CITIGROUP INC
Form 424B2
February 21, 2019

Filed pursuant to Rule 424(b)(2)
Registration Nos. 333-224495 and 333-224495-03

UNDERLYING SUPPLEMENT NO. 8

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

Citigroup Global Markets Holdings Inc.

Medium-Term Senior Notes, Series N

Payments Due from Citigroup Global Markets Holdings Inc.

Fully and Unconditionally Guaranteed by Citigroup Inc.

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.

February 21, 2019

TABLE OF CONTENTS

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

US-26

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

US-29

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:

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

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.

License Agreement

The Dow Jones Industrial Average™ is a registered trademark of Dow Jones Trademark Holdings LLC and has been licensed for use. "Dow Jones®," "Dow Jones Industrial Average™," "DJIA℠" and "Dow Jones Indexes" are service marks of Dow Jones and have been licensed for use for certain purposes by Citigroup Global Markets Inc. and its affiliates. S&P Dow Jones, Dow Jones & Company, Inc. ("Dow Jones"), CME Group Inc. ("CME Group") and their respective affiliates have no relationship with the Issuer and its affiliates, other than the licensing of the Dow Jones Industrial Average™ ("DJIA") and their respective service marks for use in connection with the certain financial products, including the securities.

S&P Dow Jones, Dow Jones, CME Group or their respective affiliates do *not*:

- sponsor, endorse, sell or promote the securities;
- recommend that any person invest in the securities;
- have any responsibility or liability for or make any decisions about the timing, amount or pricing of the securities;
- have any responsibility or liability for the administration, management or marketing of the securities; or
- consider the needs of the securities or the owners of the securities in determining, composing or calculating the DJIA or have any obligation to do so.

Notwithstanding the foregoing, CME Group and its affiliates may independently issue and/or sponsor financial products unrelated to the securities currently being issued by the Issuer, but which may be similar to and competitive with the securities. In addition, CME Group and its affiliates actively trade financial products which are linked to the performance of the DJIA. It is possible that this trading activity will affect the value of the DJIA and the securities.

S&P Dow Jones, Dow Jones, CME Group and their respective affiliates will not have any liability in connection with the securities. Specifically,

- **S&P Dow Jones, Dow Jones, CME Group and their respective affiliates do not make any warranty, express or implied, and S&P Dow Jones, Dow Jones, CME Group and their respective affiliates disclaim any warranty about:**

- **the results to be obtained by the securities, the owner of the securities or any other person in connection with the use of the DJIA and the data included in the DJIA;**

- **the accuracy or completeness of the DJIA or its data; or**

- **the merchantability and the fitness for a particular purpose or use of the DJIA or its data;**

- **S&P Dow Jones, Dow Jones, CME Group and/or their respective affiliates will have no liability for any errors, omissions or interruptions in the DJIA or its data; and**

- **under no circumstances will S&P Dow Jones, Dow Jones, CME Group and/or their respective affiliates be liable for any lost profits or indirect, punitive, special or consequential damages or losses, even if they know that they might occur.**

The licensing relating to the use of the indexes and trademarks referred to above is solely for the benefit of Citigroup Global Markets Holdings Inc., and certain of its affiliated or subsidiary companies, and not for any other third parties.

US-31

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:

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

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% ($B / A \geq 1$), 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

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

Adjusted only if treated as extraordinary dividend.

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

Divisor: unchanged

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.

US-34

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.

License Agreement

STOXX Limited (“STOXX”) and its licensors and Citigroup Global Markets Inc. have entered into a non-exclusive license agreement providing for the license to Citigroup Global Markets Inc. and its affiliates, in exchange for a fee, of the right to use the EURO STOXX 50® Index, which is owned and published by STOXX, in connection with certain financial instruments, including the securities.

The securities are not sponsored, endorsed, sold or promoted by STOXX or its licensors. STOXX and its licensors have no relationship to Citigroup Global Markets Inc. or its affiliates, other than the licensing of the EURO STOXX 50® Index and the related trademarks for use in connection with the securities. STOXX and its licensors make no recommendation that any person invest in the securities or any other securities. STOXX and its licensors have no responsibility or liability for or make any decisions about the timing, amount or pricing of the securities. STOXX and its licensors do not consider the needs of Citigroup Inc. or its affiliates or the holders of the securities in determining, composing or calculating the EURO STOXX 50® Index or have any obligation to do so. STOXX and its licensors have no responsibility or liability for the administration, management or marketing of the securities.

STOXX and its licensors will not have any liability in connection with the securities. Specifically,

- **STOXX and its licensors do not make any warranty, express or implied and disclaim any and all warranty about (i) the results to be obtained by the securities, the owner of the securities or any other person in connection with the use of the EURO STOXX 50® Index and the data included in the EURO STOXX 50® Index; (ii) the accuracy or completeness of the EURO STOXX 50® Index and its data; or (iii) the merchantability and the fitness for a particular purpose or use of the EURO STOXX 50® Index and its data;**

- **STOXX and its licensors will have no liability for any errors, omissions or interruptions in the EURO STOXX 50® Index or its data; and**

- **Under no circumstances will STOXX or its licensors be liable for any lost profits or indirect, punitive, special or consequential damages or losses, even if STOXX or its licensors knows that they might occur.**

The licensing agreement between Citigroup Global Markets Inc. and STOXX is solely for their benefit and not for the benefit of the owners of the securities or any other third parties.

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:

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

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

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

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

(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):

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

Adjusted price = (closing price × A +

Adjusted price = (closing price × A +

US-39

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.

License Agreement

STOXX Limited ("STOXX") and its licensors and Citigroup Global Markets Inc. have entered into a non-exclusive license agreement providing for the license to Citigroup Global Markets Inc. and its affiliates, in exchange for a fee, of the right to use the EURO STOXX® Banks Index, which is owned and published by STOXX, in connection with certain financial instruments, including the securities.

The securities are not sponsored, endorsed, sold or promoted by STOXX or its licensors. STOXX and its licensors have no relationship to Citigroup Global Markets Inc. or its affiliates, other than the licensing of the EURO STOXX® Banks Index and the related trademarks for use in connection with the securities. STOXX and its licensors make no recommendation that any person invest in the securities or any other securities. STOXX and its licensors have no responsibility or liability for or make any decisions about the timing, amount or pricing of the securities. STOXX and its licensors do not consider the needs of Citigroup Inc. or its affiliates or the holders of the securities in determining, composing or calculating the EURO STOXX® Banks Index or have any obligation to do so. STOXX and its licensors have no responsibility or liability for the administration, management or marketing of the securities.

STOXX and its licensors will not have any liability in connection with the securities. Specifically,

- **STOXX and its licensors do not make any warranty, express or implied and disclaim any and all warranty about (i) the results to be obtained by the securities, the owner of the securities or any other person in connection with the use of the EURO STOXX® Banks Index and the data included in the EURO STOXX® Banks Index; (ii) the accuracy or completeness of the EURO STOXX® Banks Index and its data; or (iii) the merchantability and the fitness for a particular purpose or use of the EURO STOXX® Banks Index and its data;**

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

- **Under no circumstances will STOXX or its licensors be liable for any lost profits or indirect, punitive, special or consequential damages or losses, even if STOXX or its licensors knows that they might occur.**

The licensing agreement between Citigroup Global Markets Inc. and STOXX is solely for their benefit and not for the benefit of the owners of the securities or any other third parties.

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:

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

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

US-41

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 ≥ 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 ×

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):

- 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))

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

Divisor: increases

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.

License Agreement

STOXX and its licensors and CGMI have entered into a non-exclusive license agreement providing for the license to CGMI and its affiliates, in exchange for a fee, of the right to use the STOXX® Europe 600 Index, which is owned and published by STOXX, in connection with certain financial instruments, including the securities.

The securities are not sponsored, endorsed, sold or promoted by STOXX or its licensors. STOXX and its licensors have no relationship to CGMI or its affiliates, other than the licensing of the STOXX® Europe 600 Index and the related trademarks for use in connection with the securities. STOXX and its licensors make no recommendation that any person invest in the securities or any other securities. STOXX and its licensors have no responsibility or liability for or make any decisions about the timing, amount or pricing of the securities. STOXX and its licensors do not consider the needs of Citigroup Inc. or its affiliates or the holders of the securities in determining, composing or calculating the STOXX® Europe 600 Index or have any obligation to do so. STOXX and its licensors have no responsibility or liability for the administration, management or marketing of the securities.

