their ability to secure financing. Furthermore, companies that are only in the exploration stage are typically unable to adopt specific strategies for controlling the impact of the price of gold or silver. The price of gold has fluctuated in recent years and may continue to fluctuate. These prices may fluctuate substantially over short periods of time so the VanEck Vectors® Gold Miners ETF's share price may be more volatile than other types of investments. Fluctuation in the prices of gold and silver may be due to a number of factors, including the changes in inflation and changes in industrial and commercial demand for metals. Additionally, increased environmental or labor costs may depress the value of metal investments. In times of significant inflation or great economic uncertainty, gold, silver and other precious metals may outperform traditional investments such as bonds and stocks. However, in times of stable economic growth, traditional equity and debt investments could offer greater appreciation potential and the value of gold, silver and other precious metals may be adversely affected, which could in turn affect the VanEck Vectors® Gold Miners ETF's returns.

A significant portion of the world's gold reserves are held by governments, central banks and related institutions. The production, purchase and sale of precious metals by governments or central banks or other larger holders can be negatively affected by various economic, financial, social and political factors, which may be unpredictable and may have a significant adverse impact on the supply and prices of precious metals. Additionally, the United States or foreign governments may pass laws or regulations limiting metal investments for strategic or other policy reasons.

The principal supplies of metal industries also may be concentrated in a small number of countries and regions. Economic, social and political conditions in those countries that are the largest producers of gold and silver may have a direct negative effect on the production and marketing of gold and silver and on sales of central bank gold holdings. Some gold, silver and precious metals mining operation companies may hedge their exposure to declines in gold, silver and precious metals prices by selling forward future production, which may result in lower returns during periods when the prices of gold, silver and precious metals increase.

The gold, silver and precious metals industries can be significantly adversely affected by events relating to international political developments, the success of exploration projects, commodity prices, tax and government regulations and intervention (including government restrictions on private ownership of gold and mining land), changes in inflation or expectations regarding inflation in various countries and investment speculation. If a natural disaster or other event with a significant economic impact occurs in a region where the companies in which the VanEck Vectors® Gold Miners ETF invests operate, that disaster or event could negatively affect the profitability of such companies and, in turn, the VanEck Vectors® Gold Miners ETF's investment in them. Gold and silver mining companies may also be significantly adversely affected by import controls, worldwide competition, environmental hazards, liability for environmental damage, depletion of resources, industrial accidents, underground fires, seismic activity, labor disputes, unexpected geological formations, availability of appropriately skilled persons, unanticipated ground and water conditions and mandated expenditures for safety and pollution control devices.

These factors could affect the gold and silver mining industries and could affect the value of the equity securities held by the VanEck Vectors® Gold Miners ETF and the price of the VanEck Vectors® Gold Miners ETF during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the VanEck Vectors® Oil Services ETF, risks associated with the oil services sector will affect the value of the securities.

All or substantially all of the equity securities held by the VanEck Vectors® Oil Services ETF are issued by companies whose primary line of business is directly associated with the oil services sector. As a result, the value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting this sector than a different investment linked to securities of a more broadly diversified group of issuers.

The profitability of companies in the oil services sector is related to worldwide energy prices, including all sources of energy, and exploration and production costs. The price of energy, the earnings of companies in the oil services sector, and the value of these companies' securities have recently experienced significant volatility. Additionally, the price of oil has also recently experienced significant volatility and has declined significantly, which may materially impact companies operating in the oil services sector. These companies are also subject to risks of changes in exchange rates and the price of oil and gas, changes in prices for competitive energy services, changes in the global supply of and demand for oil and gas, the imposition of import controls, world events, actions of the Organization of Petroleum Exporting Countries, negative perception and publicity, depletion of resources and general economic conditions, development of alternative energy sources, energy conservation efforts, technological developments and labor relations, as well as market, economic, social and political risks of the countries where oil services companies are located or do business. The values of securities of oil services companies are subject to swift price and supply fluctuations caused by events relating to international politics, including political instability, expropriation, social unrest and acts of war, energy conservation, the success of exploration projects and tax and other governmental regulatory policies. Oil services companies operate in a highly competitive and cyclical industry, with intense price competition.

The oil services sector is exposed to significant and numerous operating hazards. Oil services companies' operations are subject to hazards inherent in the oil and gas industry, such as fire, explosion, blowouts, loss of well control, oil spills, pipeline and equipment leaks and ruptures and discharges or releases of toxic or hazardous gases. Oil and gas exploration and production can be significantly affected by natural disasters and adverse weather conditions in the regions in which they operate. The revenues of oil services companies may be negatively affected by contract termination and renegotiation. In the oil services sector, it is customary for contracts to provide for either automatic termination or termination at the option of the customer if the drilling unit is destroyed or lost or if drilling operations are suspended for a specified period of time as a result of events beyond the control of either party or because of equipment breakdowns. In periods of depressed market conditions, the customers of oil services companies may not honor the terms of existing contracts and may terminate contracts or seek to renegotiate contract rates and terms to reduce their obligations.

Oil services companies are subject to, and may be adversely affected by, extensive federal, state, local and foreign laws, rules and regulations. Oil exploration and production companies may also be adversely affected by environmental damage claims and other types of litigation. Laws and regulations protecting the environment may expose oil services companies to liability for the conduct of or conditions caused by others or for acts that were in compliance with all applicable laws at the time they were performed. Changes to environmental protection laws, including the implementation of policies with less stringent environmental protection standards and those geared away from sustainable energy development, could lead to fluctuations in supply, demand and prices of oil and gas. The international operations of oil services companies expose them to risks associated with instability and changes in economic and political conditions, foreign currency fluctuations, changes in interest rates, changes in foreign regulations and other risks inherent to international business. Additionally, changes to U.S. trading policies could cause friction with certain oil producing countries and between the governments of the United States and other major exporters of oil to the United States. Some of the companies in the oil services sector are engaged in other lines of business unrelated to oil services, and they may experience problems with these lines of business, which could adversely affect their operating results. The operating results of these companies may fluctuate as a result of these additional risks and events in the other lines of business. In addition, a company's ability to engage in new activities may expose it to business risks with which it has less experience than it has with the business risks associated with its traditional businesses. Despite a company's possible success in traditional oil services activities, there can be no assurance that the other lines of business in which these companies are engaged will not have an adverse effect on a company's business or financial condition.

These factors could affect the oil services sector and could affect the value of the equity securities held by the VanEck Vectors® Oil Services ETF and the price of the VanEck Vectors® Oil Services ETF during the term of the securities, which may adversely affect the value of your securities.

For securities linked in whole or in part to the Vanguard FTSE Emerging Markets ETF, the index tracked by the Vanguard FTSE Emerging Markets ETF has changed over time.

The Vanguard FTSE Emerging Markets ETF tracked the Select Emerging Markets Index through August 23, 2006; the MSCI Emerging Markets Index through January 9, 2013; the FTSE Emerging Transition Index through June 27, 2013; the FTSE Emerging Index through November 1, 2015; the FTSE Emerging Markets All Cap China A Transition Index through September 18, 2016. Since September 19, 2016, the Vanguard FTSE Emerging Markets ETF has tracked the FTSE Emerging Markets All Cap China A Inclusion Index. Korean companies were first included as part of the transition to the FTSE Emerging Index, and small-capitalization stocks and China A-shares were first included as part of the transition to the FTSE Emerging Markets All Cap China A Inclusion Index. China A-shares, which are securities of Chinese-incorporated companies that trade on either the Shanghai or Shenzhen stock exchange, are quoted in Renminbi and can be traded only either by residents of the People's Republic of China or under the qualified foreign institutional investor ("QFII") and/or Renminbi QFII ("RQFII") rules and stock connect schemes. These changes could adversely affect the performance of the Vanguard FTSE Emerging Markets ETF and, in turn, your return on the securities. In addition, there is limited historical information that reflects the Vanguard FTSE Emerging Markets ETF's tracking of the FTSE Emerging Markets All Cap China A Inclusion Index.

For securities linked in whole or in part to the WisdomTree Japan Hedged Equity Fund, the currency hedge strategy employed by the WisdomTree Japan Hedged Equity Fund may not sufficiently reduce its exposure to currency fluctuations.

The price of the WisdomTree Japan Hedged Equity Fund is related to the U.S. dollar value of equity securities that trade in Japanese yen. The WisdomTree Japan Hedged Equity Fund attempts to mitigate the impact of currency fluctuations on its performance by entering into forward currency contracts or futures contracts designed to offset its exposure to the Japanese yen. The amount of forward contracts and futures contracts in the WisdomTree Japan Hedged Equity Fund is based on the aggregate exposure of the WisdomTree Japan Hedged Equity Fund to the Japanese yen. However, this approach may not eliminate the exposure of the WisdomTree Japan Hedged Equity Fund to the Japanese yen. The return of the forward currency contracts and currency futures contracts may not offset the actual fluctuations between the Japanese yen and the U.S. dollar.

As a result, the holders of the securities will still likely be exposed to currency exchange rate risk with respect to the Japanese yen. Exchange rate movements for a particular currency are volatile and are the result of numerous factors including the supply of, and the demand for, that currency, as well as relevant government policy, intervention or actions, but are also influenced significantly from time to time by political or economic developments, and by macroeconomic factors and speculative actions related to the relevant region. An investor's net exposure will depend on the extent to which the currency hedge strategy employed by the WisdomTree Japan Hedged Equity Fund is able to mitigate currency fluctuations and the extent to which the Japanese yen strengthens or weakens against the U.S. dollar. If the U.S. dollar strengthens against the Japanese yen, the price of the WisdomTree Japan Hedged Equity Fund could be adversely affected and the payment at maturity on the securities may be reduced.

For securities linked in whole or in part to the WisdomTree Japan Hedged Equity Fund, the performance of the WisdomTree Japan Hedged Equity Fund likely will not benefit from any appreciation of the Japanese yen relative to the U.S. dollar.

The currency hedge strategy of the WisdomTree Japan Hedged Equity Fund will likely result in lower returns in the WisdomTree Japan Hedged Equity Fund than an equivalent unhedged investment when the Japanese yen is rising relative to the U.S. dollar. Consequently, the weakening of the U.S. dollar relative to the Japanese yen is not expected to have any positive impact on the WisdomTree Japan Hedged Equity Fund (as compared to returns of an equivalent unhedged investment).

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."

Index Composition and Maintenance

The Dow Jones Industrial Average™ is a price-weighted index composed of 30 common stocks selected by a committee (for purposes of this section, the "Averages Committee"). The index universe consists of securities in the S&P 500® Index, excluding stocks classified under Global Industry Classification Standard (GICS®) code 2030 (Transportation) and 55 (Utilities). The definition of industrial is kept intentionally broad to provide an indicator that reflects the performance of the entire U.S. economy, excluding the transportation and utilities sectors.

While there are no rules for component selection, 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 sector(s) covered by the average. Companies should be incorporated and headquartered in the U.S. In addition, a plurality of revenues should be derived from the U.S. The Dow Jones Industrial Average™ serves as a measure of the entire U.S. market such as financial services, technology, retail, entertainment and consumer goods and is not limited to traditionally defined industrial stocks.

The Dow Jones Industrial Average™ is maintained by the Averages Committee comprised of S&P Dow Jones staff as well as non- S&P Dow Jones staff as minority members. The Dow Jones Industrial Average™ is reviewed as needed, and composition changes are rare for the sake of continuity. There is no annual or semi-annual reconstitution. Rather, 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. When such an event necessitates that one component be replaced, the entire index is reviewed. As a result, when changes are made they typically involve more than one component.

Corporate actions (such as stock splits, stock dividends, and rights offerings) are applied after the close of trading on the day prior to the ex-date. Any potential impact of a spin-off on constituents of the Dow Jones Industrial Average™ is evaluated by the Averages Committee on a case-by-case basis.

Type of Corporate Action	**Index Adjustment**	**Divisor Adjustment**
Spin-off	The price of the parent company is adjusted to the price of the parent company minus (the price of the spun-off company/share exchange ratio).	Yes
Rights offering	The price is adjusted according to the terms of the rights offering.	Yes
Stock dividend, stock split, reverse stock split	The price is adjusted according to the terms of the stock split.	Yes
Share issuance, share repurchase, equity offering or warrant conversion	None	No

Special dividends	The 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
Constituent change	Deletions due to delistings, acquisition or any other corporate event resulting in the deletion of the stock from the Dow Jones Industrial AverageTM will be replaced on the effective date of the drop. In the case of a zero price spin-off, the spun-off company is not replaced.	Yes

Index Calculation

The Dow Jones Industrial Average™ is price weighted rather than market capitalization weighted. Therefore, the component stock weightings are affected only by changes in the stocks' prices, in contrast with the weightings of other indices that are affected by both price changes and changes in the number of shares outstanding. The value of the Dow Jones Industrial Average™ is the sum of the primary exchange prices of each of the 30 common stocks included in the Dow Jones Industrial Average™, divided by a divisor. The divisor is changed in accordance with a mathematical formula to adjust for stock dividends, stock splits and other corporate actions. The current divisor of the Dow Jones Industrial Average™ is published daily in newspapers, on television and radio, and over the internet. Some companies may have more than one listing of common stock outstanding. In the Dow Jones Averages Indices, each company is represented once by the primary listing. While this methodology reflects current practice in calculating the Dow Jones Industrial Average™, no assurance can be given that S&P Dow Jones will not modify or change this methodology in a manner that may affect the return on your investment.

Computation of the Dow Jones Industrial Average™. The level of the Dow Jones Industrial Average™ is the sum of the primary exchange prices of each of the 30 component stocks included in the Dow Jones Industrial Average™, divided by a divisor that is designed to provide a meaningful continuity in the level of the Dow Jones Industrial Average™. Because the Dow Jones Industrial Average™ is price-weighted, stock splits or changes in the component stocks could result in distortions in the Dow Jones Industrial Average™ level. In order to prevent these distortions related to extrinsic factors, the divisor is periodically changed in accordance with a mathematical formula that reflects adjusted proportions within the Dow Jones Industrial Average™. The current divisor of the Dow Jones Industrial Average™ is published daily in the Wall Street Journal and other publications. In addition, other statistics based on the Dow Jones Industrial Average™ may be found in a variety of publicly available sources.

The current formula used to calculate divisor adjustments is as follows: the new divisor (*i.e.*, the divisor on the next trading session) is equal to (1) the divisor on the current trading session times (2) the quotient of (a) the sum of the adjusted (for stock dividends, splits, spin-offs and other applicable corporate actions) closing prices of the Dow Jones Industrial Average™ components on the current trading session and (b) the sum of the unadjusted closing prices of the Dow Jones Industrial Average™ components on the current trading session. The formula used to calculate divisor adjustments is:

$$\text{New Divisor} = \text{Current Divisor} \times \frac{\text{Adjusted Sum of Prices}}{\text{Unadjusted Sum of Prices}}$$

Averages Committee

The Dow Jones Industrial Average™ is maintained by the Averages Committee. The Averages Committee is composed of three representatives of S&P Dow Jones Indices and two representatives of The Wall Street Journal.

The Averages Committee meets regularly. At each meeting, the Averages Committee reviews pending corporate actions that may affect index constituents, statistics comparing the composition of the Dow Jones Industrial Average™ to the market, companies that are being considered as candidates for addition to the Dow Jones Industrial Average™, and any significant market events. In addition, the Averages Committee may revise index policy covering rules for selecting companies, treatment of dividends, share counts or other matters.

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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 on 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.

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 includes stocks selected from 11 Eurozone countries: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain. At any given time, some eligible countries may not be represented in the EURO STOXX 50® Index.

The composition of the EURO STOXX 50® Index is reviewed annually in September, based on the closing stock data on the last trading day in August. Changes to the component stocks are implemented on the third Friday in September and are effective the following trading day. For each of the 19 EURO STOXX Supersector indices, the stocks are ranked in terms of free-float market capitalization. The largest stocks are added to the selection list until the coverage is close to, but still less than, 60% of the free-float market capitalization of the corresponding EURO STOXX Total Market Indices (TMI) Supersector Index. If the next highest-ranked stock brings the coverage closer to 60% in absolute terms, then it is also added to the selection list. All current EURO STOXX 50® Index stocks are added to the selection list. All the stocks on the selection list are then ranked in terms of free-float market capitalization to produce the final index selection list. The largest 40 stocks on the selection list are selected; the remaining 10 stocks are selected from the largest remaining current stocks ranked between 41 and 60; if the number of stocks selected is still below 50, then the largest remaining stocks are selected until there are 50 stocks.

In addition, stocks must meet the following minimum liquidity criteria to be eligible for inclusion in the EURO STOXX 50® Index. For each company, only the most liquid stock is considered. Stocks must have a minimum liquidity of greater than €1 million measured over 3-month average daily trading volume.

Components of the EURO STOXX 50® Index are capped at a maximum weight of 10% quarterly.

The composition of the EURO STOXX 50® Index is also reviewed on an ongoing basis as follows:

Replacements. A deleted stock is replaced immediately to maintain the fixed number of stocks. The replacement is based on the latest selection list that is updated monthly. In case of merger and acquisition where a blue-chip stock is involved, the original stock is replaced by the new stock. If a stock is deleted from the EURO STOXX Index in between the regular review dates but is still a component of the EURO STOXX Total Market Index, then this stock will remain in the EURO STOXX 50® Index until the next regular review.

Fast exit. The components are monitored for any changes based on the monthly selection list ranking (*i.e.*, on an ongoing monthly basis). A component is deleted if it ranks 75 or below on the monthly selection list and it ranked 75 or below or below on the selection list of the previous month. The announcement will be on the first trading day of the month after close of markets. The addition will be announced based on the monthly selection list (*i.e.*, the highest-ranked non-component will be selected). Changes will be implemented on the close of the fifth trading day and are effective the next trading day.

Fast entry. All stocks on the latest selection lists and initial public offering (IPO) stocks are reviewed for a fast-track addition on a quarterly basis. A stock is added, if it qualifies for the latest blue-chip selection list generated at the end of February, May, August or November, and it ranks within the lower buffer (ranks 1 – 25) on this selection list. If it is added, the stock replaces the smallest stock in the EURO STOXX 50® Index. The announcement will be on the first trading day of the month after close of markets.

Spin-offs. Each spin-off stock qualifies for addition if it lies within the lower buffer (ranks 1 – 40) on the latest selection list for the EURO STOXX 50® Index. The spin-off replaces the lowest ranked stock in the EURO STOXX 50® Index as determined by the selection list. Qualifying spin-off stocks are added in sequence: The largest qualifying spin-off stock replaces the original stock in the EURO STOXX 50® Index. The next qualifying spin-off stock replaces the lowest ranked stock in the EURO STOXX 50® Index. Likewise for the other qualifying spin-off stocks.

Free float factors and weighting cap factors. 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. The weighting cap factors are published on Wednesday two trading days prior to quarterly review using Tuesday's closing prices.

Corporate actions. 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:

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

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).

(1) *Special cash dividend:*

Cash distributions that are outside the scope of the regular dividend policy or that the company defines as an extraordinary distribution

Adjusted price = closing price – dividend announced by the company × (1 – withholding tax if applicable)

Divisor: decreases

(2) *Split and reverse split:*

Adjusted price = closing price × A / B

New number of shares = old number of shares × B / A

Divisor: unchanged

(3) *Rights offering:*

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.

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.

Adjusted price = (closing price × A + subscription price × B) / (A + B)

New number of shares = old number of shares × (A + B)/ A

Divisor: increases

(4) *Stock dividend:*

Adjusted price = closing price × A / (A + B)

New number of shares = old number of shares × (A + B) / A

Divisor: unchanged

(5) S*tock dividend (from treasury stock):*

Adjusted only if treated as extraordinary dividend.

Adjusted close = close – close × B / (A + B)

Divisor: decreases

(6) S*tock dividend of another company:*

(7) *Return of capital and share consolidation:*

Adjusted price = (closing price × A – price of other company × B) / A

Divisor: decreases

(8) R*epurchase of shares / self-tender:*

Adjusted price = ((price before tender × old number of shares) – (tender price × number of tendered shares)) / (old number of shares – number of tendered shares)

New number of shares = old number of shares – number of tendered shares

Divisor: decreases

Adjusted price = (closing price – capital return announced by company × (1-withholding tax)) × A / B

New number of shares = old number of shares × B / A

Divisor: decreases

(9) *Spin-off:*

Adjusted price = (closing price × A – price of spun-off shares × B) / A

Divisor: decreases

(10) *Combination stock distribution (dividend or split) and rights offering:*

For this corporate action, the following additional assumptions apply:

Shareholders receive B new shares from the distribution and C new shares from the rights offering for every A share held.

If A is not equal to one share, all the following "new number of shares" formulas need to be divided by A:

- If rights are applicable after stock distribution (one action applicable to other):

Adjusted price = (closing price × A + subscription price × C × (1 + B / A)) / ((A + B) × (1 + C / A))

New number of shares = old number of shares × ((A + B) × (1 + C / A)) / A

Divisor: increases

- If stock distribution is applicable after rights (one action applicable to other):

Adjusted price = (closing price × A + subscription price × C) /((A + C) × (1 + B / A))

New number of shares = old number of shares × ((A + C) × (1 + B / A))

Divisor: increases

- Stock distribution and rights (neither action is applicable to the other):

Adjusted price = (closing price × A + subscription price × C) / (A + B + C)

New number of shares = old number of shares × (A + B + C) / A

Divisor: increases

(11) *Addition / deletion of a company:*

No price adjustments are made. The net change in market capitalization determines the divisor adjustment.

(12) *Free float and shares changes:*

No price adjustments are made. The net change in market capitalization determines the divisor adjustment.