STOXX and its licensors will not have any liability in connection with the securities. Specifically,

- **STOXX and its licensors do not make any warranty, express or implied and disclaim any and all warranty about (i) the results to be obtained by the securities, the owner of the securities or any other person in connection with the use of the STOXX® Europe 600 Index and the data included in the STOXX® Europe 600 Index; (ii) the accuracy or completeness of the STOXX® Europe 600 Index and its data; or (iii) the merchantability and the fitness for a particular purpose or use of the STOXX® Europe 600 Index and its data;**

- **STOXX and its licensors will have no liability for any errors, omissions or interruptions in the STOXX® Europe 600 Index or its data; and**

- **Under no circumstances will STOXX or its licensors be liable for any lost profits or indirect, punitive, special or consequential damages or losses, even if STOXX or its licensors knows that they might occur.**

The licensing agreement between Citigroup Global Markets Inc. and STOXX is solely for their benefit and not for the benefit of the owners of the securities or any other third parties.

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.

License Agreement

The use of and reference to the FTSE™ 100 Index in connection with the securities has been consented to by the FTSE Russell. All rights to the FTSE™ 100 Index are owned by the FTSE Russell, the publisher of the FTSE™ 100 Index. Citigroup Inc. and its affiliates disclaim all responsibility for the calculation or other maintenance of or any adjustments to the FTSE™ 100 Index. In addition, FTSE Russell has no relationship to Citigroup Inc., any of its affiliates or the securities. FTSE Russell does not sponsor, endorse, authorize, sell or promote the securities, and does not have any obligation or liability in connection with the administration, marketing or trading of the securities.

THE SECURITIES ARE NOT IN ANY WAY SPONSORED, ENDORSED, SOLD OR PROMOTED BY FTSE RUSSELL AND FTSE RUSSELL MAKES NO WARRANTY OR REPRESENTATION WHATSOEVER, EXPRESSLY OR IMPLIEDLY, EITHER AS TO THE RESULTS TO BE OBTAINED FROM THE USE OF THE FTSE™ 100 INDEX AND/OR THE FIGURE AT WHICH THE SAID INDEX

STANDS AT ANY PARTICULAR TIME ON ANY PARTICULAR DAY OR OTHERWISE. FTSE™ 100 INDEX IS COMPILED AND CALCULATED BY FTSE RUSSELL. HOWEVER, FTSE RUSSELL SHALL NOT BE LIABLE (WHETHER IN NEGLIGENCE OR OTHERWISE) TO ANY PERSON FOR ANY ERROR IN THE FTSE™ 100 INDEX AND FTSE RUSSELL SHALL NOT BE UNDER ANY OBLIGATION TO ADVISE ANY PERSON OF ANY ERROR THEREIN.

“FTSE®,” “FT-SE®” and “Footsie®” are trademarks of the London Stock Exchange Plc and its affiliates and are used by FTSE under license.

The Hang Seng China Enterprises Index

We have derived all information contained in this underlying supplement regarding the Hang Seng China Enterprises Index, including, without limitation, its make-up, method of calculation and changes in its components, from publicly available information. We have not independently verified such information. Such information reflects the policies of, and is subject to change by, Hang Seng Indexes Company Limited ("HSIL"), a wholly owned subsidiary of Hang Seng Bank. The Hang Seng China Enterprises Index is calculated, maintained and published by HSIL. HSIL has no obligation to continue to publish, and may discontinue publication of, the Hang Seng China Enterprises Index.

The Hang Seng China Enterprises Index is reported by Bloomberg L.P. under the ticker symbol "HSCEI."

The Hang Seng China Enterprises Index was first calculated and published on August 8, 1994, one year after the first H-share company was listed on The Stock Exchange of Hong Kong Ltd. ("HKEX"). H-shares are Hong Kong listed shares, traded in Hong Kong dollars, of a company incorporated in the Chinese mainland. The Hang Seng China Enterprises Index is a free-float adjusted market capitalization weighted stock market index and measures the performance of certain Mainland securities that have their primary listing on the main board of the HKEX. The Hang Seng China Enterprises Index includes 50 constituent stocks. The Hang Seng China Enterprises Index is calculated and disseminated real-time every 2 seconds during the trading hours on each trading day of HKEX, based on the calendar of the HKEX.

Index Composition

Defining the Eligible Stocks

Only Mainland securities with a primary listing on the main board of HKEX are eligible to be included in the Hang Seng China Enterprises Index, excluding stocks that are secondary listings, preference shares, debt securities, mutual funds and other derivatives. A Mainland security is a Hong-Kong listed security that has at least 50% of its sales revenue (or profit or assets, if relevant) derived from the Mainland. Mainland securities include H-shares, Red-chips and P-chips. A Red-chip is a Mainland security with a minimum of 30% of its shareholdings held by a Mainland entity or entities (including State-owned organizations and provincial or municipal authorities of the Mainland). A P-chip is a Mainland security that is not classified as an H-share or a Red-chip.

To be eligible for selection in the Hang Seng China Enterprises Index, a stock: (1) should be listed for at least one month by the review cut-off date; and (2) must satisfy the turnover screening requirements. Stocks that are already included in the Hang Seng China Enterprises Index must have a turnover velocity of at least 0.1% for at least 10 out of the past 12 months. If a stock that is already included in the Hang Seng China Enterprises Index fails this turnover requirement, a supplementary turnover test will be applied for those months in which velocity was less than 0.1% as follows: (1) the monthly aggregate turnover over the stock will be calculated and (2) if the monthly aggregate turnover is among the top 90th percentile of the total market, the stock passes the monthly turnover test for that month. The stock will be regarded as meeting the general turnover requirements if it passes the supplementary test as well.

To be added to the Hang Seng China Enterprises Index, a stock must have a turnover velocity of at least 0.1% for at least 10 out of the past 12 months and for each of the most recent three months. Turnover velocity is calculated by dividing the median of the daily trades shares during a specific calendar month by the freefloat-adjusted issued shares at the end of that month.

Additional Eligibility Criteria for Red-chips and P-chips (Applicable to Non-Existing Constituents Only)

To be added to the Hang Seng China Enterprises Index, a Red-chip or P-chip stock is subject to the following additional eligibility requirements:

Listing History Requirements

US-48

A company's listing history requirement varies depending on such company's market capitalization rank. The market capitalization of an individual stock equals the average of month-end market capitalizations for the past 12 months of any review period. With respect to non-existing constituent Red-chips and P-chips,

(1) Companies with a market capitalization rank in the top 10 should have been listed for at least one year, starting from the listing date to the review cut-off date (both dates inclusive);

(2) Companies with a market capitalization rank between 11th and 20th should have been listed for at least two years, starting from the listing date to the review cut-off date (both dates inclusive); and

(3) Companies with a market capitalization rank of 21st and below should have been listed for at least three years, starting from the listing date to the review cut-off date (both dates inclusive).

Price Volatility Requirements

The past one-month, three-month and 12-month historical price volatility (i.e., the standard deviation of the daily logarithmic return for the past one, three and 12 months to the data cut-off date) of a stock should be less than three times the historical price volatility of the Hang Seng China Enterprises Index for the respective period. A stock will not be eligible if its trading has been suspended for at least one month in the past one month before the review cut-off date.

Financial Requirements

Each of the following parameters recorded in the annual reports of a stock should be greater than zero for each of the past three consecutive fiscal years:

a) Net profit attributable to equity holders of the company;

b) Net cash generated from operating activities; and

c) Cash dividends.

However, companies with either (1) a market capitalization rank in the top 10 that have been listed for at least one year or (2) a market capitalization rank between 11th and 20th that have been listed for at least two years are eligible for the Fast Entry Mechanism. If the Fast Entry Mechanism applies, the above financial requirements will align with the stock's respective listing history. For example, a stock with a market capitalization rank of 15, which has a listing history of two years need only have positive figures in each of the above financial requirements for the previous two fiscal years, rather than the default of the previous three fiscal years.

The data cut-off date for the financial requirements is one calendar month after the review cut-off date

Selecting the Index Companies

The Hang Seng China Enterprises Index is reviewed quarterly with data cut-off dates as of the end of March, June, September and December each year. From the eligible stocks, final selections are made using the below methodology. However, with respect to stocks with a listing history of less than 12 months, the market capitalization rank will be the average of the past month-end market capitalizations since that stock's listing.

<u>The Rebalancing in March 2019</u>

Red-chip and P-chip constituents will remain unchanged in the March 2019 rebalancing. All eligible H-share stocks will undergo the following:

(1) all eligible H-share stocks are ranked by (i) full market capitalization, in terms of average month-end market capitalization in the past 12 months and (ii) freefloat-adjusted market capitalization, in terms of 12-month average market capitalization after freefloat adjustment;

US-49

(2) the combined market capitalization ranking for each eligible stock is determined as the weighted average of the fully market capitalization ranking and the freefloat-adjusted market capitalization ranking, where each rank has a 50% weight; and

(3) the 40 stocks that have the highest combined market capitalization ranking are selected as the constituents of Hang Seng China Enterprises Index, subject to the buffer zone rule as described below.