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The EURO STOXX® Banks Index

All information contained in this underlying supplement regarding the EURO STOXX® Banks 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® Banks 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® Banks Index.

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 and Maintenance

The EURO STOXX® Banks Index is derived from the EURO STOXX® Index. The EURO STOXX® Index is composed of the stocks from the STOXX® Europe 600 Index that have been issued by companies from 11 Eurozone countries: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain. The EURO STOXX® Banks Index is composed of the EURO STOXX® Index companies in the banking sector. At any given time, some eligible countries may not be represented in the EURO STOXX® Banks Index. The EURO STOXX® Banks Index is one of 19 EURO STOXX® Supersector indices that compose the EURO STOXX® 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 EURO STOXX® 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 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 after the close on the third Friday in each of March, June, September and December and are effective the following trading day.

In addition, stocks must meet the following minimum liquidity criteria to be eligible for inclusion in the STOXX® Europe 600 Index (and therefore the EURO STOXX® Index and the EURO STOXX® Banks Index). For each company, only the most liquid stock is considered. Stocks must have a minimum liquidity of greater than €1 million measured over 3-month average daily trading volume.

The composition of the EURO STOXX® Banks Index indices is reviewed quarterly in connection with the quarterly review of the STOXX® Europe Index, 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 after the close 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 EURO STOXX® Index and therefore the EURO STOXX® Banks Index as follows:

Replacements. To maintain the number of components of the STOXX® Europe 600 Index constant, a deleted stock is replaced by the highest-ranked non-component on the selection list. The selection list is updated on a monthly basis according to the review component selection process. During the review implementation month, the published review component list is used as the selection list.

Spin-offs. Each spin-off stock qualifies for addition if it lies within the upper buffer on the latest selection list for the EURO STOXX 50® Index. The spin-off replaces the lowest ranked stock in the EURO STOXX 50® Index as determined by the selection list. Qualifying spin-off stocks are added in sequence: The largest qualifying spin-off stock replaces the original stock in the EURO STOXX 50® Index. The next qualifying spin-off stock replaces the lowest ranked stock in the EURO STOXX 50® Index. Likewise for the other qualifying spin-off stocks.

Free float factors. The free float factors for each component stock used to calculate the EURO STOXX® Banks Index, as described below, are reviewed, calculated and implemented on a quarterly basis and are fixed until the next quarterly review.

Corporate actions. 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.

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:

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

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 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).

(1) *Special cash dividend:*

Cash distributions that are outside the scope of the regular dividend policy or that the company defines as an extraordinary distribution

Adjusted price = closing price – dividend announced by the company × (1 – withholding tax if applicable)

Divisor: decreases
(2) *Split and reverse split:*

Adjusted price = closing price × A / B

New number of shares = old number of shares × B / A

Divisor: unchanged
(3) *Rights offering:*

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.

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.

Adjusted price = (closing price × A + subscription price × B) / (A + B)

New number of shares = old number of shares × (A + B)/ A

Divisor: increases

(4) *Stock dividend:*

Adjusted price = closing price × A / (A + B)

New number of shares = old number of shares × (A + B) / A

Divisor: unchanged

(5) S*tock dividend (from treasury stock):*

Adjusted only if treated as extraordinary dividend.

Adjusted close = close – close × B / (A + B)

Divisor: decreases

(6) S*tock dividend of another company:*

Adjusted price = (closing price × A – price of other company × B) / A

Divisor: decreases

(7) *Return of capital and share consolidation:*

Adjusted price = (closing price – capital return announced by company × (1-withholding tax)) × A / B

New number of shares = old number of shares × B / A

Divisor: decreases

(8) R*epurchase of shares / self-tender:*

Adjusted price = ((price before tender × old number of shares) – (tender price × number of tendered shares)) / (old number of shares – number of tendered shares)

New number of shares = old number of shares – number of tendered shares

Divisor: decreases

(9) *Spin-off:*

Adjusted price = (closing price × A – price of spun-off shares × B) / A

Divisor: decreases

(10) *Combination stock distribution (dividend or split) and rights offering:*

For this corporate action, the following additional assumptions apply:

Shareholders receive B new shares from the distribution and C new shares from the rights offering for every A share held.

If A is not equal to one share, all the following "new number of shares" formulae need to be divided by A:

- If rights are applicable after stock distribution (one action applicable to other):

Adjusted price = (closing price × A +

- If stock distribution is applicable after rights (one action applicable to other):

Adjusted price = (closing price × A +

subscription price × C × (1 + B / A)) / ((A + B) × (1 + C / A))	subscription price × C) /((A + C) × (1 + B / A))
New number of shares = old number of shares × ((A + B) × (1 + C / A)) / A	New number of shares = old number of shares × ((A + C) × (1 + B / A))
Divisor: increases	Divisor: increases

- *Stock distribution and rights (neither action is applicable to the other):*

Adjusted price = (closing price × A + subscription price × C) / (A + B + C)

New number of shares = old number of shares × (A + B + C) / A

Divisor: increases

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

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- **STOXX and its licensors will have no liability for any errors, omissions or interruptions in the EURO STOXX® Banks Index or its data; and**

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The STOXX® Europe 600 Index

We have derived all information contained in this underlying supplement regarding the STOXX® Europe 600 Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, STOXX Limited ("STOXX"). The STOXX® Europe 600 Index is calculated, maintained and published by STOXX. STOXX has no obligation to continue to publish, and may discontinue publication of, the STOXX® Europe 600 Index.

The STOXX® Europe 600 Index is calculated in euros and is reported by Bloomberg L.P. under the ticker symbol "SXXP."

The STOXX® Europe 600 Index was created by STOXX, a joint venture between Deutsche Börse AG and SIX Group AG. Publication of the STOXX® Europe 600 Index began on June 15, 1998, based on an initial STOXX® Europe 600 Index value of 100 at December 31, 1991. The STOXX® Europe 600 Index is disseminated on the STOXX website: http://www.stoxx.com, which sets forth, among other things, the country and industrial sector weightings of the securities included in the STOXX® Europe 600 Index and updates these weightings at the end of each quarter. Information contained in the STOXX website is not incorporated by reference in, and should not be considered a part of, this pricing supplement. We make no representation or warranty as to the accuracy or completeness of information contained on the STOXX website.

STOXX® Europe 600 Index Composition and Maintenance

The STOXX® Europe 600 Index covers the 600 largest companies in Europe and represents large, mid and small capitalization companies across 17 European countries. The STOXX® Europe 600 Index is derived from the STOXX Europe Total Market Index. The STOXX Europe Total Market Index represents the Western Europe region as a whole and covers approximately 95 percent of the free float market capitalization across 17 European countries. The selection list for the STOXX® Europe 600 Index is composed of each company's most liquid stock with a minimum liquidity of greater than one million EUR measured over 3-month average daily trading value and is ranked in terms of free-float market capitalization. From the selection list, the largest 550 stocks qualify for selection. The remaining 50 stocks are selected from the largest remaining current components ranked between 551 and 750. If the number of stocks selected is still below 600, the largest remaining stocks are selected until there are enough stocks.

The composition of the STOXX® Europe 600 Index 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 after the close on the third Friday in each of March, June, September and

December and are effective the following trading day.

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 STOXX® Europe 600 Index, as described below, are reviewed, calculated and implemented on a quarterly basis and are fixed until the next quarterly review.

Computation of the STOXX® Europe 600 Index

The STOXX® Europe 600 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 STOXX® Europe 600 Index value at any time can be expressed as follows:

$$\text{Index} = \frac{\text{free float market capitalization of the STOXX}^{\circledR}\text{ Europe 600 Index}}{\text{Divisor}}$$

The "free float market capitalization of the STOXX® Europe 600 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 STOXX® Europe 600 Index is being calculated. All components of the STOXX® Europe 600 Index are subject to a 20% cap. The STOXX® Europe 600 Index is divided into 19 supersector indices according to the ICB industry

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classification. The STOXX® Europe 600 Index caps the weight of the largest and second largest company in each supersector index at 30% and 15%, respectively.

The divisor for the STOXX® Europe 600 Index is adjusted to maintain the continuity of STOXX® Europe 600 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).

(1) *Special cash dividend:*

Cash distributions that are outside the scope of the regular dividend policy or that the company defines as an extraordinary distribution

Adjusted price = closing price – dividend announced by the company × (1 – withholding tax if applicable)

Divisor: decreases
(2) *Split and reverse split:*

Adjusted price = closing price × A / B

New number of shares = old number of shares × B / A

Divisor: unchanged
(3) *Rights offering:*

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.

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.

Adjusted price = (closing price × A + subscription price × B) / (A + B)

New number of shares = old number of shares × (A + B)/ A

Divisor: increases

(4) *Stock dividend:*

Adjusted price = closing price × A / (A + B)

New number of shares = old number of shares × (A + B) / A

Divisor: unchanged

(5) S*tock dividend (from treasury stock):*

Adjusted if treated as extraordinary dividend:

Adjusted close = close – close × B / (A + B)

Divisor: decreases

(6) S*tock dividend of another company:*

Adjusted price = (closing price × A – price of other company × B) / A

Divisor: decreases

(7) *Return of capital and share consolidation:*

Adjusted price = (closing price – capital return announced by company × (1-withholding tax)) × A / B

New number of shares = old number of shares ×

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B / A

Divisor: decreases

(8) R*epurchase of shares / self tender:*

Adjusted price = ((price before tender × old number of shares) – (tender price × number of tendered shares)) / (old number of shares – number of tendered shares)

New number of shares = old number of shares – number of tendered shares

Divisor: decreases

(9) *Spin-off:*

Adjusted price = (closing price × A – price of spun-off shares × B) / A

Divisor: decreases

(10) *Combination stock distribution (dividend or split) and rights offering:*

For this corporate action, the following additional assumptions apply:

Shareholders receive B new shares from the distribution and C new shares from the rights offering for every A share held.

If A is not equal to one share, all the following "new number of shares" formulae need to be divided by A:

- If rights are applicable after stock distribution (one action applicable to other):

Adjusted price = (closing price × A + subscription price × C × (1 + B / A)) / ((A + B) × (1 + C / A))

New number of shares = old number of shares × ((A + B) × (1 + C / A)) / A

Divisor: increases

- If stock distribution is applicable after rights (one action applicable to other):

Adjusted price = (closing price × A + subscription price × C) /((A + C) × (1 + B / A))

New number of shares = old number of shares × ((A + C) × (1 + B / A))

Divisor: increases

- Stock distribution and rights (neither action is applicable to the other):

Adjusted price = (closing price × A + subscription price × C) / (A + B + C)

New number of shares = old number of shares × (A + B + C) / A

Divisor: increases

(11) *Addition / deletion of a company:*

No price adjustments are made. The net change in market capitalization determines the divisor adjustment.

(12) *Free float and shares changes:*

No price adjustments are made. The net change in market capitalization determines the divisor adjustment.

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The FTSE® 100 Index

All information in this underlying supplement regarding the FTSE® 100 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 Russell. FTSE Russell has no obligation to continue to publish, and may discontinue publication of, the FTSE® 100 Index.

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. 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.

Companies are required to have greater than 5% of the company's voting rights (aggregated across all of its equity securities, including, where identifiable, those that are not listed or trading) in the hands of unrestricted shareholders in order to be eligible for index inclusion. Companies already included in the FTSE® 100 Index have a 5 year grandfathering period to comply or they will be removed from the FTSE® 100 Index in September 2022.

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. 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.

Corporate Events Affecting the FTSE® 100 Index

FTSE Russell applies corporate actions to the FTSE® 100 Index on a daily basis. FTSE Russell applies the following methodology guidelines, among others, when adjusting the FTSE® 100 Index in response to corporate actions:

- *Statement of Principles and Adjustments for Specific Corporate Events.* FTSE Russell has stated as general principles that the treatment of corporate events (a) should reflect how such events are likely to be dealt with in investment portfolios to maintain the portfolio structure in line with the target set out in the index objective and index methodology and (b) should normally be designed to minimize the trading activity required by investors to match the index performance. No assurance can be provided that corporate actions and events will be treated by FTSE Russell in a manner consistent with its statement of general principles.

In addition, FTSE Russell has established guidance for the treatment of corporation actions and events, including , but not limited to, dividends, capital repayments, companies converting to a REIT structure, share buybacks, rights issues, mergers, acquisitions, tender offers, split-offs, spin-offs, bankruptcies, insolvencies, liquidations and trading suspensions. However, because of the complexities involved in some cases, those guidelines are not definitive rules that will determine FTSE Russell's actions in all circumstances. FTSE Russell reserves the right to determine the most appropriate method of implementation for any corporate event which is not covered by those guidelines or which is of a complex nature.

- *Changes to Shares Outstanding and Free Float.* The FTSE® 100 Index will be reviewed quarterly for updates to shares outstanding and to free floats used within the calculation of the FTSE® 100 Index. In March, September, and December, shares outstanding and free float will be updated to reflect changes greater than 1% for cumulative shares in issue changes and changes greater than 3% (or 1%, for constituents with a free float of 15% or below) for cumulative free float changes. In June, the shares and free float updates will be implemented regardless of size.

Shares and free float updates can be triggered in some cases by certain events, such as some primary or secondary offerings.

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The Hang Seng® Index

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The Hang Seng® Index was first calculated and published on November 24, 1969 and has a base date of July 31, 1964 and a base level of 100. The Hang Seng® Index is reported by Bloomberg, L.P. under the ticker symbol “HSI.”

The Hang Seng® Index is a free float adjusted market capitalization weighted index designed to be an indicator of the performance of the Hong Kong stock market.

Hang Seng® Index Constituent Selection

Only companies and real estate investment trusts with their primary listing on the main board of The Stock Exchange of Hong Kong Ltd. (the “HKSE”) are eligible as constituents of the Hang Seng® Index. Mainland China enterprises that have an H-share listing in Hong Kong are eligible for inclusion in the Hang Seng® Index only if the company has no unlisted share capital.

To be eligible for selection in the Hang Seng® Index, a company: (1) must be among those that constitute the top 90% of the total market capitalization of all eligible shares listed on the HKSE (market capitalization is expressed as an average of the past 12 months); (2) must be among those that constitute the top 90% of the total turnover of all primary listed shares on the HKSE (turnover is aggregated and individually assessed for eight quarterly sub-periods over the past 24 months); and (3) should normally have a listing history of at least 24 months on the HKSE, though companies with an average market capitalization in the top 25 may qualify with a shorter listing history (as short as three months). Companies that are the subject of a Hong Kong Securities and Futures Commission High Shareholding Concentration notice will not be eligible for inclusion in the Hang Seng® Index. From the candidates, final selections are based on the following: (1) the market capitalization and turnover rankings of the companies, (2) the representation of the sub-sectors within the Hang Seng® Index directly reflecting that of the market and (3) the financial performance of the companies. The number of constituents is fixed at 50.

The Hang Seng® Index is reviewed quarterly. The decision whether to remove a suspended constituent from the Hang Seng® Index and replace it with an appropriate candidate is determined in the regular index review. Should a suspended constituent be removed from the Hang Seng® Index, its last traded price may be adjusted down to the system lowest price, i.e., $0.0001 in the security's price currency, or an official residual price (if available) for index calculation on the trading day preceding the effective date of the constituent changes.

Calculation of the Hang Seng® Index

The Hang Seng® Index is calculated using a free float adjusted market capitalization weighted methodology with a 10% cap on individual stock weightings. A cap factor is calculated quarterly to coincide with the regular update of the free float adjustment factor. Additional re-capping is performed upon constituent changes.

Shares held by entities that control more than 5% of the shareholdings are generally considered non-free float and excluded from index calculation. More specifically, the following shareholdings are excluded for calculation (subject to the 5% threshold): strategic holdings (such as by governments, affiliated entities or any other entities which hold substantial shares in the company; shares held by directors, members of the board committee, principal officers or founding members (as measured individually); shares held by publicly traded companies or private firms or institutions; and shareholdings with a publicly disclosed lock-up arrangement. However, holdings by the following investor classes are generally exempt from the non-free float classification: custodians, trustees, mutual funds and investment companies. A free float adjustment factor representing the proportion of shares that is free floated as a percentage of the issued shares is rounded up to the nearest 1% for actual free float adjustment factors below 10% and otherwise to the nearest 5% for the calculation of the Hang Seng® Index and is updated quarterly.

The formula for the index calculation is shown below:

$$\text{Current Index} = \frac{\text{Current Aggregate Free Float-adjusted Market Capitalization of Constituents}}{\text{Yesterday's Aggregate Free Float-adjusted Market Capitalization of Constituents}} \text{ x Yesterday's Closing Index}$$

$$= \frac{S\ (P_t \times IS \times FAF \times CF)}{S\ (P_{t-1} \times IS \times FAF \times CF)} \times \text{Yesterday's Closing Index}$$

where:

P_t: current price at day t;

P_{t-1}: closing price at day t-1;

IS: number of issued shares (in the case of H-share constituents, only the H-share portion is taken into calculation);

FAF: free float adjusted factor, which is between 0 and 1; and

CF: capping factor, which is between 0 and 1.

Index Rebalancing

The update of the issued shares, adjustment of the free float adjusted factor and calculation of the cap factor are undertaken quarterly, after market close on the first Friday in March, June, September and December. In addition, the issued shares will be updated simultaneously with the index adjustment for corporate actions, such as bonus issues, rights issues, stock splits and stock consolidations. Ad hoc rebalancing will be conducted if a constituent's issued shares and/or free float adjusted factor is substantially different from the production data.

Corporate Action Related Adjustments

The following table describes the adjustments made to the index in response to certain corporate actions. An index divisor may decrease (i) or increase (h) or keep constant (¡) when corporate actions occur for a component stock.

Event		Description	Adjustment to Hang Seng® Index		
			Issued Shares (“IS”)	Closing Price (“P”)	Divisor (“D”)
(a)	Subdivision of Shares/ Split	X existing share(s) to be subdivided into Y subdivided share(s)	$IS_{adjusted} = IS_{before} * Y / X$	$P_{adjusted} = P_{before} * X / Y$	¡
(b)	Consolidation/ Reverse Split	X existing shares to be consolidated into Y consolidated share(s)	$IS_{adjusted} = IS_{before} * Y / X$	$P_{adjusted} = P_{before} * X / Y$	¡

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			No adjustment will be made to the price index. Instead, the cash dividend or distribution will be reflected in the total return index counterpart as reinvestment on the ex-date. *Note:* (i) Besides normal cash dividends, the following types of dividends are also considered as cash dividend equivalents: Cash dividends with scrip option; Scrip dividends with cash option; and Scrip dividends with a preannounced cash value. (ii) If new shares allotted from bonus, rights issues, etc. have a dividend disadvantage (*i.e.*, the new shares receive a different dividend amount from that paid on the old shares), the dividend amount used in the index calculation will also be adjusted accordingly. (iii) For late dividend (a dividend that is known only after the ex-date): No adjustment will be made to the price index. Instead, the cash dividend or distribution will be reflected in the total return index counterpart as reinvestment on the payment date.	
(c)	Cash Dividend/ Distribution	Dividend/ distribution in cash		
(d)	Bonus/ Stock Dividend	X bonus share(s) for holding of every Y existing share(s)	$IS_{adjusted} = IS_{before} * (X + Y) / Y$	$P_{adjusted} = P_{before} * Y / (X + Y)$
(e)	Listed Non-cash Distribution	Dividend/ Distribution in specie of X share(s) in Company A for holding of every Y existing share(s) of Company B		$P_{adjusted} = P_{before} – (P_{distribution} * X / Y)$
(f)	To-be-listed Non-cash Distribution	X share(s)/ unit(s) of the distribution for holding of every Y existing shares	The price of the constituent will be suspended on the ex-date.	

		An estimated market value (based on the price drop of the constituent on the ex-date) will be added to the price index on the trading day after ex-date until the trading day before listing of the distributed instrument. The distributed instrument will be added to the price index on its listing date and removed after market close. HSI will have the discretion to defer the removal of the distributed instrument from the index if the distribution is material. *Note*: To-be-listed non-cash distributions include stock dividend of another company, bonus warrant, etc.
(g) Preferential Offer	Preferential offer of X share(s) in another unlisted company for holding of every Y share(s) at $Z per share	To avoid stock price estimation of any unlisted company, no adjustment will be made for preferential offer.

(h)	Rights Issue/ Open Offer	X rights/ offer share(s) for holding of every Y existing share(s) at subscription price of $Z per rights/ offer share	$IS_{adjusted} = IS_{before} * (X + Y) / Y$ $P_{adjusted} = [(P_{before} * Y) + (X * Z)] / (X + Y)$ *Note*: Adjustment will not be made if Z is greater than the cum-rights closing price, unless the rights issue/ open offer is being fully underwritten. To avoid price estimation of any unlisted securities, no adjustment will be made for the open offer.
(i)	Open Offer of Unlisted Securities	Open offer of X share(s) of unlisted securities for holding of every Y share(s) at $Z per share	*Note:* If price cannot be evaluated objectively, no adjustment will be made. However, if the unlisted security is priced at an obvious discounted level, HSI will analyze it on a case by case basis and reserve the right to make a final decision. For index adjustment of listed and to-be-listed non-cash distributions, please refer to (e) and (f) above respectively.
(j)	Spin-off/ Demerger	Creation of a company through the sale or distribution of new shares of an existing business/ division of a parent company. A spin-off is a type of divestiture.	The newly spun-off/ detached entity will be considered inclusion into the index family according to regular schedule.
(k)	Merger and Acquisition	The combination of two or more constituents into one, through a mutual agreement or a tender offer.	The enlarged company will remain in the Hang Seng® Index® with a potential adjustment in its issued shares and weighting factors, subject to the terms of the transaction.