Buffer Zone in the March 2019 Rebalancing and Effective Date

Existing H-share constituents ranked 49th or lower will be removed from the Hang Seng China Enterprises Index while non-constituent H-share stocks ranked 32nd or above will be included. In case the number of incoming stocks is greater than the number of outgoing constituents, constituents with the lowest combined market capitalization rank will be removed from the Hang Seng China Enterprises Index in order to maintain the number of constituents at 40. If the number of incoming stocks is smaller than the number of outgoing constituents, stocks with the highest combined market capitalization rank will be added to the Hang Seng China Enterprises Index in order to maintain the number of constituents at 40.

Effective dates of constituent changes will be the next trading day after the first Friday of March, June, September and December. If that Friday falls on a public holiday, it will be postponed to the next Friday, subject to the final decision made by HSIL. Under normal circumstances, at least seven trading days' notice will be given for any constituent changes before the effective dates.

The Rebalancing in June 2019

Staring with the June 2019 rebalancing, from the eligible stocks, final selections will be made using the following methodology:

(1) all eligible stocks (including H-shares, Red-chips and P-chips) are ranked by (i) full market capitalization, in terms of average month-end market capitalization in the past 12 months and (ii) freefloat-adjusted market capitalization, in terms of 12-month average market capitalization after freefloat adjustment;

(2) the combined market capitalization ranking for each eligible stock is determined as the weighted average of the fully market capitalization ranking and the freefloat-adjusted market capitalization ranking, where each rank has a 50% weight; and

(3) the 50 stocks that have the highest combined market capitalization ranking are selected as the constituents of Hang Seng China Enterprises Index, subject to the buffer zone rule as described below.

Buffer Zone from the June 2019 Rebalancing Onwards

Existing constituents (including H-shares, Red-chips and P-chips) ranked 61st or lower will be removed from the Hang Seng China Enterprises Index, while non-constituent stocks (including H-shares, Red-chips and P-chips) ranked 40th or above will be included. If the number of incoming stocks is greater than the number of outgoing constituents, constituents with the lowest combined market capitalization rank will be removed from the Hang Seng China Enterprises Index in order to maintain the number of constituents at 50. If the number of incoming stocks is smaller than the number of outgoing constituents, stocks with the highest combined market capitalization rank will be added to the Hang Seng China Enterprises Index in order to maintain the number of constituents at 50.

Number of Constituent Stocks

Between the June 2019 and December 2019 rebalancing, the number of constituent stocks under each share type will change according to the following schedule

	Rebalancing Date		
	June 17, 2019	**September 9, 2019**	**December 9, 2019**
H-share constituents:	Minimum of 35	Minimum of 30	No maximum/minimum
Red-chip and P-chip constituents:	Maximum of 15	Maximum of 20	No maximum/minimum
Total:	**50**	**50**	**50**

Index Calculation

The calculation methodology of the Hang Seng China Enterprises Index is a free float-adjusted market capitalization weighting methodology with a 10% cap on individual stocks. The Hang Seng China Enterprises Index is a price index without adjustment for cash dividends or warrant bonuses.

The formula for the index calculation is shown below:

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

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

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 : freefloat-adjusted factor, which is between 0 and 1; and

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

Free-float Adjustments. Shares held by any entities (excluding custodians, trustees, mutual funds and investment companies) that control more than 5% of the shareholdings would be consisted as non-free float and are excluded from the index calculation. These include strategic holdings (holdings by governments and affiliated entities or any other entities that hold substantial shares in the company would be considered as non-freefloat unless otherwise proved), directors' and management holdings (holdings by directors, members of the board committee, principal officers or founding members), corporate cross holdings (holdings by publicly traded companies or private firms or institutions) and lock-up shares (shareholdings with a publicly disclosed lock-up arrangement). Lock-up shares with trading restrictions are classified as non-freefloat, regardless of the shareholding percentage.

The freefloat-adjusted factor represents the proportion of shares that is free-floated as a percentage of the issued shares. The freefloat-adjusted factor is rounded up to the nearest 1% if it is less than 10%; otherwise, it is rounded to the nearest 5. For companies with more than one class of shares, the freefloat-adjusted factor is calculated separately for each class of shares.

Cap Factor. A cap factor ("CF") is calculated quarterly, such that no individual constituent in an Index will have a weighting exceeding a cap level of 10% on the index capping date.

Index Rebalancing. The update of the issued shares, adjustment of the freefloat-adjusted factor and calculation of the cap factor are undertaken quarterly. 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 freefloat-adjusted factor is substantially different from the production data. The Hang Seng China Enterprises Index will also be recapped in the event of constituent changes if the newly added component weighs higher than the index cap level.

The Stock Exchange of Hong Kong Ltd.

Trading on the HKEX is fully electronic through an Automatic Order Matching and Execution System ("AMS"). The system is an electronic order book in which orders are matched and executed instantaneously if there are matching orders in the book, and on the basis of time/price priority. Trading takes place through trading terminals on the trading floor or through the off-floor trading devices at Exchange Participants' offices. Continuous trading is undertaken from 9:30 a.m. to 4:00 p.m. (Hong Kong time) every Hong Kong day except Saturdays, Sundays and other days on which the HKEX is closed. In addition, there is a pre-opening (auction) session from 9.00 a.m. to 9.30 a.m.

The HKEX has adopted certain measures intended to prevent any extreme short-term price fluctuations resulting from order imbalances or market volatility. Where the HKEX considers it necessary for the protection of the investor or the maintenance of an orderly market, it may at any time suspend dealings in any securities or cancel the listing of any securities in such circumstances and subject to such conditions as it thinks fit, whether requested by the listed issuer or not. The HKEX may also do so where: (1) an issuer fails, in a manner which the HKEX considers material, to comply with the HKEX Listing Rules or its Listing Agreements; (2) the HKEX considers there are insufficient securities in the hands of the public; (3) the HKEX considers that the listed issuer does not have a sufficient level of operations or sufficient assets to warrant the continued listing of the issuer's securities; or (4) the HKEX considers that the issuer or its business is no longer suitable for listing. Investors should also be aware that the HKEX may suspend the trading of individual stocks in certain limited and extraordinary circumstances, until certain price-sensitive information has been disclosed to the public. Trading will not be resumed until a formal announcement has been made. Trading of a company's shares may also be suspended if there is unusual trading activity in such shares.

Disclaimers related to the Hang Seng Indexes Company Limited

THE HANG SENG CHINA ENTERPRISES INDEX IS PUBLISHED AND COMPILED BY HANG SENG INDEXES COMPANY LIMITED PURSUANT TO A LICENSE FROM HANG SENG DATA SERVICES LIMITED. THE MARK AND NAME OF THE HANG SENG CHINA ENTERPRISES INDEX ARE PROPRIETARY TO HANG SENG DATA SERVICES LIMITED. HANG SENG INDEXES COMPANY LIMITED AND HANG SENG DATA SERVICES LIMITED HAVE AGREED TO THE USE OF, AND REFERENCE TO, THE HANG SENG CHINA ENTERPRISES INDEX BY CITIGROUP INC. AND ITS AFFILIATES, IN CONNECTION WITH THE SECURITIES, BUT NEITHER HANG SENG INDEXES COMPANY LIMITED NOR HANG SENG DATA SERVICES LIMITED WARRANTS OR REPRESENTS

OR GUARANTEES TO ANY BROKER OR HOLDER OF THE SECURITIES OR ANY OTHER PERSON (I) THE ACCURACY OR COMPLETENESS OF THE INDEX AND ITS COMPUTATION OR ANY INFORMATION RELATED THERETO; OR (II) THE FITNESS OR SUITABILITY FOR ANY PURPOSE OF THE INDEX OR ANY COMPONENT OR DATA COMPRISED IN IT; OR (III) THE RESULTS WHICH MAY BE OBTAINED BY ANY PERSON FROM THE USE OF THE INDEX OR ANY COMPONENT OR DATA COMPRISED IN IT FOR ANY PURPOSE, AND NO WARRANTY OR REPRESENTATION OR GUARANTEE OF ANY KIND WHATSOEVER RELATING TO THE INDEX IS GIVEN OR MAY BE IMPLIED. THE PROCESS AND BASIS OF COMPUTATION AND COMPILATION OF THE HANG SENG CHINA ENTERPRISES INDEX AND ANY OF THE RELATED FORMULA OR FORMULAE, CONSTITUENT STOCKS AND FACTORS MAY AT ANY TIME BE CHANGED OR ALTERED BY HANG SENG INDEXES COMPANY LIMITED WITHOUT NOTICE. TO THE EXTENT PERMITTED BY APPLICABLE LAW, NO RESPONSIBILITY OR LIABILITY IS ACCEPTED BY HANG SENG INDEXES COMPANY LIMITED OR HANG SENG DATA SERVICES LIMITED (I) IN RESPECT OF THE USE OF AND/OR REFERENCE TO THE INDEX BY CITIGROUP INC. OR ITS AFFILIATES IN CONNECTION WITH THE SECURITIES; OR (II) FOR ANY