			Example: Merger between China Unicom and China Netcom in Oct 2008.
(l)	Withdrawal of Listing	Delisting of a company, which might result from privatization, takeover or other corporate actions.	The relevant company will be removed from the Hang Seng® Index as soon as practicable.
			Last traded price will be used for index calculation during the suspension period.
			Constituency of suspended constituents in the Hang Seng® Index will be reviewed in its regular index review and removed on the effective date if needed.
(m)	Suspension	Trading in a company's shares has been suspended for any reason.	
			Should a suspended constituent need to be removed from the Hang Seng® Index, it will be removed at the lowest system price, *i.e.*, $0.0001 in the security's price currency, or an official residual price (if available). Such price will be used for index calculation on the trading day preceding the effective date of the removal.

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(n)	Parallel Trading	Trading in a company's shares under both a temporary stock code and the original stock code. Usually applied to securities which have undergone corporate actions such as consolidation, subdivision, change in board lot size or re-organization involving share exchange other than on a one-to-one basis.	The company in concern will be included in the Hang Seng® Index® using the temporary stock code during the period where the original stock code is not available. *Example:* Temporary stock code change of Li & Fung (from 0494.HK to 2909.HK) during 19 May to 1 June 2011 after its share subdivision.

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The JPX-Nikkei Index 400

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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 components of the JPX-Nikkei Index 400 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 non-disclosure of the latest earnings report or internal control reports, except in cases deemed to be unavoidable;
- 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 at least one-third or a minimum of three directors appointed as 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 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 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 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.

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 Indices

All information contained in this underlying supplement regarding the MSCI Brazil Index, the MSCI Canada Index, the MSCI EAFE® Index, the MSCI Emerging Markets Index, the MSCI Europe Index, the MSCI Italy SMID Cap Index, the MSCI Japan Index, the MSCI Korea Index, the MSCI Malaysia Index, the MSCI Mexico Investable Market Index, the MSCI Pacific Ex-Japan Index, the MSCI Singapore Free Index, the MSCI South Africa Index, the MSCI Spain SMID Cap Index, the MSCI Taiwan Index, the MSCI Turkey Investable Market Index and the MSCI World Index℠ (each, an "MSCI Index" and together, the "MSCI 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 Indices are calculated, maintained and published by MSCI. MSCI has no obligation to continue to publish, and may discontinue publication of, any of the MSCI Indices.

The MSCI 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 Canadian 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 24 emerging market country indices: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey and the United Arab Emirates. Beginning in June 2018, the MSCI Emerging Markets Index will include shares traded on mainland Chinese exchanges, referred to as A shares. 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 euro 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 euro 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 Japanese yen 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 Korean won 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 Malaysian ringgit price return version of the MSCI Malaysia Index is reported by Bloomberg L.P. under the ticker symbol "MXMY."

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The MSCI Pacific Ex-Japan Index

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 Free Index

The MSCI Singapore Free 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 and uses "foreign" prices instead of local prices when available. The MSCI Singapore Free Index covers about 85% of the Singapore equity universe. The Singapore dollar price return version of the MSCI Singapore Free 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 South African rand 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 euro 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 Taiwan new 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 Turkish lira price return version of the MSCI Turkey Investable Market Index is reported by Bloomberg L.P. under the ticker symbol “MXTR.”

The MSCI World Index^{SM}

The MSCI World Index℠ is a free float-adjusted market capitalization index intended to measure the equity market performance of certain developed equity markets. The MSCI World Index℠ 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 Index℠ covers approximately 85% of the free float-adjusted market capitalization in each country. The U.S. dollar price return version of the MSCI World Index℠ is reported by Bloomberg L.P. under the ticker symbol “MXWO.”

Constructing the MSCI Global Investable Market Indices

The MSCI Global Investable Markets Indices are constructed and maintained at an individual market level. MSCI undertakes an index construction process that involves: (i) defining the Equity Universe for each market; (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; and (v) 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. 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. Beginning in June 2018, the MSCI China Index and the MSCI Emerging Markets Index will include shares traded on mainland Chinese exchanges, referred to as A shares.

(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 identifying eligible listings for each security in the Equity Universes and 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.

A security may have a listing in the country where it is classified (*i.e.*, a “local listing”) and/or in a different country (*i.e.*, a “foreign listing”). Securities may be represented by either a local listing or a foreign listing (including a Depositary Receipt) in the Global Investable Equity Universe. A security may be represented by a foreign listing only if the following conditions are met:

(i) The security is classified in a country that meets the foreign listing materiality requirement, and

(ii) The security's foreign listing is traded on an eligible stock exchange of:

- a DM country if the security is classified in a DM country;
- a DM or an EM country if the security is classified in an EM country; or
- a DM or an EM or a FM country if the security is classified in a FM country.

If a country does not meet the foreign listing materiality requirement, then securities in that country may not be represented by a foreign listing in the Global Investable Equity Universe.

In order to assess whether a country meets the foreign listing materiality requirement, the following steps are undertaken:

(i) Apply the semi-annual index review index described below to determine which securities represented by a foreign listing would be included in the relevant MSCI Country Investable Market Index if foreign listings were eligible from that country;

(ii) Calculate the aggregate free float-adjusted market capitalization of all such securities; and

(iii) This aggregate market capitalization of securities represented by foreign listings should represent at least (1) 5% of the free float-adjusted market capitalization of the relevant MSCI Country Investable Market Index and (2) 0.05% of the free float-adjusted market capitalization of the MSCI ACWI Investable Market Index. For purposes of the calculation required under the first condition, securities represented by foreign listings are included in the free float-adjusted market capitalization of the relevant MSCI Country Investable Market Index. The second condition is not applied to FM countries.

Once a country meets the foreign listing materiality requirement at a given semi-annual index review, foreign listings will become eligible from this country at the following semi-annual index review. Then, foreign listings will remain eligible even if the aggregate market capitalization of securities represented by foreign listings decreases over time below the materiality thresholds.

As of the date of this underlying supplement, foreign listings are eligible for the following countries: Argentina, Bahrain, Botswana, China, Hong Kong, Israel, Kazakhstan, Mauritius, the Netherlands, Panama, Peru, Russia (only selected listings in London and New York are eligible) and Ukraine.

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 addition to the ATVR and Frequency of Trading requirements, securities in the MSCI China Equity Universe will not be eligible for inclusion in the Market Investable Equity Universe if the securities: (i) are suspended on the price cutoff date of the index review and (ii) have been suspended for 50 consecutive days or more in the past 12 months. The MSCI China Index is a component of the MSCI Emerging Markets Index.

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, the following priority rules are used to determine which listing will be used for potential inclusion of that security in the Market Investable

Equity Universe: (i) local listing; (ii) foreign listing in the same geographical region; and (iii) foreign listing in a different geographical region.

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.

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 Global, 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®.

Constructing and Calculating the Individual MSCI Global Investable Market Indices

After companies are allocated to their respective Size Segments and securities are reviewed for complying with the final Size Segment requirements, the final list of constituents for each Market Size Segment Index is determined. The MSCI Investable Market Indices are composed of the MSCI Standard Indices and the MSCI Small Cap Indices. The MSCI Standard Indices are further subdivided into the MSCI Large Cap and the MSCI Mid Cap Indices.

Two or more Market Indices can be combined to form Composite Indices. Market Indices can be grouped either on the basis of Market Classification definition, geographical regions, economic regions or other criteria. For example by combining all Market Indices from each Market Classification, *i.e.* Developed, Emerging and Frontier Markets, the index sponsor obtains the MSCI World, the MSCI Emerging Markets and the MSCI Frontier Markets Indices respectively for each size-segment.

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"), (ii) quarterly index rebalancing ("QIRs") and (iii) monthly index reviews ("MIRs")

SAIRs are conducted 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.

QIRs are conducted 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;

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- 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.

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. In case a “confirmed” announcement needs to be amended, MSCI sends a “correction” announcement with a descriptive text announcement to provide details about the changes made. MSCI also sends announcements in "acknowledged" status within five business days following the public announcement by the company of the acquisition, if the impact is above one time the constituent's underlying country index Large Cap Cutoff. 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.

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

$IndexAdjustedMarketCapUSD_t =$

$IndexAdjustedMarketCapForLocal_t =$

$IndexInitialMarketCapUSD_t =$

Where:

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

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Corporate Events

Mergers and Acquisitions

MSCI implements mergers and acquisitions executed via mutual agreement as of the close of the last trading day of the acquired entity or merged entities. This occurs whether the securities involved in the event are index constituents or non-index constituents and under the assumption that all necessary information is available prior to the completion of the event and provided the liquidity of the relevant constituent(s) is not expected to be significantly reduced on the day of implementation. For mergers and acquisitions where the completion of the deal is conditional upon the resolution of pending shareholders' legal action, MSCI waits until no legal action is pending before confirming the deletion of the target company. For acquisitions via scheme of arrangement (outside the U.S. and Canada), MSCI waits for approval from shareholders at scheme meeting before announcing in "confirmed" status the deletion of the target security. However, MSCI does not wait for the results of the court meeting if the scheme is already approved at the scheme meeting by shareholders.

If a previously announced merger or acquisition that resulted in a security deletion from an index is subsequently cancelled, the deleted security is not immediately reinstated in that index. The security will be reconsidered for index inclusion at the next regularly scheduled index review.

Tender Offers

In hostile tender offers, MSCI systematically waits for the results of the tender offer to be publicly announced before making any related changes to the MSCI Indices. In friendly 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 decreased below 0.15 (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 of shares tendered, the existence of pending regulatory approvals and/or legal actions, the market perception of the transaction, official preliminary results if any, and other additional conditions for the offer.

In cases where the target security's tendered shares are trading separately from the original non-tendered shares, MSCI switches the security's market price to the tendered shares price if at the end of the first offer period all four conditions below are met: (1) the minimum acceptance level requirement is met; (2) the acceptance level is at least 50%; (3) an additional offer period (not an extension) will be launched and (4) the tendered shares will continue to trade after the expiration of the additional offer period. If all the above conditions are met, MSCI announces in “Confirmed” status, shortly after the results of the first offer period are made publicly available, the switch of the market price to the tendered line price, which will be effective at the open of the first business day following the end of the additional offer period.

In cases where the tender offer is later cancelled and the original shares are returned to the shareholders who had tendered, MSCI switches the security’s market price back to the original non-tendered share price.

If the tender offer is likely to be successful at the end of the additional offer period and / or if the free float of the security is likely to decrease below 0.152, MSCI deletes the target security at the end of the additional offer period at the tendered line market price, provided the tendered line of shares is still trading on the last day of the additional offer period. If the above conditions are not met and the tender offer’s outcome is uncertain, MSCI will wait for the results of the offer and changes, if any, would be implemented using market prices of the original line.

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, if practicable. Changes not implemented at the immediate Index Review following the completion of the event will be implemented at subsequent Index Reviews, typically for companies listed in China.

Increases in a security's number of shares resulting from the acquisition of listed non-index constituent securities representing at least 5%, 10% or 25% for Standard, Small Caps, and Micro Caps, respectively, of the security's pre-event 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% (25% of Micro Caps) of the security's number of shares are implemented at the next regularly scheduled index review following the completion of the event. MSCI implements pending number of shares and/or free float updates simultaneously with the event. If the number of shares update is smaller than 1% on a post-event number of shares basis, it will be implemented at a subsequent index review.

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. If appropriate, historical links to existing securities are also made in cases of conversions of a share class into another share class. Periodical conversions of a share class into another share class as well as conversions of a non-index constituent share class or an unlisted line of shares into an index constituents' share class are implemented at a subsequent index review.

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 starts trading. The value of the detached security is equal to the difference between the cumulative price and the ex-price of the parent security. The price of the detached security remains unchanged until the spun-off security starts trading. MSCI will delete the detached security as of the close of its first trading day, using the closing market price of the spun-off security on that day. In cases where the terms of the distribution are different from one for one, MSCI will apply a PAF on the detached security on the first trading date of the spun-off 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. 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. Such cases will be subject to the rules applicable for the index reviews. 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

Debt-to-equity swaps representing at least 5% (25% for Micro Caps) of the security's number of shares 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 not available at the time of 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 debt-to-equity swaps representing less than 5% (25% for Micro Caps) of the security's number of shares are implemented at the next regularly scheduled index review. These cases will be subject to the rules applicable for QIRs of FIFs and NOS.

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.

License Agreement

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The MSCI 25/50 Indices

All information contained in this underlying supplement regarding the MSCI Brazil 25/50 Index, the MSCI Korea 25/50 Index, the MSCI Mexico Investable Market (IMI) 25/50 Index and the MSCI Taiwan 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 equity 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 Korea 25/50 Index

The MSCI Korea 25/50 Index is designed to measure the performance of the large- and mid-capitalization segments of the Korean equity market. It applies certain investment limits that are imposed on RICs under the current U.S. Internal Revenue Code. The MSCI Korea 25/50 Index covers approximately 85% of the free float-adjusted market capitalization in Korea. The MSCI Korea 25/50 Index is an index created by applying the weight constraints described below to the MSCI Korea Index. For more information about the MSCI Korea Index, please see "— The MSCI Indices" in this underlying supplement. The U.S. dollar price return version of the MSCI Korea 25/50 Index is reported by Bloomberg L.P. under the ticker symbol "MXKR2550."

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."

The MSCI Taiwan 25/50 Index

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

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, aiming to offer 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, subject to the weight limits, buffer rules and issuer concentration issues described above, and the treatment of corporate events, subject to the maintenance rules described above. 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 American. 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 securities.

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. If a security is a depositary receipt, the total shares outstanding is the actual depositary shares outstanding as reported by the depositary banks.

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

All information contained in this underlying supplement regarding the Nikkei 225 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, Nikkei Inc. The Nikkei 225 Index is calculated, maintained and published by Nikkei Inc. Nikkei Inc. has no obligation to continue to publish, and may discontinue the publication of, the Nikkei 225 Index.

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

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·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 Nikkei Underlying Stock designated as "securities under supervision" (i.e., Kanri Meigara) 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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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. 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 capitalization-weighted 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 BATS, IEX, 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. 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 must meet the following criteria as of the rank day in May (except that initial public offerings ("IPOs") are considered for inclusion on a quarterly basis):

- *U.S. Equity Market*. The company must be determined to be part of the U.S. equity market, meaning that its home country is the United States. 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 criteria do not match, FTSE Russell then defines three Home Country Indicators ("HCIs"): 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 location 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 in which 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.

- *U.S. Eligible Exchange*. The following exchanges and markets are deemed to be eligible U.S. exchanges: the Bats exchanges, IEX, NYSE, NYSE American, the NASDAQ exchanges and NYSE Arca. Stocks that are not traded on an eligible U.S. exchange (Bulletin Board, Pink Sheet and over-the-counter securities, including securities for which prices are displayed on the FINRA Alternative Display Facility) are not eligible for inclusion.

- *Minimum Closing Price*. A stock must have a close price at or above $1.00 (on its primary exchange), subject to exceptions to reduce turnover.

- *Minimum Total Market Capitalization*. Companies with a total market capitalization less than $30 million are not eligible for inclusion.

- *Minimum Free Float*. Companies with 5.5% or less of their shares available in the marketplace are not eligible for inclusion.

- *Company Structure*. Companies structured in the following ways are not eligible for inclusion: royalty trusts, U.S. limited liability companies, closed-end investment companies, business development companies (and other companies that are required to report Acquired Fund Fees and Expenses, as defined by the SEC), blank-check companies, special-purpose acquisition companies (SPACs), limited partnerships, exchange-traded funds and mutual funds.

- *UBTI*. Real estate investment trusts and publicly traded partnerships that generate or have historically generated unrelated business taxable income ("UBTI") and have not taken steps to block UBTI to equity holders are not eligible for inclusion. 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 or company website.

- *Security Types*. The following types of securities are not eligible for inclusion: preferred and convertible preferred stock, redeemable shares, participating preferred stock, warrants, rights, installment receipts and trust receipts.

- *Minimum Voting Rights*. As of August 2017, more than 5% of a company's voting rights (aggregated across all of its equity securities, including, where identifiable, those that are not listed or trading) must be in the hands of unrestricted shareholders. Existing constituents have a five-year grandfathering period to comply or they will be removed from each applicable Russell Index in September 2022.

- *Multiple Share Classes*. If an eligible company trades under multiple share classes, each share class is reviewed independently for eligibility for inclusion. Share classes in addition to the primary share class must meet the following minimum size, liquidity and float requirements to be eligible: (i) total market capitalization must be larger than that of the smallest company in the Russell 3000E™ Index; (ii) average daily dollar trading value must exceed that of the global median; and (iii) more than 5% of shares must be available in the marketplace.

Securities of eligible companies are included in Russell Indices based on total market capitalization. Total market capitalization is determined by multiplying total outstanding shares by the market price (generally, the last price traded on the primary exchange of the share class with the highest two-year trading volume, subject to exceptions) as of the rank day in May (except that IPOs are considered for inclusion on a quarterly basis). Common stock, non-restricted exchangeable shares and partnership units/membership interests (but not operating partnership units of umbrella partnership real estate investment trusts) are used to calculate a company's total market capitalization. If multiple share classes of common stock exist, they are combined to determine total shares outstanding; however, in cases where the common stock share classes act independently of each other (e.g., tracking stocks), each class is considered for inclusion separately. For merger and spin-off transactions that are effective between rank 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.

The 4,000 securities with the greater total market capitalization become members of the Russell 3000E™ Index. All remaining Russell Indices are a subset of the Russell 3000E™ Index. 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

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 Russell Index.

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. The following types of shares are removed from total market capitalization to arrive at free float or available market capitalization, based on information recorded in SEC corporate filings: officers' and directors' holdings, private holdings exceeding 10% of shares outstanding, institutional holdings exceeding 30% of shares outstanding, shares held by publicly listed companies, shares held by an Employee Stock Ownership Plan or a Leveraged Employee Stock Ownership Plan; shares locked up during an IPO; direct government holdings; and indirect government holdings exceeding 10% of shares outstanding.

Reconstitution occurs on the last Friday in June. However, at times this date is too proximal to exchange closures and abbreviated exchange trading schedules when market liquidity is exceptionally low. In order to ensure proper liquidity in the markets, when the last Friday in June falls on the 29th or 30th, reconstitution will occur on the preceding Friday. A full calendar for reconstitution is made available each spring.

Corporate Events Affecting the Russell Indices

FTSE Russell applies corporate actions to the Russell Indices on a daily basis. FTSE Russell applies the following methodology guidelines, among others, 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.

- *Statement of Principles and Adjustments for Specific Corporate Events.* FTSE Russell has stated as general principles that the treatment of corporate events (a) should reflect how such events are likely to be dealt with in investment portfolios to maintain the portfolio structure in line with the target set out in the index objective and index methodology and (b) should normally be designed to minimize the trading activity required by investors to match the index performance. No assurance can be provided that corporate actions and events will be treated by FTSE Russell in a manner consistent with its statement of general principles.

- In addition, FTSE Russell has established guidance for the treatment of corporation actions and events, including , but not limited to, dividends, capital repayments, companies converting to a REIT structure, share buybacks, rights issues, mergers, acquisitions, tender offers, split-offs, spin-offs, bankruptcies, insolvencies, liquidations and trading suspensions. However, because of the complexities involved in some cases, those guidelines are not definitive rules that will determine FTSE Russell's actions in all circumstances. FTSE Russell reserves the right to determine the most appropriate method of implementation for any corporate event which is not covered by those guidelines or which is of a complex nature.

- *Changes to Shares Outstanding and Free Float.* Each Russell Index will be reviewed quarterly for updates to shares outstanding and to free floats used within the calculation of each Russell Index. In March, September, and December, shares outstanding and free float will be updated to reflect changes greater than 1% for cumulative shares in issue changes and changes greater than 3% (or 1%, for constituents with a free float of 15% or below) for cumulative free float changes. In June, the shares and free float updates will be implemented regardless of size. Shares and free float updates can be triggered in some cases by certain events, such as some primary or secondary offerings.

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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.

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 S&P/ASX Index Committee (for purposes of this section, the "Index Committee") 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:

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 companies in the All Ordinaries index, an index that includes nearly all ordinary shares listed on the ASX.

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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 eight weeks. 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. The reference date used for the six months' worth of trading data is the last Friday of the month prior to the rebalancing.

The Index Committee may change the date of a given rebalancing for reasons including market holidays occurring on the scheduled rebalancing date. Any such change will be announced with proper advance notice where possible.

Buffers. In order to limit the level of index turnover, eligible securities will only be considered for index inclusion once another stock is excluded due to a sufficiently low rank and/or liquidity, based on the float-adjusted market capitalization. Potential index inclusions and exclusions need to satisfy a buffer requirement in terms of the rank of the stock relative to the AS51. The following buffer aims to limit the level of index turnover that may take place at each quarterly rebalancing, maximizing the efficiency and limiting the cost associated with holding the index portfolio.

Addition	**Rank Buffer for Deletion**
179th or higher	221st or lower

This float-adjusted market capitalization rank buffer serves as the guideline used by the Index Committee to arrive at any potential constituent changes to the AS51. However, the Index Committee has complete discretion to by-pass these rules when circumstances warrant.

Frequency. The S&P/ASX 200 Index constituents are rebalanced quarterly to ensure adequate market capitalization and liquidity. Quarterly rebalancing changes take effect after the market close 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;

· Dividend Reinvestment Plan share issuances of more than A$100 million in value; 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.

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 Investable Weight Factor (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.

Type of Corporate Action	**Index Treatment**	**Divisor Adjustment**
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

Spin-offs. A spun-off company of an index constituent is added to the S&P/ASX 200 Index at a zero price on the ex-date. Should the spun-off company not be considered eligible for the S&P/ASX 200 Index when added to it on the basis of its float-adjusted market capitalization, then it will be removed from the S&P/ASX 200 Index after at least one day of regular way trading.

Index Governance

The Index Committee monitors overall policy guidelines and methodologies, as well as additions and deletions from the S&P/ASX 200 Index. S&P Dow Jones chairs the Index Committee, which is composed of voting 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 stocks composing specific GICS® sub-industries or groups of sub-industries in the S&P Total Market Index. Membership is based on a company's GICS® classification, as well as liquidity and market capitalization requirements. The indices are modified equal-weight indices. 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 American, the NASDAQ Global Select Market, the NASDAQ Select Market, the NASDAQ Capital Market, Bats BZX, Bats BYX, Bats EDGA, Bats EDGX and the Investors Exchange (IEX). 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® 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 following GICS® sub-industries of the S&P TM Index: asset management & custody banks (must also meet the North American Industry Classification of depository credit intermediation); diversified banks; regional banks; other diversified financial services; and thrifts & mortgage finance. The S&P® Banks Select Industry™ Index is reported by Bloomberg L.P. under the ticker symbol "SPSIBK."

The S&P® Biotechnology Select Industry™ Index

The S&P® Biotechnology Select Industry™ Index is a modified equal-weighted index that is designed to measure the performance of the GICS® biotechnology sub-industry of the S&P TM Index. The S&P® Biotechnology Select Industry™ Index may also include companies in the following supplementary sub-industry: life sciences tools & services. The S&P® Biotechnology Select Industry™ Index is reported by Bloomberg L.P. under the ticker symbol "SPSIBI."

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 of the S&P TM Index. 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 of the S&P™ Index: aluminum; coal & consumable fuels; copper; 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 of the S&P™ Index: integrated oil & gas, oil & gas exploration & production 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 of the S&P™ Index. 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%.

Notwithstanding the foregoing, to be eligible for inclusion in the S&P® Banks Select Industry™ Index, a company's float-adjusted market capitalization must be above $2 billion and its float-adjusted liquidity ratio must be above 100%.

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%.

Notwithstanding the foregoing, existing index constituents of the S&P® Banks Select Industry™ Index are removed at the quarterly rebalancing date if either their float-adjusted market capitalization falls below $1 billion or their float-adjusted liquidity ratio 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:

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

$$\text{Index Market Value} = P_i \times \text{Shares}_i \times \text{IWF}_i \times \text{AWF}_i$$

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:

$$AWF_{i,t} = Z / N \times FloatAdjustedMarketValue_{i,t}$$

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 (for purposes of this section, 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 that 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 additions and deletions 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 Index Committee may change the date of a given rebalancing for reasons including market holidays occurring on or around the scheduled rebalancing date. Any such change will be announced by S&P Dow Jones with proper advance notice where possible.

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. 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.	Yes
Constituent Addition	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
	In the case of additions due to spin-offs, the Select Industry Indices follow the S&P TM Index's treatment of the action.	

S&P TM Index Action	Adjustment Made to a Select Industry Index	Divisor Adjustment
GICS® Change	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

Index Committee

The Index Committee maintains the S&P Select Industry Indices. All committee members are full-time professional members of S&P Dow Jones’ staff. The committee meets monthly. At each meeting, the Index Committee reviews pending corporate actions that may affect the Select Industry Indices constituents, statistics comparing the composition of the Select Industry Indices to the market, companies that are being considered as candidates for addition to a Select Industry 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 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 is designed to measure 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 & luxury goods; hotels, restaurants and leisure; diversified consumer services; media; distributors; internet & direct marketing retail; multiline retail; and specialty retail. In November 2017, S&P Dow Jones and MSCI announced that, after the close of business on September 28, 2018, the GICS® consumer discretionary sector will be updated to (a) expand the internet & direct marketing retail industry to include companies providing online marketplaces for consumer products and services and e-commerce companies regardless of whether they hold inventory and (b) discontinue the media industry (which will be moved to the renamed GICS® communication services sector). 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 is designed to measure 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 is designed to measure the performance of the GICS® financials sector, which currently includes companies in the following industries: banks; thrifts & mortgage finance; diversified financial services; consumer finance; capital markets; mortgage real estate investment trusts; and insurance. The Financial Select Sector Index is reported by Bloomberg L.P. under the ticker symbol “IXM.”

The Health Care Select Sector Index

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

The Industrials Select Sector Index

The Industrial Select Sector Index is designed to measure the performance of the GICS® industrials sector, which currently includes companies in the following industries: aerospace & defense; building products; construction & engineering; electrical equipment; industrial conglomerates; machinery; trading companies & distributors; commercial services & supplies; professional services; air freight & logistics; airlines; marine; road & 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 is designed to measure the performance of the GICS® materials sector, which currently includes companies in the following industries: chemicals; construction materials; containers & packaging; metals & mining; and paper & 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 is designed to measure the performance of the GICS® real estate sector, which currently includes companies in the following industries: equity real estate investment trusts; and real estate management & development. 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 is designed to measure the performance of the GICS® information technology sector and telecommunication services 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; semiconductors and semiconductor equipment; diversified telecommunication services; and wireless telecommunication services. In November 2017, S&P Dow Jones and MSCI announced that, after the close of business on September 28, 2018, (a) the companies classified in the

GICS® internet software and services industry (within the GICS® information technology sector) will be moved to the GICS® IT services or software industries (both within the GICS® information technology sector) and the internet software and services industry will be discontinued and (b) the GICS® telecommunication services sector will be broadened and renamed the communication services sector to include companies that facilitate communication and offer related content and information through various media, resulting in the addition of three GICS® industries within the renamed communication services sector: media; entertainment; and interactive media & services. 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 is designed to measure the performance of the GICS® utilities sector, which currently includes companies 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 third Friday of March, June, September, and December using the following procedures:

1. The rebalancing reference date is the second Friday of March, June, September and December.

2. With prices reflected on the rebalancing reference date, and membership, shares outstanding and investable weight factors as of the rebalancing effective date, each company is weighted by float-adjusted market capitalization. Modifications are made as defined below.

3. If any company has a weight greater than 24%, the company's float-adjusted market capitalization weight is capped at 23%, which allows for a 2% buffer. This buffer is meant to ensure that no company exceeds 25% as of the quarter-end diversification requirement date.

4. All excess weight is proportionally redistributed to all uncapped companies within the relevant Select Sector Index.

5. 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.

6. The sum of the companies with weights 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.

7. If the rule in paragraph 6 is breached, all companies are ranked in descending order of their float-adjusted market capitalization weights. The first company that causes the 50% limit to be breached has its weight reduced to 4.5%.

8. This excess weight is proportionally redistributed to all companies with weights below 4.5%. This is repeated iteratively until paragraph 6 is satisfied.

9. Index share amounts are assigned to each constituent to arrive at the weights calculated above. Since index shares are assigned based on prices one week prior to rebalancing, the actual weight of each constituent at the rebalancing differs somewhat from these weights due to market movements

10. 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.

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, subject to the capping methodology described above. 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

Securities must satisfy the following eligibility factors to be considered for inclusion in the S&P U.S. Indices. Constituent selection is at the discretion of the S&P Dow Jones's U.S. index committee (for purposes of this section, the “Index Committee”) and is based on the eligibility criteria.

Changes to the S&P U.S. Indices are made as needed, with no scheduled reconstitution. Rather, 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.

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

- *Domicile.* Only common stocks of U.S. companies are eligible. For index purposes, a U.S. company has the following characteristics:

  - the company files 10-K annual reports;

  - the U.S. portion of fixed assets and revenues constitutes 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); and

  - the primary listing is on an eligible U.S. exchange as described below.

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 Index Committee, which can consider other factors including, but not limited to, operational headquarters location, ownership information, location of officers, directors and employees, investor perception and other factors deemed to be relevant.

- *Exchange Listing.* A primary listing on one of the following U.S. exchanges is required: NYSE, NYSE Arca, NYSE American, NASDAQ Global Select Market, NASDAQ Select Market, NASDAQ Capital Market, Bats BZX, Bats BYX, Bats EDGA, Bats EDGX or Investors Exchange (IEX) exchanges. Ineligible exchanges include the OTC Bulletin Board and Pink Sheets.

- *Organizational Structure and Share Type.* Eligible organizational structures and share types are corporations (including equity and mortgage REITS) and common stock (i.e., shares). Ineligible organizational structures and share types include business development companies, limited partnerships, master limited partnerships, limited liability companies, closed-end funds, exchange-traded funds, exchange-traded notes, royalty trusts, preferred and convertible preferred stock, unit trusts, equity warrants, convertible bonds, investment trusts, rights, American Depositary Receipts and tracking stocks.

  As of July 31, 2017, companies with multiple share class structures are not eligible to be added to the S&P U.S. Indices, but securities already included in the S&P U.S. Indices have been grandfathered and will remain in the S&P U.S. Indices.

- *Market Capitalization.* The unadjusted company market capitalization should be within a specified range. For the S&P 500® Index, the range is currently $6.1 billion or more, for the S&P MidCap 400® Index, the range is currently $1.6 billion to $6.8 billion and for the S&P SmallCap 600® Index, the range is currently $450 million to $2.1 billion. These ranges are reviewed from time to time to assure consistency with market conditions. 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 (defined as average closing price over the period multiplied by historical volume) to float-adjusted market capitalization should be at least 1.00, and the stock should trade a minimum of 250,000 shares in each of the six months leading up to the evaluation date.

- *Investable Weight Factor.* The Investable Weight Factor ("IWF") for each company represents the portion of the total shares outstanding that are considered part of the public float for purposes of the S&P U.S. Indices. An IWF of at least 0.50 is required.

- *Financial Viability.* The sum of the most recent four consecutive quarters' Generally Accepted Accounting Principles (GAAP) earnings (net income excluding discontinued operations) should be positive as should the most recent quarter. For equity real estate investment trusts (REITs), financial viability is based on GAAP earnings and/or Funds From Operations (FFO), if reported.

- *Treatment of IPOs.* Initial public offerings should be traded on an eligible exchange for at least 12 months before being considered for addition to an S&P U.S. Index. Spin-offs or in-specie distributions from existing constituents do not need to be seasoned for 12 months prior to their inclusion in an S&P U.S. index.

- *Sector Balance.* The company is evaluated for its contribution to sector balance maintenance, as measured by a comparison of each GICS® sector's weight in the S&P U.S. Total Market Index, in the relevant market capitalization range. The S&P Total Market Index is a float-adjusted, market-capitalization weighted index designed to track the broad U.S. equity market, including large-, mid-, small- and micro-cap stocks.

Exceptions to the above criteria include:

- A company not included in the S&P 500® Index, the S&P MidCap 400® Index or the S&P SmallCap 600® Index (each, an "S&P Composite 1500® component index") that acquires a company included in an S&P Composite 1500® component index, but that does not fully meet the financial viability or IWF criteria, may still be added to an S&P Composite 1500 index at the discretion of the Index Committee if the Committee

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determines that the addition could minimize turnover and enhance the representativeness of the index as a market benchmark

- Current constituents of an S&P Composite 1500® component index can be migrated from one S&P Composite 1500® component index to another without meeting the financial viability, public float and/or liquidity eligibility criteria if the Index Committee decides that such a move will enhance the representativeness of the relevant index as a market benchmark.

- Companies that are spun-off from a S&P Composite 1500® component index do not need to meet the addition criteria above, but they should be considered U.S. domiciled as described above and have a total market capitalization representative of the S&P U.S. Index to which they are being added.

- S&P Dow Jones Indices consolidates the share count for the Berkshire Hathaway Inc. under the B share class line due to turnover and liquidity concerns.

S&P Dow Jones believes turnover in membership in the S&P U.S. Indices 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 the S&P U.S. Indices, not for continued membership. As a result, a constituent of the S&P U.S. Indices that appears to violate criteria for addition to the S&P U.S. Indices is not deleted unless ongoing conditions warrant an index change.

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

- A company involved in a merger, acquisition or significant restructuring such that it no longer meets the eligibility criteria is deleted from the S&P U.S. Indices 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 the index until trading resumes, at the discretion of the Index Committee. If a stock is moved to the pink sheets or the bulletin board, the stock is removed.

- A company that substantially violates one or more of the eligibility criteria may be deleted at the Index Committee's discretion.

Any company that is removed from the S&P U.S. Indices (including discretionary and bankruptcy/exchange delistings) must wait a minimum of one year from its index removal date before being reconsidered as a replacement candidate.

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 (“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. All mergers and acquisitions (“M&A”) driven changes to the S&P U.S. Indices are implemented with one to five business days’ notice on a best efforts basis. Any share issuance for the acquirer is implemented to coincide with the drop event for the target. An M&A driven share/IWF change does not need to meet any minimum threshold requirement for implementation. This helps minimize turnover in indices. Any merger related IWF change that results in an IWF of 0.96 or greater is rounded up to 1.00 at the next annual IWF review. 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. Confirmed share changes that are at least 5% of the total shares outstanding are implemented weekly. Total shares outstanding and not float-adjusted shares are used to determine whether the share change meets this 5% threshold. The 5% rule applies to share changes only. IWF changes are only considered if a share change meets the 5% threshold.

Changes to an index constituent’s total shares outstanding of at least 5% are applied weekly and are announced after the market close on Fridays for implementation after the close of trading the following Friday (i.e., one week later). Examples of such changes include public offerings (also known as secondary offerings or follow-on offerings), tender offers, Dutch auctions, exchange offers, bought deal equity offerings, prospectus offerings, company stock repurchases, private placements, redemptions, exercise of options, warrants, conversion of derivative securities, at-the-market stock offerings, and acquisitions of private companies or non-index companies that do not trade on a major exchange. If an exchange holiday/closure falls on a Friday, the weekly share change announcement will be made the day before the exchange holiday/closure, and the implementation date will remain after the close of trading the following Friday (i.e., one week later).

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.

Notwithstanding the foregoing, share or IWF changes of 5% or more due to public offerings (also known as placements or secondary offerings) are made effective at the open of the next day under certain conditions. Secondary offerings by selling shareholders are recognized the next day if certain conditions are met, or weekly via an IWF change if the secondary offering is at least 5% of total shares outstanding.

Share/IWF Freezes. A share/IWF freeze period is implemented during each quarterly rebalancing. The freeze period begins after the market close on the Tuesday preceding the second Friday of each rebalancing month (*i.e.*, March, June, September, and December) and ends after the market close on the third Friday of a rebalancing month. Pro-forma files are normally released after the market close on the second Friday, one week prior to the rebalancing effective date. In September, preliminary share and float data are released on the first Friday of the month, but the share freeze period for September will follow the same schedule as the other three quarterly share freeze periods. For illustration purposes, if rebalancing pro-forma files are scheduled to be released on Friday, March 13, the share/IWF freeze period will begin after the close of trading on Tuesday, March 10 and will end after the close of trading the following Friday, March 20 (*i.e.*, the third Friday of the rebalancing month).

During the share/IWF freeze period, shares and IWFs are not changed except for certain corporate action events (such as merger activity, stock splits, rights offerings). Share/IWF changes for index constituents resulting from secondary public offerings that would otherwise be eligible for next day implementation are instead collected during the freeze period and added to the weekly share change announcement on the third Friday of the rebalancing month for implementation the following Friday night. There is no weekly share change announcement on the second Friday of a rebalancing month.

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 Index Committee's discretion.

The table below summarizes the 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
Spin-off	The spin-off is added to the relevant S&P U.S. Index on the ex-date at a price of zero.	No
Change in IWF	Increasing (decreasing) the IWF increases (decreases) the total market value of the relevant S&P U.S. 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 the 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 S&P U.S. Indices to the market, companies that are being considered as candidates for addition to an S&P U.S. 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.

The Index Committee reserves the right to make exceptions when applying the methodology if the need arises. In any scenario where the treatment differs from the general rules stated in this document or supplemental documents, clients will receive sufficient notice, whenever possible.

In addition to its daily governance of the S&P U.S. Indices and maintenance of index methodologies, at least once within any 12-month period, the Index Committee reviews this methodology to ensure the S&P U.S. Indices continue to achieve the stated objectives, and that the data and methodology remain effective. In certain instances, S&P Dow Jones Indices may publish a consultation inviting comments from external parties.

The Index Committee may change the date of a given rebalancing for reasons including market holidays occurring on or around the scheduled rebalancing date. Any such changes will be announced by S&P Dow Jones with proper advance notice where possible.

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The Swiss Market Index

All information contained in this underlying supplement regarding the Swiss Market Index (the "SMI®"), 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, SIX Swiss Exchange Ltd ("SSE"). The SMI® is calculated, maintained and published by SSE. SSE has no obligation to continue to publish, and may discontinue publication of, the SMI®.

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 SPI® comprises all equity securities whose primary listing is on the SIX Swiss Exchange with a free float of at least 20%, other than investment companies. 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 over the last 12 months (compared to the capitalization of the entire SPI®); and

- cumulated on order book turnover over the last 12 months (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 security ranked 19 or 20 is admitted only if a security included in the SMI® meets the exclusion criteria directly (position 23 or lower) and no other security that either meets the admission criteria directly (position 18 or higher) or is rated higher has moved up in its place. A security ranked 21 or 22 is excluded only if a security meets the admission criteria directly (position 18 or higher) and no other security that either meets the exclusion criteria directly (position 23 or lower) or is rated lower has been excluded in its place.

Additional admission and exclusion criteria apply to companies whose securities have a primary listing on several exchanges and less than 50% of their total turnover is generated on SSE. For these companies, in addition to the criteria described above, a security is admitted if, as measured solely on the basis of cumulated on order book turnover, it ranks 18 or better in the selection list and a security is excluded if, as measured solely on the basis of cumulated on order book turnover, it ranks 23 or lower in the selection list. In assessing the relevant portion of turnover, only the trading turnover on the exchanges where the company has a primary listing will be taken into account.

Index Maintenance

Ordinary Adjustments

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. In the case of major market changes as a result of capital events such as mergers or new listings, the Management Committee of SIX Swiss Exchange can decide at the request of the Index Commission that a security should be admitted to the SMI® outside the accepted admission period as long as it clearly fulfils the criteria. For the same reasons, a security can also be excluded if the requirements for admission to the SMI® are no longer fulfilled. As a general rule, extraordinary acceptances into the SMI® take place after a three-month period, this on a quarterly basis after the close of trading on the third Friday of March, June, September and December.

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).

The SSE may conduct a capital survey among issuers in order to obtain the required data.

The announcement of the provisional new stocks occurs at least one month before the adjustment date. The SSE reserves the right to take account of recent changes before the adjustment date, so the definite new stocks are announced only five trading days before the adjustment date.

The communication of the capping factors follows as well five trading days before implementation. The new number of shares and free-float figures are used to determine the factors.

Extraordinary Adjustments

In order to avoid frequent slight changes to the weighting and to maintain the stability of the SMI®, any extraordinary change of the total number of outstanding stocks or the free float will only result in an extraordinary adjustment if it exceeds 10% and 5%, respectively, and is in conjunction with a corporate action. After a takeover, the SSE may, in exceptional cases, adjust the free float of the company in question upon publication of the end result. A five-day notification period applies. At the same time, the SSE may exclude the stock from the relevant index family.

Where an insolvency has been announced, an extraordinary adjustment will be made and an exclusion from the SMI®, taking into account a notification period of 5 trading days.

In case SIX Regulation has confirmed a delisting, an exclusion from the SMI® will be made at the next upcoming ordinary adjustment date (March, June, September, December) taking into account a notification period of at least 5 trading days.

If a company is deleted from the SMI® as a result of a delisting, takeover or bankruptcy, a replacement is determined based on the current selection list.

The foregoing notwithstanding, the SSE may make the adjustments described above without observing the relevant notification periods.

If the free float changes as a result of an extraordinary adjustment of the number of shares, the free float is adjusted at the same time as the number of shares even if the free float changes by less than ten percentage points.

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:

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; $K_{i,t}$ is the capping factor, as described in the following paragraph, for security i on day t and r_s is the current CHF exchange rate at time s.

The securities included in the SMI® are weighted according to their free float. This means that large share packages that reach or exceed the threshold of 5% are subtracted from the total market capitalization. The free float is calculated on the basis of outstanding shares. Issued and outstanding equity capital is, as a rule, the total amount of equity capital that has been fully subscribed and wholly or partially paid in and documented in the Commercial Register. Neither conditional nor approved capital is counted as issued and outstanding equity capital. The free float is calculated on the basis of listed shares only. Where a company has different categories of listed participation rights, these are considered separately for the purposes of calculating the SMI®.

The weight of any SMI® constituent that exceeds a weight of 18% within the SMI® is reduced to that value at each ordinary quarterly adjustment date by applying a capping factor to the calculation of that constituent's free float market capitalization. The excess weight (the difference of the original weight minus the capped weight) is distributed proportionally across the other SMI® constituents. The constituents are also capped to 18% as soon as two SMI® constituents exceed a weight of 20% (an "intra-quarter breach"). If an intra-quarter breach is observed after the close of the markets, a new calculation of the capping factors is executed immediately and communicated to the market in order to ensure that the maximum weight per constituent is capped at 18% for the opening on the next day. In order to achieve a capped weighting while attempting to not cause market distortion, a stepwise reduction is conducted based on the ordinary quarterly index adjustment reviews to ensure that no reduction in the weight (as a result of capping) from one review to the next exceeds 3%. The transition period is in effect until no component has a weight larger than 18%. In the case of an intra-quarter breach, the weights are limited to the last defined weights as of the prior review.

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. The distribution of a dividend on shares of another company is not classified as an ordinary dividend payment and so necessitates an adjustment of the divisor.

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SSE is under no obligation to continue the calculation and dissemination of the SMI®. SSE determines, composes and calculates the SMI® without regard to the securities. SSE has no obligation to take into account your interest, or that of anyone else having an interest, in the securities in determining, composing or calculating the SMI®.