INACCURACIES, OMISSIONS, MISTAKES OR ERRORS OF HANG SENG INDEXES COMPANY LIMITED IN THE COMPUTATION OF THE HANG SENG CHINA ENTERPRISES INDEX; OR (III) FOR ANY INACCURACIES, OMISSIONS, MISTAKES, ERRORS OR INCOMPLETENESS OF ANY INFORMATION USED IN CONNECTION WITH THE COMPUTATION OF THE INDEX WHICH IS SUPPLIED BY ANY OTHER PERSON; OR (IV) FOR ANY ECONOMIC OR OTHER LOSS WHICH MAY BE DIRECTLY OR INDIRECTLY SUSTAINED BY ANY BROKER OR HOLDER OF THE SECURITIES OR ANY OTHER PERSON DEALING WITH THE SECURITIES AS A RESULT OF ANY OF THE AFORESAID, AN NO CLAIMS, ACTIONS OR LEGAL PROCEEDINGS MAY BE BROUGHT AGAINST HANG SENG INDEXES COMPANY LIMITED AND/OR HANG SENG DATA SERVICES LIMITED IN CONNECTION WITH THE SECURITIES IN ANY MANNER WHATSOEVER BY ANY BROKER, HOLDER OR OTHER PERSON DEALING WITH THE SECURITIES. ANY BROKER, HOLDER OR OTHER PERSON DEALING WITH THE SECURITIES DOES SO THEREFORE IN FULL KNOWLEDGE OF THIS DISCLAIMER AND CAN PLACE NO RELIANCE WHATSOEVER ON HANG SENG INDEXES COMPANY LIMITED AND HANG SENG DATA SERVICES LIMITED. FOR THE AVOIDANCE OF DOUBT, THIS DISCLAIMER DOES NOT CREATE ANY CONTRACTUAL OR QUASI-CONTRACTUAL RELATIONSHIP BETWEEN ANY BROKER, HOLDER OR OTHER PERSON AND HANG SENG INDEXES COMPANY LIMITED AND/OR HANG SENG DATA SERVICES LIMITED AND MUST NOT BE CONSTRUED TO HAVE CREATED SUCH RELATIONSHIP.

The Hang Seng® Index

All information contained in this underlying supplement regarding the Hang Seng® Index, including, without limitation, its make-up, method of calculation and changes in its component securities, has been derived from publicly available information, without independent verification. This information reflects the policies of, and is subject to change by, Hang Seng® Indexes Company Limited ("HSI"), a wholly owned subsidiary of Hang Seng Bank. The Hang Seng® Index is calculated, maintained and published by HSI. HSI has no obligation to continue to publish, and may discontinue publication of, the Hang Seng® Index.

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:

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

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

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)	$IS_{adjusted} = IS_{before} * Y / X$	$P_{adjusted} = P_{before} * X / Y$	

US-55

(c) Cash Dividend/ Distribution	Dividend/ distribution in cash	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.	
(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.

			$IS_{adjusted} = IS_{before} * (X + Y) / Y$ $P_{adjusted} = [(P_{before} * Y) + (X * Z)] / (X + Y)$ *Note*:
(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	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. *Note:*
(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	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.

			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.
(k)	Merger and Acquisition	The combination of two or more constituents into one, through a mutual agreement or a tender offer.	
			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.

(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.

Disclaimers

THE HANG SENG® INDEX IS PUBLISHED AND COMPILED BY HANG SENG INDEXES COMPANY LIMITED PURSUANT TO A LICENSE FROM HANG SENG DATA SERVICES LIMITED. THE MARK AND NAME OF THE HANG SENG® INDEX ARE PROPRIETARY TO HANG SENG DATA SERVICES LIMITED. HANG SENG INDEXES COMPANY LIMITED AND HANG SENG DATA SERVICES LIMITED HAVE AGREED TO THE USE OF, AND REFERENCE TO, THE HANG SENG® INDEX BY CITIGROUP INC. AND ITS AFFILIATES, IN CONNECTION WITH THE SECURITIES, BUT NEITHER HANG SENG INDEXES COMPANY LIMITED NOR HANG SENG DATA SERVICES LIMITED WARRANTS OR REPRESENTS OR GUARANTEES TO ANY BROKER OR HOLDER OF THE SECURITIES OR ANY OTHER PERSON (I) THE ACCURACY OR COMPLETENESS OF THE INDEX AND ITS COMPUTATION OR ANY INFORMATION RELATED THERETO; OR (II) THE FITNESS OR SUITABILITY FOR ANY PURPOSE OF THE INDEX OR ANY COMPONENT OR DATA COMPRISED IN IT; OR (III) THE RESULTS WHICH MAY BE OBTAINED BY ANY PERSON FROM THE USE OF THE INDEX OR ANY COMPONENT OR DATA COMPRISED IN IT FOR ANY PURPOSE, AND NO WARRANTY OR REPRESENTATION OR GUARANTEE OF ANY KIND WHATSOEVER RELATING TO THE INDEX IS GIVEN OR MAY BE IMPLIED. THE PROCESS AND BASIS OF COMPUTATION AND COMPILATION OF THE HANG SENG® INDEX AND ANY OF THE RELATED FORMULA OR FORMULAE, CONSTITUENT STOCKS AND FACTORS MAY AT ANY TIME BE CHANGED OR ALTERED BY HANG SENG INDEXES COMPANY LIMITED WITHOUT NOTICE. TO THE EXTENT PERMITTED BY APPLICABLE LAW, NO RESPONSIBILITY OR LIABILITY IS ACCEPTED BY HANG SENG INDEXES COMPANY LIMITED OR HANG SENG DATA SERVICES LIMITED (I) IN RESPECT

OF THE USE OF AND/OR REFERENCE TO THE INDEX BY CITIGROUP INC. OR ITS AFFILIATES IN CONNECTION WITH THE SECURITIES; OR (II) FOR ANY INACCURACIES, OMISSIONS, MISTAKES OR ERRORS OF HANG SENG INDEXES COMPANY LIMITED IN THE COMPUTATION OF THE HANG SENG® INDEX; OR (III) FOR ANY INACCURACIES, OMISSIONS, MISTAKES, ERRORS OR INCOMPLETENESS OF ANY INFORMATION USED IN CONNECTION WITH THE COMPUTATION OF THE INDEX WHICH IS SUPPLIED BY ANY OTHER PERSON; OR (IV) FOR ANY ECONOMIC OR OTHER LOSS WHICH MAY BE DIRECTLY OR INDIRECTLY SUSTAINED BY ANY BROKER OR HOLDER OF THE SECURITIES OR ANY OTHER PERSON DEALING WITH THE SECURITIES AS A RESULT OF ANY OF THE AFORESAID, AN NO CLAIMS, ACTIONS OR LEGAL PROCEEDINGS MAY BE BROUGHT AGAINST HANG SENG INDEXES COMPANY LIMITED AND/OR HANG SENG DATA SERVICES LIMITED IN CONNECTION WITH THE SECURITIES IN ANY MANNER WHATSOEVER BY ANY BROKER, HOLDER OR OTHER PERSON DEALING WITH THE SECURITIES. ANY BROKER, HOLDER OR OTHER PERSON DEALING WITH THE SECURITIES DOES SO THEREFORE IN FULL KNOWLEDGE OF THIS DISCLAIMER AND CAN PLACE NO RELIANCE WHATSOEVER ON HANG SENG INDEXES COMPANY LIMITED AND HANG SENG DATA SERVICES LIMITED. FOR THE

AVOIDANCE OF DOUBT, THIS DISCLAIMER DOES NOT CREATE ANY CONTRACTUAL OR QUASI-CONTRACTUAL RELATIONSHIP BETWEEN ANY BROKER, HOLDER OR OTHER PERSON AND HANG SENG INDEXES COMPANY LIMITED AND/OR HANG SENG DATA SERVICES LIMITED AND MUST NOT BE CONSTRUED TO HAVE CREATED SUCH RELATIONSHIP.