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."

Publication of the TOPIX® Index began on July 1, 1969, based on an initial Index value of 100 at January 4, 1968.

The TOPIX® Index consists of all Japanese common stocks listed on the First Section of the TSE. Japanese stocks admitted to the TSE are assigned to one of the First Section, the Second Section and the Mothers (Market of high-growth and emerging stocks). Stocks listed on the First Section are typically limited to larger, longer established and more actively traded issues, stocks listed on the Second Section are typically limited to mid-sized companies and stocks listed on the Mothers are typically limited to high-growth start-up companies.

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 a free-float adjusted market capitalization-weighted index. 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 (calculated as the aggregate, for each component of the TOPIX® Index, of 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) (the "Current Market Value") by the base market value (*i.e.*, the Current Market Value on the base date) (the "Base Market Value"). The free-float weight is the weight of listed shares deemed to be available for trading in the market.

In the event of an increase or decrease in the Current Market Value due to reasons other than fluctuations in the stock market, such as public offerings or changes in the number of constituents, necessary adjustments are made to the Base

Market Value in order to maintain the continuity of the TOPIX® Index. Under these circumstances, 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. Event that require adjustments to the Base Market Value include changes in constituents (due to, for example, new listings on the First Section, reassignment of listings from the First Section to the Second Section or delistings) or changes in the number of shares (due to, for example, changes in the free-float weight, public offerings, allocations of new shares to a third party, issues to shareholders with payment, exercises of subscription warrants, conversions of preferred shares, cancellations of treasury stocks, mergers, stocks-swaps or spin-offs).

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Commodity Index Descriptions

The Bloomberg Commodity Indices

General

All information contained in this underlying supplement regarding the Bloomberg Commodity Index^{SM}, its single-commodity sub-indices and the forward-month version of the Bloomberg Commodity Index^{SM} 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 securities in any way and have no obligation to consider your interests as a holder of the securities. 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 Index^{SM} was renamed to the Bloomberg Commodity Index^{SM} 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 Index^{SM} 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 Index^{SM} 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 Index^{SM} for 2018 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 Index^{SM} 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"), the New York Mercantile Exchange ("NYMEX"), the Chicago Mercantile Exchange ("CME"), the London Metals Exchange ("LME") and ICE

Futures Europe.

The Bloomberg Commodity Index^{SM} 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 Index^{SM} 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 Index^{SM} follow the methodology of the Bloomberg Commodity Index^{SM}, 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 Index^{SM} are published by Bloomberg L.P. If the securities are linked in whole or in part to a single-commodity sub-index of the Bloomberg Commodity Index^{SM}, the ticker symbol will be provided in the relevant terms supplement.

Bloomberg also publishes forward-month versions of the Bloomberg Commodity Index^{SM} and its single-commodity sub-indices that trades longer-dated commodity futures contracts. The Bloomberg Commodity Index 3 Month Forward^{SM} follows the methodology of the Bloomberg Commodity Index^{SM}, except that the futures contracts used for calculating the Bloomberg Commodity Index 3 Month Forward^{SM} are advanced, as compared to the

Bloomberg Commodity Index^{SM}, such that the delivery months for the reference contracts are later than those of the corresponding reference contracts used for the Bloomberg Commodity Index^{SM}. The Bloomberg Commodity Index 3 Month Forward^{SM} 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 Index^{SM} follow the methodology of the Bloomberg Commodity Index^{SM}, 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 Index^{SM}, 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 Index^{SM} are published by Bloomberg L.P. If the securities are linked in whole or in part to a forward-month single-commodity sub-index of the Bloomberg Commodity Index^{SM}, 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 securities 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 Index^{SM}, as well as commodities, including commodities included in the Bloomberg Commodity Index^{SM}. For information about how this trading may affect the value of the Bloomberg Commodity Indices, see "Risk Factors — For securities 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.

Benchmark Governance

Bloomberg has established the Benchmark Oversight Committee ("**BOC**") in order to monitor, manage and/or improve the objectivity, reliability, consistency, transparency and management and implementation of the benchmark rules, including those applicable to the Bloomberg Commodity Index^{SM}. The BOC is the uppermost governance body and consists of senior representatives from various Bloomberg business units. Voting members of the BOC do not directly participate in the index business.

The BOC meets on a quarterly basis to review matters such as material risks, conflicts of interest, industry developments, client complaints and material index errors and restatements. To assist in its oversight, the BOC has constituted the Index Operating Subcommittee ("**IOS**"). The IOS is composed of senior benchmark and strategy index managers designed by the BOC. Members include Bloomberg personnel with significant index experience. The IOS meets at least monthly to address matters such as new index approvals, periodic reviews of existing indices, index pricing, management of errors and restatements, identification and management of actual and potential conflicts of interest, approvals of changes to indices and approvals of cessation of indices. The IOS also consults with the Index Advisory Councils on the matters outlined below. The IOS reports to the BOC at least quarterly on all matters delegated to it.

Index Advisory Council ("IAC")

IACs are composed of key market participants and other influential individuals to assist Bloomberg in setting index priorities, to discuss potential rules changes and to provide ideas for new products. IACs are generally constituted on an annual basis. While potential benchmark changes are discussed through this process, all feedback received is non-binding and all final decisions on benchmark index rules are made by the IOS (subject to BOC review) after the review period has ended.

Internal and External Reviews

Index administration is subject to Bloomberg's internal compliance function which periodically reviews various aspects of Bloomberg's businesses in order to determine whether such businesses are adhering to applicable firm-wide policies and procedures, and assess whether applicable internal controls are functioning properly.

In addition to the compliance function, Bloomberg may from time to time appoint an independent external auditor with appropriate experience and capability to periodically review and report on its adherence to the IOSCO Principles for Financial Benchmarks. The frequency of such external reviews will depend on the size and complexity of the operations and the breadth and depth of the index use by Stakeholders.

Four Main Principles Guiding the Creation of the Bloomberg Commodity Index^{SM}

The Bloomberg Commodity Index^{SM} 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 Index^{SM} uses both liquidity data and dollar-weighted production data in determining the relative quantities of included commodities. The Bloomberg Commodity Index^{SM} 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 Index^{SM} 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 on various commodities. Accordingly, production statistics alone do not necessarily provide as accurate a reflection of economic importance as the markets themselves. The Bloomberg Commodity Index^{SM} thus relies on data that is both endogenous to the futures market (liquidity) and exogenous to the futures market (production) in determining relative weightings.

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DIVERSIFICATION. A second major goal of the Bloomberg Commodity Index[SM] 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 Index[SM] 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 Index[SM] 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 Index[SM] from year to year. The Bloomberg Commodity Index[SM] 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 Index[SM].

LIQUIDITY. Another goal of the Bloomberg Commodity Index[SM] is to provide a highly liquid index. The explicit inclusion of liquidity as a weighting factor helps to ensure that the Bloomberg Commodity Index[SM] 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 Index^{SM} and its creators, and there can be no assurance that these goals will be achieved.

Composition of the Bloomberg Commodity Index^{SM} — 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 Index^{SM} 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 Index^{SM} 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 Index^{SM} (each, an “Index Commodity” and collectively, the “Index Commodities”) for 2018 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 Index^{SM}. Historically, through and including the composition of the Bloomberg Commodity Index^{SM} for 2018, 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 Index^{SM} 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 2018 Designated Contracts for the commodities underlying the Bloomberg Commodity Index^{SM} 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"	ICE US	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	ICE US	50,000 lbs	U.S. cents/pound
Crude (WTI)	Light, Sweet Crude Oil	NYMEX	1,000 barrels	USD/barrel

Commodity	Designated Contract	Exchange	Units	Price quote
Crude (Brent)	Brent Crude Oil	ICE 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	ICE US	112,000 lbs	U.S. cents/pound
ULS diesel	ULS diesel	NYMEX	42,000 gallons	U.S. cents/gallon
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	CBOT	5,000 bushels	U.S. cents/ bushel
Zinc	Special High Grade Zinc	LME	25 metric tons	USD/metric ton

* The Bloomberg Commodity Index^{SM} 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 Index^{SM}.

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 Index^{SM}.

Commodity Groups

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

Commodity Group:	Commodities:	Commodity Group:	Commodities:
Energy		Livestock	

	Crude Oil (WTI and Brent) ULS diesel Natural Gas Unleaded Gasoline (RBOB)		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 Index^{SM} Breakdown by Commodity Group

The Commodity Group Breakdown set forth below is based on the weightings and composition of the Bloomberg Commodity Index^{SM} set forth under "The Bloomberg Commodity Index^{SM} 2018 Commodity Index Target Weights" below.

Energy	30.57%
Precious Metals	15.29%
Industrial Metals	17.39%
Livestock	6.07%
Grains	23.46%
Softs	7.22%

Annual Reweightings and Rebalancings of The Bloomberg Commodity Index^{SM}

The Bloomberg Commodity Index^{SM} is reweighted and rebalanced each year in January on a price-percentage basis. The annual weightings for the Bloomberg Commodity Index^{SM} are determined each year in the third or fourth quarter by Bloomberg index managers operating under the supervision of the BOC 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 Index^{SM} for 2018 was published on October 23, 2017. The January 2018 reweighting and rebalancing was based on the following percentages:

The Bloomberg Commodity Index^{SM} 2018 Commodity Index Target Weights

Commodity	**Weighting**
Crude Oil	15.000000%
WTI Crude Oil:	7.3193290%
Brent Crude Oil:	7.6806710%
Gold	11.9458820%
Natural Gas	8.0140970%
Copper	7.1586790%
Corn	6.1344250%
Soybeans	5.9596950%
Aluminum	4.5087010%

Wheat	4.5637780%
Chicago:	3.2589240%
KC HRW:	1.3048540%
Silver	3.6729800%
Sugar	3.5366250%
ULS Diesel*	3.6652400%
Unleaded Gasoline	3.7506600%
Live Cattle	4.3115070%

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Commodity	Weighting
Soybean Oil	2.7481210%
Soybean Meal	3.0355430%
Zinc	3.0976320%
Coffee	2.6050390%
Nickel	2.7616480%
Lean Hogs	2.0760360%
Cotton	1.4537110%

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

Information concerning the Bloomberg Commodity Index^{SM}, 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 Index^{SM}, 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 Index^{SM}. 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 Index^{SM} and their respective percentage weights.

Diversification Rules

The Bloomberg Commodity Index^{SM} 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 Index^{SM}, the following diversification rules are applied to the annual reweighting and rebalancing of the Bloomberg Commodity Index^{SM}:

- No single commodity (*e.g.*, natural gas or silver) may constitute more than 15% of the Bloomberg Commodity Index^{SM}.

- 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 Index^{SM}.

- 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 Index^{SM}.

- No single commodity included in the Bloomberg Commodity Index^{SM} may constitute less than 2% of the Bloomberg Commodity Index^{SM}, as liquidity allows.

Following the annual reweighting and rebalancing of the Bloomberg Commodity Index^{SM}, 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 initially established.

Commodity Index Multipliers

Following application of the diversification rules discussed above, CIPs are incorporated into the Bloomberg Commodity Index^{SM} 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 Index^{SM}, 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 excess return version of the Bloomberg Commodity Index^{SM} is calculated by Bloomberg by applying the impact of the changes to the futures prices of commodities included in the Bloomberg Commodity Index^{SM} (based on their relative weightings). Once the CIMs are determined as discussed above, the calculation of the excess return version of the Bloomberg Commodity Index^{SM} 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 Index^{SM} excess return level to calculate the new Bloomberg Commodity Index^{SM} excess return level.

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

The Bloomberg Commodity Index^{SM} Is a Rolling Index

The Bloomberg Commodity Index[SM] 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 Index[SM] 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 2018, 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 Index[SM] 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 Index[SM] 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 Index^{SM} on that day;

(b) the settlement price of any futures contract used in the calculation of the Bloomberg Commodity Index^{SM} 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 Index^{SM}; or

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

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Purchasers of the securities should not conclude that the inclusion of a futures contract in the Bloomberg Commodity Indices 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 Indices components has been derived solely from publicly available documents. None of UBS, Bloomberg or any of their subsidiaries or affiliates has made any due diligence inquiries with respect to the Bloomberg Commodity Indices components in connection with the securities. None of UBS, Bloomberg or any of their subsidiaries or affiliates makes any representation that these publicly available documents or any other publicly available information regarding the Bloomberg Commodity Indices components, including without limitation a description of factors that affect the prices of such components, are accurate or complete.

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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 Index^{SM} 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 securities. 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 securities 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 securities 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 securities 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;

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- 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 S&P GSCI commodity where the production quantity is determined based on regional (North American) production.

The five-year moving average is updated annually for each commodity included in the S&P GSCI®, based on the 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 quarterly 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 quarterly 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).

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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 an 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.

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S&P Dow Jones and Citigroup Global Markets Inc. have entered into a non-exclusive license agreement providing for the license to Citigroup Inc. and its other affiliates, in exchange for a fee, of the right to use indices owned and published by S&P Dow Jones in connection with certain financial products, including the securities. "Standard & Poor's," "S&P" and "S&P GSCI™" are trademarks of S&P. "Dow Jones" is a registered trademark of Dow Jones Trademark Holdings, LLC ("Dow Jones"). Trademarks have been licensed to S&P Dow Jones and have been licensed for use by Citigroup Inc. and its affiliates.

The license agreement between S&P Dow Jones and Citigroup Global Markets Inc. provides that the following language must be stated in this underlying supplement:

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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 and BlackRock Fund Advisors ("BFA"). The 20+ Treasury Fund is an investment portfolio of iShares® Trust and is maintained and managed by BFA. 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 NASDAQ Stock Market under the ticker symbol "TLT."

The 20+ Treasury Fund seeks to track the investment results, before fees and expenses, of an index composed of U.S. Treasury bonds with remaining maturities greater than twenty year. 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 Bond 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 greater than twenty years. For more information on the ICE 20+ Year Index, please see "The ICE U.S. Treasury 20+ Year Index" below.

BFA uses a representative sampling indexing strategy to manage the 20+ Treasury Fund. "Representative sampling" is an indexing strategy that involves investing in a representative sample of securities that collectively has an investment profile similar to that of an applicable underlying 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 an applicable underlying index. The 20+ Treasury Fund may or may not hold all of the securities in the ICE 20+ Year Index.

The ICE 20+ Year Index is a financial calculation, based on a grouping of financial instruments, and is not an investment product, while the 20+ Treasury Fund is an actual investment portfolio. The performance of the 20+ Treasury Fund and the ICE 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 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 20+ Year Index. "Tracking error" is the divergence of the performance (return) of the 20+ Treasury Fund's portfolio from that of the ICE 20+ Year Index. BFA expects that, over time, the 20+ Treasury Fund's tracking error will not exceed 5%. 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. "Replication" is an indexing strategy in which a fund invests in substantially all of the securities in its underlying index in approximately the same proportions as in the underlying index.

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 Bond 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, ICE Data Indices LLC ("IDI"), a subsidiary of Intercontinental Exchange, Inc. IDI 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 greater than twenty 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 Pricing and Reference Data LLC ("Interactive Data"), a subsidiary of Intercontinental Exchange, Inc.

Maturity. Each security must have a minimum effective maturity of greater than twenty years as of the last business day of the month (the "Rebalance Date"). Treasury bonds calls that have an announced call are removed from the ICE 20+ Year Index at the end of the month prior to the month in which the call will take place.

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 at each month end. The new ICE 20+ Year Index for the next month is available three days prior to month end. The new ICE 20+ Year Index is intended to reflect the constituent changes from the prior rebalancing date based on index eligibility.

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

, , , and and , , , and denote the price, accrued interest, par amount, cumulative coupon payments and market values at date and date , respectively. C denotes the coupon payments during the period (excluding any coupon payment on date but including any coupon payment on date).

Coupon payments during the period are calculated as follows:.

The market values at time and are: and , respectively.

The price return and coupon return (whenever applicable) are defined as follows:

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

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

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

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:

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 and , market value weights at date are used. The total market value of the ICE 20+ Year Index at time is   plus any intra-month cash from coupon payment or principal repayment and the weight for constituent security, which is calculated as follows:

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

Index Policies

Timing and Pricing Source. 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 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.

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 day on which SIFMA declares the U.S. fixed income markets open. 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.

Exceptional Market Conditions and Corrections. IDI retains the right to delay the publication of the index level. Furthermore, IDI retains the right to suspend the publication of the level of the ICE 20+ Year Index if it believes that circumstances prevent the proper calculation of the ICE 20+ Year Index. If evaluated prices are not available, the ICE 20+ Year Index will not be recalculated unless IDI decides otherwise. Reasonable efforts are made to ensure the correctness and validity of data used in index calculations. Where errors have occurred in the determination or calculation of the ICE 20+ Year Index, the decision to make a restatement will be assessed on a case by case basis. Such decision will take account of the significance; impact; age; and scale of the error.

In the event that there is a market-wide event resulting in evaluated prices not being available, IDI will determine its approach on a case by case basis, taking into account information and notifications provided by Interactive Data. Market-wide events include, but are not limited to, technological problems or failures, natural disaster or other business continuity planning-related event. IDI will communicate any issues with publication of the ICE 20+ Year Index during the day through the regular client communication channels; in addition, IDI may also contact clients directly; post a notice on the IDI website; send a message via the market data portal, or use other such forms of communication.

Expert Judgment. In cases which are not expressly covered in the index rules, operational adjustments may take place along the lines of the aim of the ICE 20+ Year Index. Operational adjustments may also take place if, in the opinion of IDI, it is desirable to do so to maintain the integrity of the ICE 20+ Year Index. Any such modifications described under this section or exercise of expert judgment will be based upon the ICE Data Index Design Principles, which detail the core design principles adhered to IDI 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 IDI 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. Any exercise of expert judgment will be overseen by the ICE Data Indices, LLC Governance Committee (for purposes of this section, the

"Index Committee"). The ICE Data Index Design Principles are available on request to Interactive Data.

Index Reviews. IDI undertakes regular reviews of the ICE 20+ Year Index, the methodology and the market which it represents to ensure it continues to meet the index objective, in accordance with IDI's policies and procedures. Should material changes to the ICE 20+ Year Index be required or proposed, this will be communicated to stakeholders and subscribers.

Consultations. IDI may from time to time consult with stakeholders and subscribers on proposed material changes that affect the ICE 20+ Year Index in accordance with IDI's consultation process. These proposals will be published to stakeholders and subscribers and all feedback received will be considered by IDI. Any resulting changes to the ICE 20+ Year Index will be announced prior to it being implemented.

Restatements. IDI 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 Index Committee is responsible for governance and oversight of the ICE 20+ Year Index. The Index Committee provides oversight to the ICE Data Index Services Team (the “Services Team”) that has daily responsibilities for the development, issuance and operation of the ICE 20+ Year Index.

The Index 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 subscribers. Where a change is material, IDI will consult with stakeholders and subscribers in accordance with the IDI consultation process. For other changes, advance notice will be provided, where possible, to allow stakeholders and subscribers appropriate preparation to implement the change.

The iShares® ETFs

All information contained in this underlying supplement regarding the iShares® MSCI Brazil 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 ETF, the iShares® Nasdaq Biotechnology 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 and BlackRock Fund Advisors ("BFA"). The iShares® ETFs are investment portfolios of either iShares Trust® or iShares®, Inc. and are maintained and managed by their respective fund managers. BFA is currently the investment adviser to the iShares® ETFs. The iShares® ETFs (except for the iShares® Nasdaq Biotechnology ETF) are exchange-traded funds that trade on the NYSE Arca, Inc. under their respective ticker symbols. The iShares® Nasdaq Biotechnology ETF is an exchange-traded fund that trades on The NASDAQ Stock Market ("NASDAQ") under its ticker symbol.

BFA uses a representative sampling indexing strategy to manage each iShares® ETF. "Representative sampling" is an indexing strategy that involves investing in a representative sample of securities that collectively has an investment profile similar to an applicable underlying 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 and yield) and liquidity measures similar to those of an applicable 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 financial calculation, based on a grouping of financial instruments, while each iShares® ETF is an actual investment portfolio. The performance of each iShares® ETF and its underlying index may vary for a number of reasons, including transaction costs, non-U.S. currency valuation, asset valuations, corporate actions (such as mergers and spin-offs), timing variances and differences between that iShares® ETF's portfolio and its underlying index resulting from that iShares® ETF's use of representative sampling or from legal restrictions (such as diversification requirements) that apply to that iShares® ETF but not to its underlying index. "Tracking error" is the divergence of the performance (return) of an iShares® ETF's portfolio from that of its underlying index. BFA expects that, over time, each iShares® ETF's tracking error will not exceed 5%. Because each iShares® ETF uses a representative sampling indexing strategy, it can be expected to have a larger tracking error than if it used a replication indexing strategy. "Replication" is an indexing strategy in which a fund invests in substantially all of the securities in its underlying index in approximately the same proportions as in the underlying index.

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 ETF

The iShares® MSCI Brazil 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. Effective December 29, 2017, the name of the EWZ Fund was changed from iShares® MSCI Brazil Capped ETF to its current name. The EWZ Fund is an investment portfolio of 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 Custom Capped Index. On September 1, 2017, the iShares® MSCI Canada ETF's underlying index changed from the MSCI Canada Index to the MSCI Canada Custom Capped Index. For more information about the MSCI Canada Index, please see "Equity Index Descriptions — The MSCI Indices" in this underlying supplement. For more information about the MSCI Canada Custom Capped Index, please see "— Additional Information About the Underlying Indices for Certain iShares® ETFs — MSCI Canada Custom Capped Index" below. The EWC Fund is an investment portfolio of 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 of 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 of 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 of iShares®, Inc. The EWJ Fund trades under the ticker symbol "EWJ."

The iShares® MSCI Mexico ETF

The iShares® MSCI Mexico 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 IMI 25/50 Index. Effective December 29, 2017, the name of the EWW Fund was changed from the iShares® MSCI Mexico Capped ETF to its current name. 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 of iShares®, Inc. The EWW Fund trades under the ticker symbol “EWW.”

The iShares® Nasdaq Biotechnology ETF

The iShares® Nasdaq Biotechnology ETF (the “IBB Fund”) seeks to track the investment results, before fees and expenses, of an index composed of biotechnology and pharmaceutical equities listed on NASDAQ, which is currently the NASDAQ Biotechnology Index® (the “Biotechnology Index”). For more information about the Biotechnology Index, please see “— Additional Information About the Underlying Indices for Certain iShares® ETFs — The NASDAQ Biotechnology Index®” below. The IBB Fund is an investment portfolio of iShares® Trust. The IBB Fund trades under the ticker symbol “IBB.”

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 of iShares® Trust. The IWM Fund trades under the ticker symbol "IWM."

The iShares® Russell 3000 ETF

The iShares® Russell 3000 ETF (the "IWV 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 IWV Fund is an investment portfolio of iShares® Trust. The IWV Fund trades under the ticker symbol "IWV."

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 "—Additional Information About the Underlying Indices for Certain iShares® ETFs — Dow Jones U.S. Real Estate Index" below. The IYR Fund is an investment portfolio of iShares® Trust. The IYR Fund trades under the ticker symbol "IYR."

Additional Information About the Underlying Indices for Certain iShares® ETFs

The MSCI Canada Custom Capped Index

The MSCI Canada Custom Capped Index is designed to measure the performance of the large- and mid-cap segments of the Canadian equity market. The MSCI Canada Custom Capped Index uses a variation of the MSCI 25/50 Indices methodology, where no issuer may exceed 22.50% of index weight and all issuers with weight above 5% may not exceed 24.50% of the index weight. The MSCI Canada Custom Capped Index is an index created by applying such weight constraints to the MSCI Canada Index. For more information about the MSCI Canada Index, please see "— The MSCI Indices" in this underlying supplement. For more information about the MSCI 25/50 Indices, please see "— The MSCI 25/50 Indices" in this underlying supplement.

The NASDAQ Biotechnology Index®

All information contained in this underlying supplement regarding the Biotechnology 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 NASDAQ OMX Group, Inc. (“NASDAQ OMX”). The Biotechnology Index was developed and is calculated, maintained and published by NASDAQ OMX. NASDAQ OMX does not have any obligation to continue to publish, and may discontinue publication of, the Biotechnology Index.

General

The Biotechnology Index is designed to track the performance of a set of securities listed on NASDAQ that are classified as either biotechnology or pharmaceutical according to the Industry Classification Benchmark (“ICB”). The inception date of the Biotechnology Index is November 1, 1993. The Biotechnology Index is reported by Bloomberg L.P. under the ticker symbol “NBI.”

Component Security Eligibility Criteria

To be eligible for initial inclusion in the Biotechnology Index, the issuer of a component security (which can be a common stock, ordinary share, American depositary receipt (“ADR”), share of beneficial interest or limited partnership interest) must meet the following criteria:

- the component security’s U.S. listing must be exclusively on the NASDAQ Global Select Market or on 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);

- the issuer of the security must be classified according to the Industry Classification Benchmark as either biotechnology or pharmaceutical;
- the component security may not be issued by an issuer currently in bankruptcy proceedings;
- the component security must have a market capitalization of at least $200 million;
- the component security must have an average daily trading volume of at least 100,000 shares;
- the issuer of the component security may not have entered into a definitive agreement or other arrangement that would likely result in the security no longer being eligible for inclusion in the Biotechnology Index;
- the issuer of the component security may not have annual financial statements with an audit opinion that is currently withdrawn; and
- the component security must have "seasoned" on NASDAQ, the New York Stock Exchange or NYSE American LLC (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).

Calculation of the Biotechnology Index

The NASDAQ Biotechnology Index is a modified market capitalization weighted index. The closing level of the Biotechnology Index is calculated as the aggregate values of (x) the number of shares each component security of the Biotechnology Index included in the Biotechnology Index (the "Biotechnology Index Shares") *multiplied by* (y) its last sale price on NASDAQ, which may be the NASDAQ Official Closing Price, and then *divided by* (z) the divisor of the Biotechnology Index, which is a scaling factor. The divisor serves the purpose of scaling the aggregate value to a lower order of magnitude for index reporting purposes. If trading in a component security is halted on its primary listing market, the most recent last sale price for that security is used for all index computations until trading on such market resumes. Likewise, the most recent last sale price is used if trading in a component security is halted on its primary listing market before the market is open. The closing level of the Biotechnology Index reflects the price return of the component securities without regard to cash dividends paid on the component securities. The Biotechnology Index also reflects extraordinary cash dividends.

Biotechnology Index Rebalancing

The Biotechnology Index is rebalanced quarterly. At each quarter, the Biotechnology Index is rebalanced such that the maximum weight of any component security does not exceed 8% and no more than five component securities are at that cap. The excess weight of any capped component security is distributed proportionally across the remaining component securities. If, after redistribution, any of the five highest ranked component securities are weighted below 8%, these securities are not capped. Next, any remaining component securities in excess of 4% are capped at 4% and the excess weight is redistributed proportionally across the remaining component securities. The process is repeated, if necessary, to derive the final modified market capitalization weights of each component security.

The modified market capitalization weighting methodology is applied to the capitalization of each component security, using its last sale price as of the close of trading on the last trading day in February, May, August and November and after applying quarterly changes to the total shares outstanding. The Biotechnology Index Shares of each component security are then calculated by multiplying its weight derived above by the new market value of the Biotechnology Index and dividing the modified market capitalization of each component security by its last sale price. The changes will be effective after the close of trading on the third Friday in March, June, September and December.

NASDAQ OMX may, from time to time, exercise reasonable discretion as it deems appropriate in order to ensure the integrity of the Biotechnology Index.

Biotechnology Index Evaluation

The component securities of the Biotechnology Index are evaluated annually in December of each year. The eligibility criteria described above are applied using market data through the end of October and is updated for total shares outstanding submitted in a document filed publicly with the SEC through the end of November. Securities meeting the eligibility criteria listed above are included in the Biotechnology Index. Additions and deletions of component securities become effective after the close of trading on the third Friday in December.

Additionally, if at any time during the year other than the time for an evaluation, a component security no longer meets the eligibility criteria, or is otherwise determined to have become ineligible for continued inclusion in the Biotechnology Index, the component security will be removed from the Biotechnology Index at its last sale price. If, however, at the time of its removal, a component security is halted from trading on its primary listing market and an official closing price cannot be readily determined, the component security may, in NASDAQ OMX's discretion, be removed at a price of zero.

Biotechnology Index Maintenance

Changes in the price and/or Biotechnology Index Shares of 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%, the changes is made as soon as practicable. However, if the change in total shares outstanding is less than 10%, 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 March, June, September and December. The Biotechnology Index Shares of each component security are adjusted by the same percentage amount by which the total shares outstanding for that component security has changed.

A special cash dividend announced by the listing exchange will result in an adjustment to the last sale price of the relevant component security prior to market open on the ex-date for the special amount distributed.

Ordinarily, whenever there is a change in the Biotechnology Index Shares of component securities, in the component securities or to the price of a component security due to spin-offs, rights issuances or special cash dividends, the divisor of the Biotechnology Index will be adjusted to ensure that there is no discontinuity in the value of the Biotechnology Index caused by any such change. All changes are announced in advance and are reflected in the Biotechnology Index prior to market open on the relevant date of effectiveness.

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. The Dow Jones U.S. Real Estate Index is reported by Bloomberg L.P. under the ticker symbol "DJUSRE."

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

The Dow Jones U.S. Real Estate Index is designed to track the performance of real estate investment trusts (REITs) and other companies that invest directly or indirectly in real estate through development, management, or ownership, including property agencies. 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. Index, which is designed to be a measure of the U.S. stock market, covering 95% of U.S. stocks by float-adjusted market capitalization, excluding the most thinly traded securities. 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.

The index universe is defined as all stocks traded on the major U.S. stock exchanges, minus any non-common issues and illiquid stocks. Index component candidates are filtered through screens for share class and eligibility.

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, listed property trusts and similar real-property-owning pass-through structures taxed as REITs by their domiciles are also eligible. In some cases, companies issue multiple share classes. A separate investable weight factor (IWF), which is an adjustment factor that accounts for publicly available shares of a company, is calculated for each class and the class is included, providing it meets eligibility criteria and foreign investors may hold shares in the class. For liquidity, non-trading days are reviewed for all existing constituents during the annual reconstitution in September. Securities with ten or more non-trading days over the previous quarter becomes ineligible.

Stocks in the index universe are sorted by float-adjusted market capitalization. Stocks in the top 95% of the index universe by float-adjusted market capitalization are selected as constituents of the Dow Jones U.S. Index. Selection is subject to a 2% buffer for current and non-current stocks. Current constituents remain eligible up to the 97th percentile as ranked by float-adjusted market capitalization. Non- constituents are eligible up to the 93rd percentile as ranked by float-adjusted market capitalization.

Stocks selected as components of the Dow Jones U.S. Index are then categorized 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 U.S. Index.

The Dow Jones Real Estate Index is calculated by means of the divisor methodology. On any given day, the index value is the quotient of the total float-adjusted market capitalization of the Dow Jones Real Estate Index’s constituents and its divisor. Continuity in 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 Dow Jones Real Estate Index, rights issues, share buybacks and issuances, and spin-offs. 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 index value at an instant just prior to a change in base capital equals the index value at an instant immediately following that change.

The Dow Jones U.S. Real Estate Index is reconstituted annually in September. The process includes the review of all stocks in their respective markets to determine eligibility according to the existing criteria. The reference date for data used in the annual reconstitution is the last business day in July. In addition, the IWF for each stock is reviewed and updated as needed. Changes are implemented at the opening of trading on the Monday following the third Friday of September. Changes in shares outstanding of less than 5% are accumulated and made quarterly in March, June, September and December. These changes, as well as any weight adjustments are implemented at the opening of trading on the Monday following the third Friday of the quarterly update month.

The Dow Jones U.S. Real Estate Index is also reviewed on an ongoing basis to account for corporate events such as mergers, takeovers, delisting or bankruptcies. Changes to index composition and related weight adjustments are made as soon as they are effective. These changes are typically announced two business days prior to the implementation date.

Initial Public Offerings (IPOs). IPOs and new listings on eligible exchanges are added to the Dow Jones U.S. Real Estate Index at the next quarterly update if the new listing meets all eligibility requirements. The reference date for IPO inclusions will be five weeks prior to the effective rebalance date and additions are effective at the open of Monday following the third Friday of March, June, September and December.

Spinoffs. The spun-off company is added to the Dow Jones U.S. Real Estate Index, at a zero price at the market close of the day before the ex-date (with no divisor adjustment). If a spun-off company is determined not to be eligible to remain in the Dow Jones U.S. Real Estate Index, it will be removed after at least one day of regular way trading (with a divisor adjustment). Spinoffs are assigned the same size and style as the parent company at the time of the event. All spinoff sizes are evaluated at the next quarterly update.

Additions

Generally no companies are added to the Dow Jones U.S. Real Estate Index between annual reconstitutions except for IPOs and spinoffs as described above. Any exceptions to this rule will be announced in advance. Any stocks considered for addition at the quarterly rebalance must have a float market capitalization larger than the smallest stock included in the Dow Jones U.S. Real Estate Index at the time of the previous reconstitution.

Deletions

Between rebalancings, a company can be deleted from the Dow Jones U.S. Real Estate Index due to corporate events such as mergers, acquisitions, takeovers, delistings or bankruptcies. Whenever possible, changes in the Dow Jones U.S. Real Estate Index's constituents are announced at least two business days prior to their implementation date. If an index constituent is suspended by its primary market, it may be removed from the Dow Jones U.S. Real Estate Index at the discretion of the Global Equity Indices Index Committee (for purposes of this section, the "Index Committee"). Whenever practicable, S&P Dow Jones will use the best-available alternate pricing source to determine the value at which the company should be removed from the Dow Jones U.S. Real Estate Index.

Governance of the Dow Jones U.S. Real Estate Index

The Dow Jones Global Indices® are maintained by the Index Committee. All 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 Dow Jones U.S. Real Estate Index to the market, companies that are being considered as candidates for addition to the Dow Jones U.S. Real Estate 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.

The Invesco QQQ Trust℠, Series 1

All information contained in this underlying supplement regarding the Invesco QQQ Trust℠, Series 1 (the “QQQ Fund”) has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, The Bank of New York Mellon, as trustee of the QQQ Fund (the “QQQ Fund Trustee”), and Invesco Capital Management LLC, as sponsor of the QQQ Fund (the “QQQ Fund Sponsor”). The QQQ Fund is a unit investment trust that issues securities called “Invesco QQQ Shares.” The QQQ Fund is an exchange-traded fund that trades on The NASDAQ Stock Market under the ticker symbol “QQQ.”

The QQQ Fund is a registered investment company. Information provided to or filed with the SEC by the QQQ 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 333-61001 and 811- 08947, respectively, through the SEC’s website at http://www.sec.gov. For additional information regarding the QQQ Fund, the QQQ Fund Trustee and the QQQ Fund Sponsor, please see the QQQ Fund’s prospectus. In addition, information about the QQQ Fund, the QQQ Fund Trustee and the QQQ Fund Sponsor may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents and the QQQ Fund website at www.powershares.com/qqq. Information contained in the QQQ Fund’s website and in the QQQ Fund’s prospectus is not incorporated by reference in, and should not be considered a part of, this underlying supplement.

Investment Objective and Strategy

The QQQ Fund is a unit investment trust, which is a registered investment company. The objective of the QQQ Fund is to provide investment results that, before expenses, generally correspond to the price and yield performance of the NASDAQ-100 Index®. The NASDAQ-100 Index® is a modified market capitalization-weighted index of 100 of the largest non-financial securities listed on The NASDAQ Stock Market based on market capitalization. For additional information about the NASDAQ-100 Index®, see “Equity Index Descriptions — The NASDAQ-100 Index®.”

The QQQ Fund holds securities and cash and is not actively managed by traditional methods, which typically involve effecting changes in the holdings of securities on the basis of judgments made relating to economic, financial and market considerations. To maintain the correspondence between the composition and weighs of the securities held by the QQQ Fund and the component securities of the Underlying Index (“QQQ Index Securities”), the QQQ Fund Trustee adjusts the holdings of the QQQ Fund from time to time to conform to periodic changes in the identity and/or relative weights of the QQQ Index Securities.

The QQQ Fund Trustee aggregates certain of these adjustments and makes conforming changes to the holdings of the QQQ Fund at least monthly; however, adjustments are made more frequently in the case of significant changes to the Underlying Index. Any change in the identity of a QQQ Index Security (*i.e.*, a substitution of one security in place of another) will result in a corresponding adjustment to the prescribed holdings of the Fund within three business days before or after the day on which the change in the identity of that QQQ Index Security is scheduled to take effect at the close of the market. The value of the shares of the QQQ Fund fluctuates in relation to changes in the value of the holdings of the QQQ Fund. The market price of each individual share of the QQQ Fund may not be identical to the net asset value of the share of the QQQ Fund.

Although the QQQ Fund may at any time fail to own certain of the QQQ Index Securities, the QQQ Fund will be substantially invested in the QQQ Index Securities at all times. It is possible that, for a short period of time, the QQQ Fund may not fully replicate the performance of NASDAQ-100 Index® due to temporary unavailability of certain QQQ Index Securities in the secondary market or due to other extraordinary circumstances. In addition, the QQQ Fund is not able to replicate exactly the performance of the NASDAQ-100 Index® because the total return generated by the QQQ Fund's portfolio of securities and cash is reduced by the expenses of the QQQ Fund and transaction costs incurred in adjusting the actual balance of the QQQ Fund's portfolio.

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.

Each Select Sector SPDR® Fund seeks 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 their sector classifications under the Global Industry Classification Standards (“GICS®”) from a universe of companies defined by the S&P 500® Index. In November 2017, S&P Dow Jones Indices LLC and MSCI Inc. announced changes to the GICS® in September 2018 that will affect the Consumer Discretionary Select Sector Index and the Technology Select Sector Index. Effective after the close of business on September 28, 2018, the GICS® consumer discretionary sector will be updated to (a) expand the internet & direct marketing retail industry to include companies providing online marketplaces for consumer products and services and e-commerce companies regardless of whether they hold inventory and (b) discontinue the media industry (which will be moved to the renamed GICS® communication services sector). In addition, effective after the close of business on September 28, 2018, (a) the companies classified in the GICS® internet software and services industry (within the GICS® information technology sector) will be moved to the GICS® IT services or software industries (both within the GICS® information technology sector) and the internet software and services industry will be discontinued and (b) the GICS® telecommunication services sector will be broadened and renamed the communication services sector to include companies that facilitate communication and offer related content and information through various media, resulting in the addition of three GICS® industries within the renamed communication services sector: media; entertainment; and interactive media & services. 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
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 each 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. However, under various circumstances, it may not be possible or practical to purchase all of the securities in the relevant Select Sector Index for a Select Sector SPDR® Fund, or amounts of such securities in proportion to their weighting in the relevant Select Sector Index, such as when there are practical difficulties or substantial costs involved in compiling a portfolio of securities to follow the relevant Select Sector Index; in instances when a security in the I relevant Select Sector Index becomes temporarily illiquid, unavailable or less liquid; or due to legal restrictions (such as diversification requirements that apply to a Select Sector SPDR® Fund but not the relevant Select Sector Index). Under such circumstances, 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 Select Sector Index, outside of the relevant Select Sector Index and derivatives that have a similar investment profile as the relevant Select Sector 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 (*i.e.*, achieve a high degree of correlation with the relevant Select Sector Index), each Select Sector SPDR® Fund's return may not match the return of the relevant Select Sector Index. Each Select Sector SPDR® Fund incurs a number of operating expenses not applicable to the relevant Select Sector Index and incurs costs in buying and selling securities. In addition, a Select Sector SPDR® Fund may not be fully invested at times, generally as a result of cash flows into or out of that Select Sector SPDR® Fund or reserves of cash held by that Select Sector SPDR® Fund to meet redemptions.

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 seeks 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.

While SSGA FM seeks to track the performance of the EURO STOXX 50® Index (*i.e.*, achieve a high degree of correlation with the EURO STOXX 50® Index), the FEZ Fund's return may not match the return of the EURO STOXX 50® Index. The FEZ Fund incurs a number of operating expenses not applicable to the EURO STOXX 50® Index, and incurs costs in buying and selling securities. In addition, the FEZ Fund may not be fully invested at times, generally as a result of cash flows into or out of the FEZ Fund or reserves of cash held by the FEZ Fund to meet redemptions. SSGA FM may attempt to replicate the EURO STOXX 50® Index return by investing in fewer than all of the securities in the EURO STOXX 50® Index, or in some securities not included in the EURO STOXX 50® Index, potentially increasing the risk of divergence between the FEZ Fund's return and that of the EURO STOXX 50® Index.

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.

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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 for its shares to reflect the performance of the price of gold bullion, less the Gold Trust's expenses. The Gold Trust holds gold bars and from time to time, 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 designed for investors who want a cost-effective and convenient way to invest in gold.

The shares of the Gold Trust represent units of fractional undivided beneficial interest in and ownership of the Gold Trust. The Gold Trust is a passive investment vehicle and the trustee of the Gold Trust does not actively manage the gold held by the Gold Trust. The trustee of the Gold Trust sells gold held by the Gold Trust to pay the Gold Trust's expenses on an as-needed basis irrespective of then-current gold prices. Currently, 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 333-217785 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. The Gold Trust is not a commodity pool for purposes of the Commodity Exchange Act of 1936, as amended, and World Gold is not subject to regulation by the Commodity Futures Trading Commission as a commodity pool operator, or a commodity trading advisor. 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 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 Global Advisors Trust Company ("SSGATC"), 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 seeks 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 SPY Fund seeks to achieve its investment objective by holding a portfolio of common stocks that are included in the S&P 500® Index, with the weight of each stock in the portfolio substantially corresponding to the weight of that stock in the S&P 500® Index. At any time, the portfolio of the SPY Fund will consist of as many of the component stocks of the S&P 500® Index as is practicable. 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, SSGATC or its parent company, State Street Bank and Trust Company ("SSBT") adjusts the portfolio of the SPY Fund from time to time to conform to periodic changes in the identity and/or relative weightings of the component stocks of the S&P 500® Index. SSGATC or SSBT aggregates certain of these adjustments and makes changes to the portfolio of the SPY Fund at least monthly or more frequently in the case of significant changes to the S&P 500® Index.

While the SPY Fund is intended to track the performance of the S&P 500® Index as closely as possible (*i.e.*, to achieve a high degree of correlation with 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 due to expenses 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 component stocks of the S&P 500® Index in the secondary market or due to other extraordinary circumstances (*e.g.*, if trading in a security has been suspended).

The SPY Fund is an investment company registered under the Investment Company Act of 1940, as amended. 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, SSGATC and PDRS, please see the SPY Fund's prospectus. In addition, information about the SPY Fund, SSGATC 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® Bank ETF	KBE	S&P® Banks Select Industry™ Index
SPDR® S&P® Biotech ETF	XBI	S&P® Biotechnology 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). This differs from an actively-managed fund, which typically seeks to outperform a benchmark 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 daily changes in percentage terms of the spot price of light, sweet crude oil (the "Underlying Commodity" with respect to the Oil Fund) 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 (the "benchmark oil futures contract"), less the Oil Fund's expenses. The benchmark oil futures contract is the futures contract on light, sweet crude oil traded on the New York Mercantile Exchange 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, 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 to a lesser extent, in order to comply with regulatory requirements or in view of market conditions, other oil-related investments such as cash-settled options on oil futures contracts, forward contracts for oil, cleared swap contracts and non-exchange traded (or 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. 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 contract 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 333-209362 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.