The JPX-Nikkei Index 400

All information in this underlying supplement regarding the JPX-Nikkei Index 400, 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 Japan Exchange Group, Inc. ("JPX"), the Tokyo Stock Exchange ("TSE") (collectively, the "JPX group") and Nikkei Inc. ("Nikkei," and together with the JPX group, the "JPNK400 Index Provider"). The JPX-Nikkei Index 400 is calculated, maintained and published by the JPNK400 Index Provider. The JPNK400 Index Provider has no obligation to continue to publish, and may discontinue publication of, the JPX-Nikkei Index 400.

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

License Agreement

Citigroup Global Markets Inc. has entered into an agreement with Nikkei Inc. that provides Citigroup Global Markets Inc. and certain of its affiliates or subsidiaries identified in that agreement with a non-exclusive license and, for a fee, with the right to use the JPX-Nikkei Index 400, which is owned and published by Nikkei Inc., in connection with certain securities, including the securities.

The license agreement with Nikkei Inc. provides that Nikkei Inc. will assume no obligation or responsibility for use of the JPX-Nikkei Index 400 by Citigroup Global Markets Inc. or its affiliates.

The JPX-Nikkei Index 400 is an intellectual property of Nikkei Inc. Nikkei Inc. was formerly known as Nihon Keizai Shimbun, Inc. The name was changed on January 1, 2007. “Nikkei,” “Nikkei Stock Average,” and “JPX-Nikkei Index 400” are the service marks of Nikkei Inc. Nikkei Inc. reserves all the rights, including copyright, to the index. Nikkei Digital Media, Inc., a wholly owned subsidiary of Nikkei Inc., calculates and disseminates the JPX-Nikkei Index 400 under exclusive agreement with Nikkei Inc. Nikkei Inc. and Nikkei Digital Media Inc. are collectively referred to as the “JPX-Nikkei Index 400 Index Sponsor.”

THE SECURITIES ARE NOT IN ANY WAY SPONSORED, ENDORSED OR PROMOTED BY THE JPX-NIKKEI INDEX 400 INDEX SPONSOR. THE JPX-NIKKEI INDEX 400 INDEX SPONSOR DOES NOT MAKE ANY WARRANTY OR REPRESENTATION WHATSOEVER, EXPRESS OR IMPLIED, EITHER AS TO THE RESULTS TO BE OBTAINED AS TO THE USE OF THE JPX-NIKKEI INDEX 400 OR THE FIGURE AT WHICH THE JPX-NIKKEI INDEX 400 STANDS AT ANY PARTICULAR DAY OR OTHERWISE. THE JPX-NIKKEI INDEX 400 IS COMPILED AND CALCULATED SOLELY BY THE JPX-NIKKEI INDEX 400 INDEX SPONSOR. HOWEVER, THE JPX-NIKKEI INDEX 400 INDEX SPONSOR SHALL NOT BE LIABLE TO ANY PERSON FOR ANY ERROR IN THE JPX-NIKKEI INDEX 400 AND THE JPX-NIKKEI INDEX 400 INDEX SPONSOR SHALL NOT BE UNDER ANY OBLIGATION TO ADVISE ANY PERSON, INCLUDING A PURCHASER OR VENDOR OF THE SECURITIES, OF ANY ERROR THEREIN.

In addition, the JPX-Nikkei Index 400 Index Sponsor gives no assurance regarding any modification or change in any methodology used in calculating the JPX-Nikkei Index 400 and is under no obligation to continue the calculation, publication and dissemination of the JPX-Nikkei Index 400.

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.”

The MSCI Mexico Investable Market Index

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

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[SM] is a free float-adjusted market capitalization index intended to measure the equity market performance of certain developed equity markets. The MSCI World Index[SM] 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[SM] 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[SM] 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.

US-65

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;

US-69

- 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.

US-70

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

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

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

$IndexAdjustedMarketCapUSD_t$ =

Where:

- $EndOfDayNumberOfShares_{t-1}$ is the number of shares of security s at the end of day t-1.
- $PricePerShare_t$ is the price per share of security s at time t.
- $PricePerShare_{t-1}$ is the price per share of security s at time t-1.

- $InclusionFactor_t$ is the inclusion factor of security s at time t. The inclusion factor can be one or the combination of the following factors: Foreign Inclusion Factor, Domestic Inclusion Factor Growth Inclusion Factor, Value Inclusion Factor, Index Inclusion Factor.

- PAF_t is the Price Adjustment Factor of security s at time t.

- $FXrate_t$ is the FX rate of the price currency of security s vs USD at time t. It is the value of 1 USD in foreign currency.

- $FXrate_{t-1}$ is the FX rate of the price currency of security s vs USD at time t-1. It is the value of 1 USD in foreign currency.

- ICI_t is the Internal Currency Index of price currency at time t. The ICI is different than 1 when a country changes the internal value of its currency (*e.g.*, from Turkish Lira to New Turkish Lira – ICI = 1,000,000).

- ICI_{t-1} is the Internal Currency Index of price currency at time t-1.

Corporate Events

Mergers and Acquisitions

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

MSCI and Citigroup Global Markets Inc. have entered into a non-exclusive license agreement providing for the license to Citigroup Global Markets Inc. and certain of its affiliates, in exchange for a fee, of the right to use the MSCI Indices in connection with certain securities, including the securities.

The MSCI Indexes are the exclusive property of MSCI. MSCI and the MSCI Index names are service mark(s) of MSCI or its affiliates and have been licensed for use for certain purposes by Citigroup Global Markets Inc. and certain of its affiliates. The securities referred to herein are not sponsored, endorsed, or promoted by MSCI, and MSCI bears no liability with respect to any such securities.

THIS FINANCIAL PRODUCT IS NOT SPONSORED, ENDORSED, SOLD OR PROMOTED BY MSCI INC. (“MSCI”), ANY AFFILIATE OF MSCI OR ANY OTHER PARTY INVOLVED IN, OR RELATED TO, MAKING OR COMPILING ANY MSCI INDEX. THE MSCI INDEXES ARE THE EXCLUSIVE PROPERTY OF MSCI. MSCI AND THE MSCI INDEX NAMES ARE SERVICE MARK(S) OF MSCI OR ITS AFFILIATES AND HAVE BEEN LICENSED FOR USE FOR CERTAIN PURPOSES BY CITIGROUP GLOBAL MARKETS INC. AND ITS AFFILIATES (THE “LICENSEE”). NEITHER MSCI, ANY OF ITS AFFILIATES NOR ANY OTHER PARTY INVOLVED IN, OR RELATED TO, MAKING OR COMPILING ANY MSCI INDEX MAKES ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, TO THE OWNERS OF THIS FINANCIAL PRODUCT OR ANY MEMBER OF THE PUBLIC REGARDING THE ADVISABILITY OF INVESTING IN FINANCIAL SECURITIES GENERALLY OR IN THIS FINANCIAL PRODUCT PARTICULARLY OR THE ABILITY OF ANY MSCI INDEX TO TRACK CORRESPONDING STOCK MARKET PERFORMANCE. MSCI OR ITS AFFILIATES ARE THE LICENSORS OF CERTAIN TRADEMARKS, SERVICE MARKS AND TRADE NAMES AND OF THE MSCI INDEXES WHICH ARE DETERMINED, COMPOSED AND CALCULATED BY MSCI WITHOUT REGARD TO THIS FINANCIAL PRODUCT OR THE ISSUER OR OWNER OF THIS FINANCIAL PRODUCT. NEITHER MSCI, ANY OF ITS AFFILIATES NOR ANY OTHER PARTY INVOLVED IN, OR RELATED TO, MAKING OR COMPILING ANY MSCI INDEX HAS ANY OBLIGATION TO TAKE THE NEEDS OF THE ISSUERS OR OWNERS OF THIS FINANCIAL PRODUCT INTO CONSIDERATION IN DETERMINING, COMPOSING OR CALCULATING THE MSCI INDEXES. NEITHER MSCI, ITS AFFILIATES NOR ANY OTHER PARTY INVOLVED IN, OR RELATED TO, MAKING OR COMPILING ANY MSCI INDEX IS RESPONSIBLE FOR OR HAS PARTICIPATED IN THE DETERMINATION OF THE TIMING OF, PRICES AT, OR QUANTITIES OF THIS FINANCIAL PRODUCT TO BE ISSUED OR IN THE DETERMINATION OR CALCULATION OF THE EQUATION BY WHICH THIS FINANCIAL PRODUCT IS REDEEMABLE FOR CASH. NEITHER MSCI, ANY OF ITS AFFILIATES NOR ANY OTHER PARTY INVOLVED IN, OR RELATED TO, THE MAKING OR COMPILING ANY MSCI INDEX HAS ANY OBLIGATION OR LIABILITY TO THE OWNERS OF THIS FINANCIAL PRODUCT IN CONNECTION WITH THE ADMINISTRATION, MARKETING OR OFFERING OF THIS FINANCIAL PRODUCT.