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The VanEck Vectors® Gold Miners ETF

All information contained in this underlying supplement regarding the VanEck 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, VanEck Vectors® ETF Trust (the "VanEck Trust") and Van Eck Associates Corporation ("Van Eck"). The GDX Fund is an investment portfolio of the VanEck Vectors® ETF 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."

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 by investing in a portfolio of securities that generally replicates the Gold Miners Index. Van Eck anticipates that, generally, the GDX Fund will hold all of the securities that compose the Gold Miners Index in proportion to their weightings in the Gold Miners Index. However, under various circumstances, it may not be possible or practicable to purchase all of those securities in those weightings. In these circumstances, the GDX Fund may purchase a sample of securities in the GDX Index.

The GDX Fund's return may not match the return of the Gold Miners Index for a number of reasons. For example, the GDX Fund incurs a number of operating expenses not applicable to the Gold Miners Index and incurs costs associated with buying and selling securities, especially when rebalancing the GDX Fund's securities holdings to reflect changes in the composition of the Gold Miners Index, which are not factored into the return of the Gold Miners Index. Transaction costs, including brokerage costs, will decrease the GDX Fund's net asset value ("NAV") to the extent not offset by the transaction fee payable by an authorized participant. Market disruptions and regulatory restrictions could have an adverse effect on the GDX Fund's ability to adjust its exposure to the required levels in order to track the Gold Miners Index. Errors in the Gold Miners Index data, the Gold Miners Index computations and/or the construction of the Gold Miners Index in accordance with its methodology may occur from time to time and may not be identified and corrected by the Gold Miners Index provider for a period of time or at all, which may have an adverse impact on the GDX Fund and its shareholders. In addition, the GDX Fund may not invest in certain securities included in the Gold Miners Index, or invest in them in the exact proportions in which they are represented in the Gold Miners Index, due to legal restrictions or limitations imposed by the governments of certain countries, certain NYSE Arca listing standards, a lack of liquidity on stock exchanges in which such securities trade, potential adverse tax consequences or other regulatory reasons (such as diversification requirements). The GDX Fund may value certain of its investments and/or underlying currencies based on fair value prices. To the extent the GDX Fund calculates its NAV based on fair value prices and the value of the Gold Miners Index is based on securities' closing prices on local foreign markets (*i.e.*, the value of the Gold Miners Index is not based on fair value prices), the GDX Fund's ability to track the Gold Miners Index may be adversely affected. For tax efficiency purposes, the GDX Fund may sell certain securities, and such sale may cause the GDX Fund to realize a loss and deviate from the performance of the Gold Miners Index. In light of the factors discussed above, the GDX Fund's return may deviate significantly from the return of the Gold Miners Index.

The VanEck 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 VanEck 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 VanEck Trust, Van Eck and the GDX Fund, please see the GDX Fund's prospectus. In addition, information about the VanEck 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 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 at rebalance, 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 depositary 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 VanEck Vectors® Oil Services ETF

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

The Oil Services Fund seeks to replicate as closely as possible, before fees and expenses, the price and yield performance of the MVIS® US Listed Oil Services 25 Index (the "Oil Services Index"). For more information about the Oil Services Index, please see "The MVIS® US Listed Oil Services 25 Index" below.

The Oil Services Fund uses a "passive" or indexing investment approach to attempt to approximate the investment performance of the Oil Services Index by investing in a portfolio of securities that generally replicates the Oil Services Index.

The Oil Services Fund's return may not match the return of the Oil Services Index for a number of reasons. For example, the Oil Services Fund incurs a number of operating expenses not applicable to the Oil Services Index and incurs costs associated with buying and selling securities, especially when rebalancing the Oil Services Fund's securities holdings to reflect changes in the composition of the Oil Services Index. The Oil Services Fund also bears the costs and risks associated with buying and selling securities while such costs and risks are not factored into the return of the Oil Services Index. In addition, the Oil Services Fund may not be able to invest in certain securities included in the Oil Services Index, or invest in them in the exact proportions in which they are represented in the Oil Services Index, due to legal restrictions or limitations imposed by the governments of certain countries, a lack of liquidity on stock exchanges in which such securities trade, potential adverse tax consequences or other regulatory reasons. To the extent the Oil Services Fund calculates its net asset value based on fair value prices and the value of the Oil Services Index is based on securities' closing prices (i.e., the value of the Oil Services Index is not based on fair value prices), the Oil Services Fund's ability to track the Oil Services Index may be adversely affected. For tax efficiency purposes, the Oil Services Fund may sell certain securities, and such sale may cause the Oil Services Fund to realize a loss and deviate from the performance of the Oil Services Index. In light of the factors discussed above, the Oil Services Fund's return may deviate significantly from the return of the Oil Services Index.

The VanEck Trust is a registered investment company that consists of numerous separate investment portfolios, including the Oil Services Fund. Information provided to or filed with the SEC by the VanEck 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 VanEck Trust, Van Eck and the Oil Services Fund, please see the Oil Services Fund's prospectus. In addition, information about the VanEck Trust and the Oil Services

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 and in the Oil Services Fund's prospectus is not incorporated by reference in, and should not be considered a part of, this underlying supplement.

The MVIS® US Listed Oil Services 25 Index

All information contained in this underlying supplement regarding the Oil Services Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, MV Index Solutions GmbH ("MVIS"). The Oil Services Index was developed by MVIS and is maintained and published by MVIS. The Oil Services Index is calculated by Solactive AG. MVIS has no obligation to continue to publish, and may discontinue the publication of, the Oil Services Index.

The Oil Services Index is reported by Bloomberg L.P. under the ticker symbol "MVOIH."

The Oil Services Index is designed to track the performance of the largest and most liquid U.S.-listed companies that derive at least 50% (25% for current components) of their revenues from oil services to the upstream oil sector. The Oil Services Index was launched on August 12, 2011 with a base index value of 1,000 as of September 29, 2000.

Index Composition and Maintenance

The Index Universe

The index universe includes only common stocks and stocks with similar characteristics from financial markets that are freely investable for foreign investors and that provide real-time and historical component and currency pricing. Limited partnerships are excluded. Companies from financial markets that are not freely investable for foreign investors or that do not provide real-time and historical component and currency pricing may still be eligible if they have a listing on an eligible exchange and if they meet all the size and liquidity requirements on that exchange.

Only stocks that have a full market capitalization exceeding US$50 million are eligible for the index universe.

Investable Index Universe

Only companies with a free-float (or shares available to foreign investors) of 5% or more for existing index components or 10% or more for new components are eligible for inclusion.

In addition to the above, stocks that are currently not in the Oil Services Index must meet the following size and liquidity requirements:

- a full market capitalization exceeding US$150 million;
- a three-month average-daily-trading volume of at least US$1 million at the current review and also at the previous two reviews; and
- at least 250,000 shares traded per month over the last six months at the current review and also at the previous two reviews.

For stocks already in the Oil Services Index the following applies:

- a full market capitalization exceeding US$75 million; and
- a three-month average-daily-trading volume of at least US$0.2 million in at least two of the latest three quarters (current review and also at previous two reviews)
- In addition, a three-month average-daily-trading volume of at least US$0.6 million at current review or at one of the previous two reviews; or
- at least 200,000 shares traded per month over the last six months at the current review or at one of the previous two reviews.
- In case the number of investable stocks drops below the minimum component number for the Oil Services Index, additional companies are flagged eligible by MVIS's decision until the number of eligible stocks equals the minimum component count.

Only one share line of each company is eligible. In case more than one share line fulfills the above size and liquidity rules, only the largest share line by free-float market capitalization is eligible. MVIS can, in exceptional cases (e.g., significantly higher liquidity), decide for a different share line.

In case the free-float market capitalization of a non-component share line:

- exceeds the free-float market capitalization of a share line of the same company which is an index component by at least 25%; and

· fulfills all size and liquidity eligibility criteria for non-components,

the current component share line will be replaced by the larger one. MVIS can, in exceptional cases (*e.g.*, significantly higher liquidity), decide to keep the current share line instead.

Index Constituent Selection

The Oil Services Index is reviewed on a semi-annual basis in March and September.

The target coverage of the Oil Services Index is 25 companies from the investable universe. Oil Services Index constituents are selected using the following procedure:

1) The largest 50 stocks (by full market capitalization) from the investable universe qualify.

2) The 50 stocks are ranked in two different ways — by free-float market capitalization in descending order (the largest company receives rank "1") and then by three-month average-daily-trading volume in descending order (the most liquid company receives rank "1"). These two ranks are added up.

3) The 50 stocks are then ranked by the sum of their two ranks in Step 2 in ascending order. If two companies have the same sum of ranks, the larger company is placed on top.

a. Initially, the highest ranked 25 companies made up the Oil Services Index.

b. On-going, a 10-40 buffer is applied: the highest ranked 10 companies qualify. The remaining 15 companies are selected from the highest ranked remaining current Oil Services Index components ranked between 11 and 40. If the number of selected companies is still below 25, then the highest ranked remaining stocks are selected until 25 companies have been selected.

Review Schedule

The reviews for the Oil Services Index are based on the closing data on the last business day in February and August. If a company does not trade on the last business day in February or August, the last available price for this company will be used.

The underlying index data (e.g., new number of shares, new free-float factors and new weighting cap factors) is announced on the second Friday in March or September. The weighting cap factors are based on closing data of the Wednesday prior to the second Friday in March or September. Changes to the Oil Services Index are implemented and based on the closing prices of the third Friday in March or September. If the third Friday is not a business day, then the review will take place on the last business day before the third Friday. If a constituent of the Oil Services Index does not trade on the third Friday in March or September, then the last available price for that index constituent will be used. Changes become effective on the next business day.

For purposes of this annex, “business day” means any day (other than a Saturday or Sunday) on which commercial banks and foreign exchange markets settle payments in Frankfurt.

Ongoing Maintenance

In addition to the periodic reviews, the Oil Services Index is continually reviewed for corporate events (*e.g.*, mergers, takeovers, spin-offs, delistings and bankruptcies) that affect the Oil Services Index components.

Replacements. For all corporate events that result in a stock deletion from the Oil Services Index, the deleted stock will be replaced with the highest ranked non-component on the most recent replacement list. The replacement stock will be added at the same weight as the deleted stock. Only in case of a merger of two or more index components, the replacement stock will be added with its free-float market capitalization, weighted with the capping factor of the uncapped components in the small-weight group of the weighting scheme.

Changes to Free-Float Factor and Number of Shares. Changes to the number of shares or the free-float factors due to corporate actions like stock dividends, splits, rights issues, etc. are implemented immediately and will be effective the next trading day (i.e., the ex-date). Simple share/float changes are implemented after a 3-day notice period.

Initial Public Offerings (IPOs) and Spin-Offs. An IPO stock is eligible for fast-track addition to the index universe for the Oil Services Index once, either at the next semi-annual review if it has been trading since at least the last trading day of the month prior to the review snapshot dates (*i.e.*, the last trading day in February or August) or else at the then-following semi-annual review. In order to be added to the Oil Services Index the IPO stock has to meet the size and liquidity requirements:

- the IPO must have a full market capitalization exceeding US$150 million;
- the IPO must have a free-float factor of at least 10%;
- the IPO must have an average-daily-trading volume of at least US$1 million; and
- the IPO must have traded at least 250,000 shares per month (or per 22 days).
- This rule is applicable for newly spun-off companies as well.

Changes due to Mergers & Takeovers. A merger or takeover is deemed successful if it has been declared wholly unconditional and has received approval of all regulatory agencies with jurisdiction over the transaction. The result of a merger or takeover is typically one surviving stock and one or more non-surviving stocks that may not necessarily be de-listed from the respective trading system(s).

- If an Oil Services Index component merges with or takes over another Oil Services Index component: The surviving stock remains in the Oil Services Index and the other stock is deleted immediately from the Oil Services Index. Its shares and float are adjusted according to the terms of the merger/takeover. The index market capitalization of the merged company corresponds to the market capitalization of the two separate companies.

- If an Oil Services Index component merges with or takes over a non-Oil Services Index component: If the surviving stock meets the Oil Services Index requirements, then it remains in the Oil Services Index and its shares (if the share change is greater than 10%) and float are adjusted according to the terms of the merger/takeover. If the surviving stock does not meet the Oil Services Index requirements, then it is deleted immediately from the Oil Services Index.

- If a non-Oil Services Index component merges with or takes over an Oil Services Index component: If the surviving stock meets the Oil Services Index requirements, then it will be added to the Oil Services Index (shares (if the share change is greater than 10%) and float adjusted according to the terms of the merger/takeover) and will replace the current Oil Services Index component. If the surviving stock does not meet the Oil Services Index requirements, then it will not be added to the Oil Services Index and the current Oil Services Index component is deleted immediately from the Oil Services Index.

Changes due to Spin-Offs. Each spin-off stock is immediately added to the Oil Services Index for at least two trading days. If a spin-off company does not qualify for the Oil Services Index, it will be deleted based on its closing price. Shares and floats of the surviving companies are adjusted according to the terms of the spin-off.

Additions due to Replacements. In case the number of Oil Services Index components drops below the minimum component number and no non-component stock is eligible as a replacement, the determination of the addition is subject to MVIS's decision.

Index Calculation

The value of the Oil Services Index is calculated using the Laspeyres' formula, rounded to two decimal places, with stock prices converted to U.S. dollars:

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where (for all stocks (i) in the Oil Services Index):

pi = stock price (rounded to four decimal places);

qi = number of shares;

ffi = free-float factor (rounded to two decimal places);

fxi = exchange rate (local currency to U.S. Dollar) (rounded to 12 decimal places);

cfi = company-weighting cap factor (if applicable, otherwise set to 1) (rounded to 16 decimal places);

M = free-float market capitalization of the Oil Services Index; and

D = divisor (rounded to six decimal places).

Free-Float

The Oil Services Index is free-float adjusted — that is, the number of shares outstanding is reduced to exclude closely held shares (amount larger than 5% of the company's full market capitalization) from the index calculation. At times, other adjustments are made to the share count to reflect foreign ownership limits. These are combined with the block-ownership adjustments into a single factor. To avoid unwanted double counting, either the block-ownership adjustment or the restricted stocks adjustment is applied, whichever produces the higher result. Free-float factors are reviewed quarterly.

Company-Weighting Cap Factors

Companies in the Oil Services Index are weighted according to their free-float market capitalization, as modified by the company-weighting cap factors. The Oil Services Index used the company-weighting cap factors to ensure diversification to avoid overweighting. The company-weighting cap factors are reviewed quarterly and applied, if necessary. The following weighting scheme applies to the Oil Services Index:

(1) All Oil Services Index components are weighted by their free-float market capitalization.

(2) All companies exceeding 4.5% but at least the largest five companies are grouped together (so called "Large-Weights") and all other companies are grouped together as well (so called "Small-Weights").

(3) The aggregated weighting of the Large-Weights is capped at 50%:

a. Large-Weights: If the aggregated weighting of all companies in Large-Weight exceeds 50%, then a capping factor is calculated to bring the weighting down to 50%; at the same time, a second capping factor for the Small-Weights is calculated to increase the aggregated weight to 50%. These two factors are then applied to all companies in the Large-Weights or the Small-Weights respectively.

b. Large-Weights: The maximum weight for any single stock is 20% and the minimum weighting is 5%. If a stock is above the maximum or below the minimum weight, then the weight will be reduced to the maximum weight or increased to the minimum weight and the excess weight will be re-distributed proportionally across all other remaining Oil Services Index constituents in the Large-Weights.

c. Small-Weights: The maximum weight for any single stock is 4.5%. If a stock is above the maximum weight, then the weight will be reduced to the maximum weight and the excess weight will be re-distributed proportionally across all other remaining Oil Services Index constituents in the Small-Weights.

Divisor Adjustments

Index maintenance (reflecting changes in, e.g., shares outstanding, capital actions, addition or deletion of stocks to the Oil Services Index) should not change the level of the Oil Services Index. This is accomplished with an adjustment to the divisor. Any change to the stocks in the Oil Services Index that alters the total market value of the Oil Services Index while holding stock prices constant will require a divisor adjustment.

where ΔMC is the difference between closing market capitalization and adjusted closing market capitalization of the Oil Services Index.

Data Correction

Incorrect or missing input data will be corrected immediately.

Corporate Action Related Adjustments

Corporate actions range widely from routine share issuances or buy backs to unusual events like spin-offs or mergers. These are listed on the table below with notes about the necessary changes and whether the divisor will be adjusted. Implementation takes place on the ex-date.

Special cash dividend	Divisor change: Yes
pi, adjusted = pi – (Dividend x (1 – Withholding Tax))	Divisor change: No

Split		
Shareholders receive “B” new shares for every “A” share held.		
Rights offering		
Shareholders receive “B” new shares for every “A” share held. If the subscription-price is either not available or not smaller than the closing price, then no adjustment will be done.	Divisor change: Yes	

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Stock dividend	
Shareholders receive "B" new shares for every "A" share held.	Divisor change: No
Stock dividend from treasury	
Stock dividends from treasury are adjusted as ordinary cash dividends. Shareholders receive 'B' new shares for every 'A' share held.	Divisor change: Yes
Stock dividend of a different company security	
Shareholders receive "B" shares of a different company for every "A" share held.	Divisor change: Yes
Spin-offs	
Shareholders receive "B" new shares for every "A" share held.	Divisor change: Yes
Addition/deletion of a company	Divisor change: Yes
Net change in market value determines the divisor adjustment.	

Changes in shares outstanding/free-float	
Any secondary issuance, share repurchase, buy back, tender offer, Dutch auction, exchange offer, bought deal equity offering or prospectus offering will be updated at the semi-annual review if the change is smaller than 10%. Changes larger than 10% will be pre-announced (3 trading days' notice) and implemented on a best efforts basis. If necessary and information is available, resulting float changes are taken into consideration. Share changes will not be implemented in the week between review announcement and implementation.	Divisor change: Yes
Changes due to a merger/takeover/spin-off	
Net change in free-float market value determines the divisor adjustment. In case of no change, the divisor change is 0.	Divisor change: Yes

With corporate actions where cash dividends or other corporate assets are distributed to shareholders, the price of the stock will drop on the ex-dividend day (the first day when a new shareholder is eligible to receive the distribution). The effect of the divisor adjustment is to prevent this price drop from causing a corresponding drop in the Oil Services Index.

Corporate actions are announced at least four days prior to implementation.

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 International Trust") and The Vanguard Group, Inc. ("Vanguard"). The Vanguard FTSE Emerging Markets ETF is an investment portfolio of the Vanguard International 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, before fees and expenses, 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 Inclusion Index (the "Emerging Markets Index"). For more information about the Emerging Markets Index, see "— The FTSE Emerging Markets All Cap China A Inclusion Index" below.

The index tracked by the Vanguard FTSE Emerging Markets ETF has changed over time. The Vanguard FTSE Emerging Markets ETF tracked the Select Emerging Markets Index through August 23, 2006; the MSCI Emerging Markets Index through January 9, 2013; the FTSE Emerging Transition Index through June 27, 2013; the FTSE Emerging Markets Index through November 1, 2015; and the FTSE Emerging Markets All Cap China A Transition Index through September 18, 2016. Since September 19, 2016, the Vanguard FTSE Emerging Markets ETF has tracked the Emerging Markets Index. Korean companies were first included as part of the transition to the FTSE Emerging Markets Index, and small-capitalization stocks and China A-shares were first included as part of the transition to the Emerging Markets Index. These changes could adversely affect the performance of the Vanguard FTSE Emerging Markets ETF. In addition, there is limited historical information that reflects the Vanguard FTSE Emerging Markets ETF's tracking of the Emerging Markets Index.

The Vanguard FTSE Emerging Markets ETF employs an indexing investment approach designed to track the Emerging Markets Index. The Vanguard FTSE Emerging Markets ETF invests by sampling the Emerging Markets Index, meaning that it holds a broadly diversified collection of securities that, in the aggregate, approximates the Emerging Markets 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 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 Emerging Markets Index. In addition, the Vanguard FTSE Emerging Markets ETF has operating expenses and transaction costs while the Emerging Markets Index does not.

The Vanguard International 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 International 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 Inclusion Index

All information in this underlying supplement regarding the 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 Russell. FTSE Russell has no obligation to continue to publish, and may discontinue publication of, the Emerging Markets Index.

The Emerging Markets Index is a market-capitalization weighted index representing the performance of large-, mid- and small-cap companies in emerging markets. The Emerging Markets Index was launched on June 5, 2015, with a base date of December 30, 2005 and a base value of 1,000. The Emerging Markets Index is currently composed securities from 23 different countries.

The Emerging Markets Index applies the same methodology as the FTSE Emerging Markets Index, except that the Emerging Markets Index includes small-capitalization stocks and China A-shares at a weighting equivalent to the aggregate qualified foreign institutional investor ("QFII") and/or Renminbi QFII ("RQFII") approved quota for international investors. China A-shares, which are securities of Chinese-incorporated companies that trade on either the Shanghai or Shenzhen stock exchange, are quoted in Renminbi and can be traded only either by residents of the People's Republic of China or under the QFII or RQFII rules and stock connect schemes. 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 Markets Index, see "The FTSE Emerging Markets Index" below.