ALTHOUGH MSCI SHALL OBTAIN INFORMATION FOR INCLUSION IN OR FOR USE IN THE CALCULATION OF THE MSCI INDEXES FROM SOURCES WHICH MSCI CONSIDERS RELIABLE, NEITHER MSCI, ANY OF ITS AFFILIATES NOR ANY OTHER PARTY INVOLVED IN, OR RELATED TO MAKING OR COMPILING ANY MSCI INDEX WARRANTS OR GUARANTEES THE ORIGINALITY, ACCURACY AND/OR THE COMPLETENESS OF ANY MSCI INDEX OR ANY DATA INCLUDED THEREIN. NEITHER MSCI, ANY OF ITS AFFILIATES NOR ANY OTHER PARTY INVOLVED IN, OR RELATED TO, MAKING OR COMPILING ANY MSCI INDEX MAKES ANY WARRANTY, EXPRESS OR IMPLIED, AS TO RESULTS TO BE OBTAINED BY LICENSEE, LICENSEE’S CUSTOMERS OR COUNTERPARTIES, ISSUERS OF THE FINANCIAL SECURITIES, OWNERS OF THE FINANCIAL SECURITIES, OR ANY OTHER PERSON OR ENTITY, FROM THE USE OF ANY MSCI INDEX OR ANY DATA INCLUDED THEREIN IN CONNECTION WITH THE RIGHTS LICENSED HEREUNDER OR FOR ANY OTHER USE. NEITHER MSCI, ANY OF ITS AFFILIATES NOR ANY OTHER PARTY INVOLVED IN, OR RELATED TO, MAKING OR COMPILING ANY MSCI INDEX SHALL HAVE ANY LIABILITY FOR ANY ERRORS, OMISSIONS OR INTERRUPTIONS OF OR IN CONNECTION WITH ANY MSCI INDEX OR ANY DATA INCLUDED THEREIN. FURTHER, NEITHER MSCI, ANY OF ITS AFFILIATES NOR ANY OTHER PARTY INVOLVED IN, OR RELATED TO, MAKING OR COMPILING ANY MSCI INDEX MAKES ANY EXPRESS OR IMPLIED WARRANTIES OF ANY KIND, AND MSCI, ANY OF ITS AFFILIATES AND ANY OTHER PARTY INVOLVED IN, OR

RELATED TO MAKING OR COMPILING ANY MSCI INDEX HEREBY EXPRESSLY DISCLAIM ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO ANY MSCI INDEX AND ANY DATA INCLUDED THEREIN. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT SHALL MSCI, ANY OF ITS AFFILIATES OR ANY OTHER PARTY INVOLVED IN, OR RELATED TO, MAKING OR COMPILING ANY MSCI INDEX HAVE ANY LIABILITY FOR ANY DIRECT, INDIRECT, SPECIAL, PUNITIVE, CONSEQUENTIAL OR ANY OTHER DAMAGES (INCLUDING LOST PROFITS) EVEN IF NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES.

No purchaser, seller or holder of this security, or any other person or entity, should use or refer to any MSCI trade name, trademark or service mark to sponsor, endorse, market or promote this product without first contacting MSCI to determine whether MSCI's permission is required. Under no circumstances may any person or entity claim any affiliation with MSCI without the prior written permission of MSCI.

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.

License Agreement

MSCI and Citigroup Global Markets Inc. have entered into a non-exclusive license agreement providing for the license to Citigroup Global Markets Inc. and certain of its affiliates, in exchange for a fee, of the right to use the MSCI 25/50 Indices in connection with certain securities, including the securities.

The MSCI 25/50 Indexes are the exclusive property of MSCI. MSCI and the MSCI 25/50 Index names are service mark(s) of MSCI or its affiliates and have been licensed for use for certain purposes by Citigroup Global Markets Inc. and certain of its affiliates. The securities referred to herein are not sponsored, endorsed, or promoted by MSCI, and MSCI bears no liability with respect to any such securities.

THIS FINANCIAL PRODUCT IS NOT SPONSORED, ENDORSED, SOLD OR PROMOTED BY MSCI INC. ("MSCI"), ANY AFFILIATE OF MSCI OR ANY OTHER PARTY INVOLVED IN, OR RELATED TO, MAKING OR COMPILING ANY MSCI 25/50 INDEX. THE MSCI 25/50 INDEXES ARE THE EXCLUSIVE PROPERTY OF MSCI. MSCI AND THE MSCI 25/50 INDEX NAMES ARE SERVICE MARK(S) OF MSCI OR ITS AFFILIATES AND HAVE BEEN LICENSED FOR USE FOR CERTAIN PURPOSES BY CITIGROUP GLOBAL MARKETS INC. AND ITS AFFILIATES (THE "LICENSEE"). NEITHER MSCI, ANY OF ITS AFFILIATES NOR ANY OTHER PARTY INVOLVED IN, OR RELATED TO, MAKING OR COMPILING ANY MSCI 25/50 INDEX MAKES ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, TO THE OWNERS OF THIS FINANCIAL PRODUCT OR ANY MEMBER OF THE PUBLIC REGARDING THE ADVISABILITY OF INVESTING IN FINANCIAL SECURITIES GENERALLY OR IN THIS FINANCIAL PRODUCT PARTICULARLY OR THE ABILITY OF ANY MSCI

25/50 INDEX TO TRACK CORRESPONDING STOCK MARKET PERFORMANCE. MSCI OR ITS AFFILIATES ARE THE LICENSORS OF CERTAIN TRADEMARKS, SERVICE MARKS AND TRADE NAMES AND OF THE MSCI 25/50 INDEXES WHICH ARE DETERMINED, COMPOSED AND CALCULATED BY MSCI WITHOUT REGARD TO THIS FINANCIAL PRODUCT OR THE ISSUER OR OWNER OF THIS FINANCIAL PRODUCT. NEITHER MSCI, ANY OF ITS AFFILIATES NOR ANY OTHER PARTY INVOLVED IN, OR RELATED TO, MAKING OR COMPILING ANY MSCI 25/50 INDEX HAS ANY OBLIGATION TO TAKE THE NEEDS OF THE ISSUERS OR OWNERS OF THIS FINANCIAL PRODUCT INTO CONSIDERATION IN DETERMINING, COMPOSING OR CALCULATING THE MSCI 25/50 INDEXES. NEITHER MSCI, ITS AFFILIATES NOR ANY OTHER PARTY INVOLVED IN, OR RELATED TO, MAKING OR COMPILING ANY MSCI 25/50 INDEX IS RESPONSIBLE FOR OR HAS PARTICIPATED IN THE DETERMINATION OF THE TIMING OF, PRICES AT, OR QUANTITIES OF THIS FINANCIAL PRODUCT TO BE ISSUED OR IN THE DETERMINATION OR CALCULATION OF THE EQUATION BY WHICH THIS FINANCIAL PRODUCT IS REDEEMABLE FOR CASH. NEITHER MSCI, ANY OF ITS AFFILIATES NOR ANY OTHER PARTY INVOLVED IN, OR RELATED TO, THE MAKING OR COMPILING ANY MSCI 25/50 INDEX HAS ANY OBLIGATION OR LIABILITY TO THE OWNERS OF THIS FINANCIAL PRODUCT IN CONNECTION WITH THE ADMINISTRATION, MARKETING OR OFFERING OF THIS FINANCIAL PRODUCT.

ALTHOUGH MSCI SHALL OBTAIN INFORMATION FOR INCLUSION IN OR FOR USE IN THE CALCULATION OF THE MSCI 25/50 INDEXES FROM SOURCES WHICH MSCI CONSIDERS RELIABLE, NEITHER MSCI, ANY OF ITS AFFILIATES NOR ANY OTHER PARTY INVOLVED IN, OR RELATED TO MAKING OR COMPILING ANY MSCI 25/50 INDEX WARRANTS OR GUARANTEES THE ORIGINALITY, ACCURACY AND/OR THE COMPLETENESS OF ANY MSCI 25/50 INDEX OR ANY DATA INCLUDED THEREIN. NEITHER MSCI, ANY OF ITS AFFILIATES NOR ANY OTHER PARTY INVOLVED IN, OR RELATED TO, MAKING OR COMPILING ANY MSCI 25/50 INDEX MAKES ANY WARRANTY, EXPRESS OR IMPLIED, AS TO RESULTS TO BE OBTAINED BY LICENSEE, LICENSEE'S CUSTOMERS OR COUNTERPARTIES, ISSUERS OF THE FINANCIAL SECURITIES, OWNERS OF THE FINANCIAL SECURITIES, OR ANY OTHER PERSON OR ENTITY, FROM THE USE OF ANY MSCI 25/50 INDEX OR ANY DATA INCLUDED THEREIN IN CONNECTION WITH THE RIGHTS LICENSED HEREUNDER OR FOR ANY OTHER USE. NEITHER MSCI, ANY OF ITS AFFILIATES NOR ANY OTHER PARTY INVOLVED IN, OR RELATED TO, MAKING OR COMPILING ANY MSCI 25/50 INDEX SHALL HAVE ANY LIABILITY FOR ANY ERRORS, OMISSIONS OR INTERRUPTIONS OF OR IN CONNECTION WITH ANY MSCI 25/50 INDEX OR ANY DATA INCLUDED THEREIN. FURTHER, NEITHER MSCI, ANY OF ITS AFFILIATES NOR ANY OTHER PARTY INVOLVED IN, OR RELATED TO, MAKING OR COMPILING ANY MSCI 25/50 INDEX MAKES ANY EXPRESS OR IMPLIED WARRANTIES OF ANY KIND, AND MSCI, ANY OF ITS AFFILIATES AND ANY OTHER PARTY INVOLVED IN, OR RELATED TO MAKING OR COMPILING ANY MSCI 25/50 INDEX HEREBY EXPRESSLY DISCLAIM ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO ANY MSCI 25/50 INDEX AND ANY DATA INCLUDED THEREIN. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT SHALL MSCI, ANY OF ITS AFFILIATES OR ANY OTHER PARTY INVOLVED IN, OR RELATED TO, MAKING OR COMPILING ANY MSCI 25/50 INDEX HAVE ANY LIABILITY FOR ANY DIRECT, INDIRECT, SPECIAL, PUNITIVE, CONSEQUENTIAL OR ANY OTHER DAMAGES (INCLUDING LOST PROFITS) EVEN IF NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES.

No purchaser, seller or holder of this security, or any other person or entity, should use or refer to any MSCI trade name, trademark or service mark to sponsor, endorse, market or promote this product without first contacting MSCI to determine whether MSCI's permission is required. Under no circumstances may any person or entity claim any affiliation with MSCI without the prior written permission of MSCI.

The NASDAQ-100 Index®

All information contained in this underlying supplement regarding the NASDAQ-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, The Nasdaq Stock Market, Inc. (“Nasdaq”). The NASDAQ-100 Index® was developed by Nasdaq and is calculated, maintained and published by The NASDAQ OMX Group, Inc. (“NASDAQ OMX”). Neither Nasdaq nor NASDAQ OMX has any obligation to continue to publish, and may discontinue publication of, the NASDAQ-100 Index®.

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®.

License Agreement

Citigroup Global Markets Inc. has entered into a non-exclusive license agreement with NASDAQ OMX providing for the license to Citigroup Global Markets Inc. and its affiliates, in exchange for a fee, of the right to use the NASDAQ-100 Index® in connection with certain securities, including the securities.

The license agreement between NASDAQ OMX and Citigroup Global Markets Inc. provides that the following language must be stated in this underlying supplement:

The securities are not sponsored, endorsed, sold or promoted by, The NASDAQ OMX Group, Inc. or its affiliates (NASDAQ OMX, with its affiliates, are referred to as the "Corporations"). The Corporations have not passed on the legality or suitability of, or the accuracy or adequacy of descriptions and disclosures relating to, the securities. The Corporations make no representation or warranty, express or implied, to the owners of the securities or any member of the public regarding the advisability of investing in securities generally or in the securities particularly, or the ability of the NASDAQ-100 Index® to track general stock market performance. The Corporations' only relationship to Citigroup Inc. and its affiliates is in the licensing of the Nasdaq®, NASDAQ OMX®, OMX® and NASDAQ-100 Index® registered trademarks, service marks and certain trade names of the Corporations and the use of the NASDAQ-100 Index® which is determined, composed and calculated by NASDAQ OMX without regard to Citigroup Inc., its affiliates or the securities. NASDAQ OMX has no obligation to take the needs of Citigroup Inc., its affiliates or the owners of the securities into consideration in determining, composing or calculating the NASDAQ-100 Index®. The Corporations are not responsible for and have not participated in the determination of the timing of, prices at, or quantities of the securities to be issued or in the determination or calculation of the equation by which the securities are to be converted into cash. The Corporations have no liability in connection with the administration, marketing or trading of the securities.

THE CORPORATIONS DO NOT GUARANTEE THE ACCURACY AND/OR UNINTERRUPTED CALCULATION OF THE NASDAQ-100 INDEX® OR ANY DATA INCLUDED THEREIN. THE CORPORATIONS MAKE NO WARRANTY, EXPRESS OR IMPLIED, AS TO RESULTS TO BE OBTAINED BY CITIGROUP INC., ITS AFFILIATES, OWNERS OF THE SECURITIES, OR ANY OTHER PERSON OR ENTITY FROM THE USE OF THE NASDAQ-100 INDEX® OR ANY DATA INCLUDED THEREIN. THE CORPORATIONS MAKE NO EXPRESS OR IMPLIED WARRANTIES, AND EXPRESSLY DISCLAIM ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE WITH RESPECT TO THE NASDAQ-100 INDEX® OR ANY DATA INCLUDED THEREIN. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT SHALL THE CORPORATIONS HAVE ANY LIABILITY FOR ANY LOST PROFITS OR SPECIAL, INCIDENTAL, PUNITIVE, INDIRECT, OR CONSEQUENTIAL DAMAGES, EVEN IF NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES.

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

· 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.

License Agreement

Citigroup Global Markets Inc. has entered into an agreement with Nikkei Inc. that provides Citigroup Global Markets Inc. and certain of its affiliates or subsidiaries identified in that agreement with a non-exclusive license and, for a fee, with the right to use the Nikkei 225 Index, which is owned and published by Nikkei Inc., in connection with certain securities, including the securities.

The license agreement with Nikkei Inc. provides that Nikkei Inc. will assume no obligation or responsibility for use of the Nikkei 225 by Citigroup Global Markets Inc. or its affiliates.

The Nikkei 225 Index is an intellectual property of Nikkei Inc. Nikkei Inc. was formerly known as Nihon Keizai Shimbun, Inc. The name was changed on January 1, 2007. “Nikkei,” “Nikkei Stock Average,” and “Nikkei 225” are the service marks of Nikkei Inc. Nikkei Inc. reserves all the rights, including copyright, to the index. Nikkei Digital Media, Inc., a wholly owned subsidiary of Nikkei Inc., calculates and disseminates the Nikkei 225 Index under exclusive agreement with Nikkei Inc. Nikkei Inc. and Nikkei Digital Media Inc. are collectively referred to as the “Nikkei 225 Index Sponsor.”

The Securities are not in any way sponsored, endorsed or promoted by the Nikkei 225 INDEX Sponsor. The Nikkei 225 INDEX Sponsor does not make any warranty or representation whatsoever, express or implied, either as to the results to be obtained as to the use of the Nikkei 225 INDEX or the figure aT which the Nikkei 225 INDEX stands at any particular day or otherwise. The Nikkei 225 INDEX is compiled and calculated solely by the Nikkei 225 INDEX Sponsor. However, the Nikkei 225 INDEX Sponsor shall not be liable to any person for any error in the Nikkei 225 INDEX and the Nikkei 225 INDEX Sponsor shall not be under any obligation to advise any person, including a purchaseR or vendor of the Securities, of any error therein.

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

The 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.

Disclaimers

The securities are not sponsored, endorsed, sold, or promoted by London Stock Exchange Group plc or its affiliates (collectively, "LSE") or any successor thereto or index owner and neither LSE nor any party hereto makes any representation or warranty whatsoever, whether express or implied, to the owners of the securities or any member of the public regarding the advisability of investing in securities generally or in the securities particularly or the ability of the Russell Indices to track general stock market performance or a segment of the same. LSE's publication of the Russell Indices in no way suggests or implies an opinion by LSE as to the advisability of investment in any or all of the securities upon which the Russell Indices are based. LSE is not responsible for and has not reviewed the securities or any associated literature or publications and LSE makes no representation or warranty express or implied as to their accuracy or completeness, or otherwise. LSE reserves the right, at any time and without notice, to alter, amend, terminate or in any way change the Russell Indices. LSE has no obligation or liability in connection with the administration, marketing or trading of the securities.