The FTSE Emerging Markets Index

All information in this underlying supplement regarding the FTSE 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 Russell has no obligation to continue to publish, and may discontinue publication of, the FTSE Emerging Markets Index.

The FTSE Emerging Markets Index is included in the FTSE Global Equity Index Series. The FTSE Global Equity Index Series covers securities in 47 different countries. It attempts to represent every equity and sector relevant to international investors' needs and has a modular structure. The universe is divided into Developed, Advanced Emerging and Secondary Emerging segments, with indexes calculated at regional, national and sector level. The FTSE Emerging Markets 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; no 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 days; 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 Russell 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 Russell will consult the FTSE Russell 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 Russell releases the results of its annual review in September of each year. FTSE Russell 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 Russell will allocate the company to that country. In all other circumstances, FTSE Russell will base its decision on an 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, FTSE Russell will normally assign the company to the country of incorporation. If the company fails FTSE Russell’s liquidity test in the country of incorporation, FTSE Russell 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, FTSE Russell 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 FTSE Russell. For companies incorporated in approved low taxation countries, FTSE Russell will normally assign the company to the developed country with the greatest liquidity. The country allocation of the FTSE Emerging Markets Index constituents may be reassessed at any time at the FTSE Russell's discretion.

Eligible Securities

Ineligible securities include those whose business is that of holding equity and other investments, those of Limited Liability Partnerships, Limited Partnerships, Master Limited Partnerships, Limited Liability Companies and Business Development Company, and a stapled unit if it comprises an eligible security and a non-eligible security, and 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.

Securities that are subject to surveillance by the stock exchanges and have been assigned to any of the following segments will not be eligible for index inclusion. Where an existing constituent is assigned to an ineligible segment, it will normally be deleted from the FTSE Emerging Markets Index at the next quarterly review and it will only be reconsidered for index inclusion after a period of 12 months from its deletion subject to it no longer being under surveillance. For the purposes of the index eligibility, it will be treated as a new issue.

Country	Exchange	Segment
China	Shanghai Stock Exchange Shenzhen Stock Exchange	Special Treatment (ST)
India	Bombay Stock Exchange National Stock Exchange of India	Graded Surveillance Measure (GSM)
Malaysia	Bursa Malaysia	PN17
Poland	Warsaw Stock Exchange	Alert List
Taiwan	Taiwan Stock Exchange	Altered Trading Method (ATM)
Thailand	Stock Exchange of Thailand	Companies facing possible delisting according to No. 9(g) of Stock Exchange of Thailand's Regulations on Delisting of Securities
Turkey	Borsa Istanbul	Watch-list

Securities that are assigned to the above segments after the review announcement date but before the FTSE Emerging Markets Index review effective date are assessed on a case-by-case basis which may generally result in scheduled FTSE Emerging Markets Index review additions, investability weight and shares in issue changes no longer being implemented at the forthcoming review.

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 market quotations. Thomson 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 Markets 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:

Where

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

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:

Where

is local currency exchange rate on stock I on day 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:

Where is country index j expressed in another currency (x) and 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:

or

Where is the number of U.S. dollars per pound sterling at time t.

The performance of the FTSE Emerging Markets Index on a given day is determined by calculating the percentage difference between:

US-174

- the FTSE Emerging Markets 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

<u>Free Float:</u> 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 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.
- All shares where the holder is subject to a lock-in clause (for the duration of that clause)*.
- Shares held by an investor, investment company or an investment fund that is actively participating in the management of a company or is holding shares in a company for strategic reasons as evidenced by specific statements to that effect in publicly available announcements, or has successfully placed a current member to the board of directors of a company.

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

* For the analysis of U.S. company free float, holdings of options, warrants and convertibles will be removed from the officer and director holdings when those shares are provided in summed format within the footnotes of the SEC filings. Where FTSE Russell determines that a company is being excluded from index membership solely on the basis of the minimum float requirement, FTSE Russell will use the best available information contained in the SEC filings to determine the free float.

* 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 Tuesday before the Friday of the review month. If the previously locked-in shares are sold by way of a corporate event (such as a secondary offering), any change to the free float will be applied T+2 following completion and will not be subject to the minimum 20 business day rule.

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 is calculated using available published information rounded to 12 decimal places. Securities with a free float of 5% or below are not eligible for inclusion in the FTSE Emerging Markets Index.

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

Multiple 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 semi-annually in March and September by calculation of its monthly median of daily trading volume. Liquidity will be calculated for the March review from the first business day of January to the last business day of December of the previous year and for the September review from the first business day of July of the previous year to the last business day of June. When calculating the median of daily trading volume of any security for a particular month, a minimum of five trading days in that month must exist, otherwise the month will be excluded from the test.

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 if there is an odd number of days and the mean of the middle two if there is an even number of days. 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. Any period of suspension will not be included in the test. For newly eligible securities where the testing period is less than 12 months, the liquidity test will be applied on a pro-rata basis.

Liquidity Thresholds:

- An existing constituent which, based on its median daily trading volume per month does not turnover at least 0.04% of its shares in issue (after the application of any free float weightings*) for at least eight of the twelve months prior to a full market review will be removed from the FTSE Global Equity Index Series.

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

- 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 shares in issue (after the application of any free float weightings)* based on their median daily trading volume each month, on a pro-rata basis since listing. This rule will not apply to new issues added under the Fast Entry Rule. Newly eligible securities will be treated as new issues and liquidity will be tested from the date of eligibility. Trading records prior to this date will generally not be taken into account.

In assessing liquidity, data will be aggregated from trading volume in the country in which the company is classified by FTSE Russell and from any other trading venues, as approved by FTSE Russell, operating in a similar time zone. In the event that a company fails the liquidly test based on its underlying shares, and the company has an equivalent Depositary Receipt ("**DR**"), then the DR may be considered for inclusion in the FTSE Emerging Markets Index if it passes the liquidity test in its own right and is traded on an exchange within the similar regional time-zone to where the underlying shares are listed. Where a company has both DR and underlying shares listed, both lines will be tested separately for liquidity. The underlying share will be included as long as it passes the liquidity test in its own right. The DR will only be eligible for inclusion if the underlying share fails the liquidity test and the DR passes in its own right. Where the DR has been included it will remain in the FTSE Emerging Markets Index until such a time 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).

The above percentage figures may be adjusted by up to 0.01% at a market review so that, in FTSE Russell's opinion, the FTSE Emerging Markets 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.

* When testing liquidity, the free float weight as at the last date in the testing period will be used for the calculation for the whole of that period.

Periodic Review of Index Constituents

Countries are usually reviewed semi-annually in March and September, on a region by region basis, based on data as at the close of business on the last business day of December and June. Any constituent changes resulting from the periodic review will be implemented after the close of business on the third Friday (*i.e.*, effective the following Monday) of March and September. The review process is designed to reflect market movements since the previous review and to minimize turnover.

In order to determine which companies are included in the FTSE Emerging Markets 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 and "A" 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 the FTSE Emerging Markets Index:

To reduce turnover, existing and potential constituents are subject to a series of 'buffer zones' to determine the cut-off points between Large, Mid and Small Cap – the buffers are detailed in the table below.

	Turnover Bands (Based on Index Universe)	
	Eligible for Inclusion	**Eligible for Exclusion**
Large Cap	68%	72%
Mid Cap	86%	92%
Small Cap	98%	101%

For companies not currently in the FTSE Index:

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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 Emerging Markets 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 Emerging Markets 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 Emerging Markets 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 Emerging Markets 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)**
Asia Pacific ex Japan	0.05%	0.01%
Latin America	0.50%	0.20%
Emerging Europe Middle East & Africa	1.00%	0.20%

In exceptional circumstances where FTSE Russell believes that strict adherence to the inclusion and exclusion levels listed in the above table would produce either excessive turnover at an index review, or an index that inaccurately represented different size segments, FTSE Russell reserves the right to vary the percentage levels.

Fast Entry Rule

Non-constituent securities may be added to the 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. Shares being offered as a greenshoe (over allotment option) will be excluded from the investable market capitalization calculation.

The fast entry level thresholds will be set at the time of the semiannual reviews in March and September using data at the last trading day in December and June. The fast entry levels thresholds will be adjusted up to February 11 or August 11 (previous trading day's data will be taken if any of these dates are on a non-trading day), respectively, to reflect the performance of the FTSE Global Equity Index Series as a whole, and will be published by FTSE Russell.

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 May 11 or November 11 (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.

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.

Corporate Actions

FTSE Russell applies corporate actions and events to the FTSE Emerging Markets Indices on a daily basis. A company's index membership and its weight in the index can be impacted by these corporate actions and events. FTSE Russell uses a variety of public sources to determine when an event is final, including a company's press releases and regulatory filings, local exchange notifications, and official updates from other data providers. Prior to the completion of a corporate event, 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 event, before confirming its effective date.

Depending upon the time an event is determined to be final, FTSE Russell either (1) applies the event before the open on the ex-date or (2) applies the event providing appropriate notice if it is deemed to be "actionable" for passive index managers. The impact of the event and the effective date will be communicated to clients on a regular schedule, via the daily corporate actions and events deliverables.

If FTSE Russell has confirmed the completion of a corporate event, scheduled to become effective subsequent to a rebalance or index review, the event may be implemented in conjunction with the rebalance to limit turnover, providing appropriate notice can be given.

The FTSE Emerging Markets Indices recognize a minimum two day notice requirement for "actionable" corporate event implementation such as mergers and acquisitions. This provides an appropriate window for global managers to receive a notification of intended index treatment and consequently act upon it.

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, before fees and expenses, 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 invests by 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 is subject to index sampling risk, which is the chance that the securities selected for the Vanguard Total Stock Market ETF, in the aggregate, will not provide investment performance matching that of the CRSP U.S. Total Market Index. In addition, the Vanguard Total Stock Market ETF has operating expenses and transaction costs while the CRSP U.S. Total Market Index does not.

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 "CRSPTM1."

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 and U.S.-headquartered companies traded on the NYSE, NYSE American, NYSE Arca, NASDAQ, Bats Global Markets, and the Investors Exchange (IEX) (each a "CRSP exchange of interest").

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 American, NYSE Arca, NASDAQ, Bats Global Markets, and IEX;
- 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 and headquartered in the United States; however, securities of company headquartered in the United States, a U.S. territory, domicile of convenience or tax haven may also be considered for inclusion by CRSP's Index Eligibility Committee.

Eligibility status is reviewed quarterly at ranking. 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 (after the close of 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 (reconstitution occurs over a five-day transition period, generally starting after the close of the second Wednesday after the ranking day and ends on the first Tuesday after the third Friday of the ranking month, with 20% of the change in constituents implemented on each day), as follows:

- minimum total market capitalization: the company must have at least $15 million total market capitalization;
- float shares requirement: the number of a company's float shares, those readily available for trading, must be at least 12.5% of the total shares outstanding (or at least 10% of the total shares outstanding for securities qualifying as a fast-track initial public offering ("IPO"));
- 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;
- consecutive trading days requirement: the securities must not have a sequence of 10 consecutive non-trading days during the previous quarter;
- suspended securities: the securities must currently not be suspended from their listing exchange;
- seasoning of new securities: new securities are eligible for inclusion if they fulfill at least one of the two conditions below (securities created by a corporate action payout are not subject to the seasoning rule):

- o the first day of regular-way trading on a CRSP exchange of interest was at least 20 trading days before the ranking day; or

- o the first day of regular-way trading on a CRSP exchange of interest was at least five trading days before the ranking day and the company's capitalization is greater than or equal to the lower breakpoint for the CRSP U.S. Small Cap Index determined at the last ranking. These companies are considered to be fast-track IPO.

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.

- suspended securities: if a security has been suspended from its listing exchange for at least 40 trading days.

CRSP will consider for inclusion companies that IPO via direct listings — and skip the traditional underwriting process — assuming that public disclosures are available related to the company's eligibility and investability (*e.g.,* share type, organization type, float shares, total shares outstanding, location, market capitalization etc.). Given sufficient information, CRSP will not limit its eligible and investable universe based on the initial offering type. CRSP will also consider for inclusion companies that IPO with capital structures that include share classes (common stock) with dissimilar voting rights assuming that public disclosures are available related to the company's eligibility and investability. The presence of multiple share classes with skewed voting rights is not currently used to restrict CRSPs eligible and investable universe.

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 a security's index holdings multiplied by the security's price (used to determine a security's weight within the CRSP U.S. Total Market Index). 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:

$$\text{Index Level}_t = \underline{\text{Index Market Value}_t}$$

Divisor_t

Index Maintenance

In addition to the quarterly ranking reviews, changes in the CRSP U.S. Total Market Index occur on a daily basis as a result of numerous factors, including price movements actions and security additions and deletions. CRSP adheres to the principles of replicability, consistency, maintaining style purity, and minimizing turnover when implementing corporate actions, with the ultimate objective of reflecting changes in the US equity market in a timely manner. When a corporate action occurs such that index eligibility cannot be determined, CRSP will evaluate the security's eligibility at the next ranking. Among the events that may give rise to an adjustment to the CRSP U.S. Total Market Index on any day are: stock splits and reverse stock splits; stock dividends; special dividends; share changes reported in corporate filings; mergers and acquisitions; exchanges or conversions; tender offers; partial or full liquidations, IPOs; transfer from over-the-counter market; delistings; bankruptcies, rights offerings; warrant offerings; secondary offerings; and spin-offs.

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 of the WisdomTree Trust and is 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 to track 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 generally uses a representative sampling strategy to achieve its investment objective, meaning it generally will invest in a sample of the securities in the WisdomTree Japan Hedged Equity Index whose risk, return and other characteristics resemble the risk, return and other characteristics of the WisdomTree Japan Hedged Equity Index as a whole.

Forward currency contracts or futures contracts are used to offset the DXJ Fund’s exposure to the Japanese yen. 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. While this approach is designed to minimize the impact of currency fluctuations on the DXJ ETF’s returns, it does not necessarily eliminate the DXJ ETF’s exposure to the Japanese yen. The return of the forward currency contracts and currency futures contracts may not perfectly offset the actual fluctuations between the Japanese yen and the U.S. dollar.

The performance of the DXJ Fund and the WisdomTree Japan Hedged Equity Index may vary somewhat for a variety of reasons. For example, the DXJ ETF incurs operating expenses and portfolio transaction costs, while also managing cash flows and potential operational inefficiencies, not incurred by the WisdomTree Japan Hedged Equity Index. In addition, the DXJ ETF may not be fully invested in the securities of the WisdomTree Japan Hedged Equity Index at all times or may hold securities not included in the WisdomTree Japan Hedged Equity Index or may be subject to pricing differences, differences in the timing of dividend accruals, tax gains or losses, currency convertibility and repatriation, operational inefficiencies and the need to meet various new or existing regulatory requirements. For example, it may take several business days for additions and deletions to the WisdomTree Japan Hedged Equity Index to be reflected in the portfolio composition of the DXJ ETF. The use of sampling techniques may affect the DXJ ETF’s ability to achieve close correlation with the WisdomTree Japan Hedged Equity Index. By using a representative sampling strategy, the DXJ ETF generally can be expected to have a greater non-correlation risk and this risk may be heightened during times of market volatility or other unusual market conditions.

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

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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. The WisdomTree Japan Hedged Equity Index is a total return index with dividends reinvested.

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 gross cash dividends on common shares in the annual cycle prior to the annual rebalance of the WisdomTree Japan Hedged Equity Index; (ii) have less than 80% of revenue from Japan; (iii) 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); (iv) average daily dollar volume of at least $100,000 for the three months preceding the International Screening Date; and (v) trading of at least 250,000 shares per month for each of the six months preceding the International Screening Date. To be deleted from the WisdomTree Japan Hedged Equity Index, companies must derive more than 82% of their revenue from Japan.

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 WisdomTree Japan Hedged Equity Index is a total return index with dividends reinvested.

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:

$$WT\_Hedged_1 = WT\_Hedged_0 * \left(\frac{WT\_Unhedged_1}{WT\_Unhedged_0} + \mathrm{HedgeRet}_1 \right)$$

$$HedgeRet_1 = \frac{Spot\ Rate_{m0}}{Forward\ Rate_{m0}} - \frac{Spot\ Rate_{m0}}{Spot\ Rate_{md} + \left(\frac{D - d}{D}\right) * (Forward\ Rate_{md} - Spot\ Rate_{md})}$$

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, … D calendar days so "md" is day d for month m and "m0" is one business day prior to the month end of month m-1.
- D = total number of days in month m
- WT_Hedged_0 – previous month-end
- $WT\_Unhedged_0$ – previous month-end

Weighting

The WisdomTree Japan Hedged Equity Index is a modified capitalization-weighted index that employs a 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"). Special dividends are not included in the computation of weights of the WisdomTree Japan Hedged Equity Index. 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 will be adjusted for constituents with dividend yields greater than 12% at the close of trading on the last trading in May (the "Screening Date"). The dividend stream of these capped constituents will be their market capitalization multiplied by 12%. 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").

Should any company achieve a weighting equal to or greater than 24.0% of the WisdomTree Japan Hedged Equity Index, its weighting will be reduced to 20.0% at the close of the current calendar quarter, and all other components in the WisdomTree Japan Hedged Equity Index will be rebalanced. Moreover, should the collective weight of component securities whose individual current weights equal or exceed 5.0% of the WisdomTree Japan Hedged Equity Index, when added together, equal or exceed 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, and other components in the WisdomTree Japan Hedged Equity Index will be rebalanced proportionally to reflect their relative weights before the adjustment. Further iterations of these adjustments may occur until no company or group of companies violates these rules.

In addition, the maximum weight of any individual component security is capped at 5% on the annual rebalance prior to the introduction of sector caps and the weights of all other components will be adjusted proportionally. Should any sector achieve a weight equal to or greater than 25% of the WisdomTree Japan Hedged Equity Index, the weights of companies will be proportionally reduced to 25% as of the annual Screening Date. The weights may fluctuate above the specified caps during the year, but will be reset at each annual rebalance date. All sector cappings are conducted based on the old Global Industry Classification Standards (GICS®) to define companies in each sector (*i.e.*, real estate and financials are aggregated into one sector).

A further volume screen requires that a calculated volume factor (the average daily dollar volume for three months preceding the Screening Date / weight of security in the WisdomTree Japan Hedged Equity Index) be greater than $200 million to be eligible for the WisdomTree Japan Hedged Equity Index. If a security's volume factor falls below $200 million at the annual screening, but is currently in the WisdomTree Japan Hedged Equity Index, it will remain in the WisdomTree Japan Hedged Equity Index. The securities' weight will be adjusted downwards by an adjustment factor equal to its volume factor divided by $400 million. In the event a security has a calculated volume factor that is less than $400 million, its weight will be reduced such that weight after volume adjustment = weight before adjustment x calculated volume factor / $400 million. The implementation of the volume factor may cause an increase in the holding, sector and country weights above the specified caps.

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 the relevant 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 or increases or decreases in dividend per share between reconstitutions, do not require changes in the number of stocks of the relevant 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 that corporate action. 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.

Additions. Additions to WisdomTree Japan Hedged Equity Index are made at the annual reconstitution according to the inclusion criteria defined above. Changes are implemented on the International Reconstitution Date. No additions are made to the Indexes between annual reconstitutions.

Deletions. Shares of companies that are delisted or acquired by a company outside of the Indexes are deleted from the WisdomTree Japan Hedged Equity Index and the weights of the remaining components are adjusted proportionately to reflect the change in composition of the WisdomTree Japan Hedged Equity Index. A component company that cancels its dividend payment is deleted from the WisdomTree Japan Hedged Equity Index and the weights of the remaining components are adjusted proportionately to reflect the change in the composition of the WisdomTree Japan Hedged Equity Index. A component company that files for bankruptcy is deleted from the WisdomTree Japan Hedged Equity Index and the weights of the remaining components are adjusted proportionately to reflect the change in the composition of the WisdomTree Japan Hedged Equity Index. If a component company is acquired by another company in the WisdomTree Japan Hedged Equity Index for stock, the acquiring company's shares and weight in the WisdomTree Japan Hedged Equity Index are adjusted to reflect the transaction after the close of trading on the day prior to the execution date. Companies being acquired will be deleted from the WisdomTree Japan Hedged Equity Index immediately before the effective date of the acquisition or upon notice of a suspension of trading in the stock of the company that is being acquired. In cases where an effective date is not publicly announced in advance, or where a notice of suspension of trading in connection with an acquisition is not announced in advance, WTI reserves the right to delete the company being acquired based on best available market information. Component companies that reclassify their shares (*i.e.*, that convert multiple share classes into a single share class) remain in the WisdomTree Japan Hedged Equity Index, although the number of shares are adjusted to reflect the reclassification.

Spin-Offs and Initial Public Offerings. Should a company be spun-off from an existing component company and pay a regular cash dividend, it is not allowed into the WisdomTree Japan Hedged Equity Index until the next annual reconstitution, *provided* it meets all other inclusion requirements. Spin-off shares of publicly traded companies that are included in the WisdomTree Japan Hedged Equity Index as their parent company are increased to reflect the spin-off and the weights of the remaining components are adjusted proportionately to reflect the change in the composition of the WisdomTree Japan Hedged Equity Index. Companies that go public in an initial public offering and that pay regular cash dividends and that meet all other index inclusion requirements must wait until the next annual reconstitution to be included in the WisdomTree Japan Hedged Equity Index.

Companies that are acquired, delisted, file for bankruptcy, reincorporate outside of Japan or that cancel their dividends in the intervening weeks between the Screening Date and the International Reconstitution Date are not included in the WisdomTree Japan Hedged Equity Index, and the weights of the remaining components are adjusted accordingly.

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. By adjusting the divisor, the level of the WisdomTree Japan Hedged Equity Index retains its continuity before and after the event. 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.