"Russell 1000® Index," "Russell 2000® Index," "Russell 3000® Index" and "Russell 3000E™ Index" are trademarks of LSE and have been licensed for use by Citigroup Global Markets Inc. and its affiliates. This transaction is not sponsored, endorsed, sold, or promoted by LSE and LSE makes no representation regarding the advisability of entering into this transaction.

LSE DOES NOT GUARANTEE THE ACCURACY AND/OR THE COMPLETENESS OF THE RUSSELL INDICES OR ANY DATA INCLUDED THEREIN AND RUSSELL SHALL HAVE NO LIABILITY FOR ANY ERRORS, OMISSIONS, OR INTERRUPTIONS THEREIN. LSE MAKES NO WARRANTY, EXPRESS OR IMPLIED, AS TO RESULTS TO BE OBTAINED BY CITIGROUP INC.

AND/OR ITS AFFILIATES, INVESTORS, OWNERS OF THE SECURITIES, OR ANY OTHER PERSON OR ENTITY FROM THE USE OF THE RUSSELL INDICES OR ANY DATA INCLUDED THEREIN. LSE MAKES NO EXPRESS OR IMPLIED WARRANTIES, AND EXPRESSLY DISCLAIMS ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE WITH RESPECT TO THE RUSSELL INDICES OR ANY DATA INCLUDED THEREIN. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT SHALL RUSSELL HAVE ANY LIABILITY FOR ANY SPECIAL, PUNITIVE, INDIRECT, OR CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS), EVEN IF NOTIFIED OF THE POSSIBILITY OF THEREOF. THERE ARE NO THIRD PARTY BENEFICIARIES OF ANY AGREEMENTS OR ARRANGEMENTS BETWEEN RUSSELL AND CITIGROUP INC."

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.

US-95

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**
179^{th} or higher	221^{st} 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.

License Agreement

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/ASX 200” 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:

"The securities are not sponsored, endorsed, sold or promoted by S&P Dow Jones, Dow Jones, S&P or their respective affiliates (collectively, "S&P Dow Jones Indices"). S&P Dow Jones Indices make no representation or warranty, express or implied, to the holders of the securities or any member of the public regarding the advisability of investing in securities generally or in the securities particularly. S&P Dow Jones Indices' only relationship to Citigroup Inc. and its affiliates (other than transactions entered into in the ordinary course of business) is the licensing of certain trademarks, trade names and service marks of S&P Dow Jones Indices and of the S&P/ASX 200 Index, which is determined, composed and calculated by S&P Dow Jones Indices without regard to Citigroup Inc., its affiliates or the securities. S&P Dow Jones Indices have no obligation to take the needs of Citigroup Inc., its affiliates or the holders of the securities into consideration in determining, composing or calculating the S&P/ASX 200 Index. S&P Dow Jones Indices are not responsible for and have not participated in the determination of the timing of, prices at or quantities of the securities to be issued or in the determination or calculation of the equation by which the securities are to be converted into cash. S&P Dow Jones Indices have no obligation or liability in connection with the administration, marketing or trading of the securities.

S&P DOW JONES INDICES DO NOT GUARANTEE THE ACCURACY AND/OR THE COMPLETENESS OF THE S&P/ASX 200 INDEX OR ANY DATA INCLUDED THEREIN AND S&P DOW JONES INDICES SHALL HAVE NO LIABILITY FOR ANY ERRORS, OMISSIONS, OR INTERRUPTIONS THEREIN. S&P DOW JONES INDICES MAKE NO WARRANTY, EXPRESS OR IMPLIED, AS TO RESULTS TO BE OBTAINED BY CITIGROUP INC., HOLDERS OF THE SECURITIES, OR ANY OTHER PERSON OR ENTITY FROM THE USE OF THE S&P/ASX 200 INDEX OR ANY DATA INCLUDED THEREIN. S&P DOW JONES INDICES MAKE NO EXPRESS OR IMPLIED WARRANTIES, AND EXPRESSLY DISCLAIM ALL WARRANTIES, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE WITH RESPECT TO THE S&P/ASX 200 INDEX OR ANY DATA INCLUDED THEREIN. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT SHALL S&P DOW JONES INDICES HAVE ANY LIABILITY FOR ANY LOST PROFITS OR INDIRECT, PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES, EVEN IF NOTIFIED OF THE POSSIBILITY THEREOF. THERE ARE NO THIRD PARTY BENEFICIARIES OF ANY AGREEMENTS OR ARRANGEMENTS BETWEEN S&P DOW JONES INDICES AND CITIGROUP INC."

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:

Index Value = (Index Market Value) / Divisor 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.	

US-104

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.

License Agreement

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,” “S&P Total Market Index,®” “S&P Homebuilders Select Industry™ Index” and the “S&P® Metals & Mining Select Industry™ Index” 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:

“The securities are not sponsored, endorsed, sold or promoted by S&P Dow Jones, Dow Jones, S&P or their respective affiliates (collectively, “S&P Dow Jones Indices”). S&P Dow Jones Indices make no representation or warranty, express or implied, to the holders of the securities or any member of the public regarding the advisability of investing in securities generally or in the securities particularly. S&P Dow Jones Indices' only relationship to Citigroup Inc. and its affiliates (other than transactions entered into in the ordinary course of business) is the licensing of certain trademarks, trade names and service marks of S&P Dow Jones Indices and of the Select Industry Indices, which are determined, composed and calculated by S&P Dow Jones Indices without regard to Citigroup Inc., its affiliates or the securities. S&P Dow Jones Indices have no obligation to take the needs of Citigroup Inc., its affiliates or the holders of the securities into consideration in determining, composing or calculating the Select Industry Indices. S&P Dow Jones Indices are not responsible for and have not participated in the determination of the timing of, prices at or quantities of the securities to be issued or in the determination or calculation of the equation by which the securities are to be converted into cash. S&P Dow Jones Indices have no obligation or liability in connection with the administration, marketing or trading of the securities.

S&P DOW JONES INDICES DO NOT GUARANTEE THE ACCURACY AND/OR THE COMPLETENESS OF THE SELECT INDUSTRY INDICES OR ANY DATA INCLUDED THEREIN AND S&P DOW JONES INDICES SHALL HAVE NO LIABILITY FOR ANY ERRORS, OMISSIONS, OR INTERRUPTIONS THEREIN. S&P DOW JONES INDICES MAKE NO WARRANTY, EXPRESS OR IMPLIED, AS TO RESULTS TO BE OBTAINED BY CITIGROUP INC., HOLDERS OF THE SECURITIES, OR ANY OTHER PERSON OR ENTITY FROM THE USE OF THE SELECT INDUSTRY INDICES OR ANY DATA INCLUDED THEREIN. S&P DOW JONES INDICES MAKE NO EXPRESS OR IMPLIED WARRANTIES, AND EXPRESSLY DISCLAIM ALL WARRANTIES, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE WITH RESPECT TO THE SELECT INDUSTRY INDICES OR ANY DATA INCLUDED THEREIN. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT SHALL S&P DOW JONES INDICES HAVE ANY LIABILITY FOR ANY LOST PROFITS OR INDIRECT, PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES, EVEN IF NOTIFIED OF THE POSSIBILITY THEREOF. THERE ARE NO THIRD PARTY BENEFICIARIES OF ANY AGREEMENTS OR ARRANGEMENTS BETWEEN S&P DOW JONES INDICES AND CITIGROUP INC."

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.

License Agreement

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" and "S&P" are trademarks of Standard & Poor's Financial Services LLC ("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:

“The securities are not sponsored, endorsed, sold or promoted by S&P Dow Jones, Dow Jones, S&P or their respective affiliates (collectively, “S&P Dow Jones Indices”). S&P Dow Jones Indices make no representation or warranty, express or implied, to the holders of the securities or any member of the public regarding the advisability of investing in securities generally or in the securities particularly. S&P Dow Jones Indices’ only relationship to Citigroup Inc. and its affiliates (other than transactions entered into in the ordinary course of business) is the licensing of certain trademarks, trade names and service marks of S&P Dow Jones Indices and of the Select Sector Indices, which are determined, composed and calculated by S&P Dow Jones Indices without regard to Citigroup Inc., its affiliates or the securities. S&P Dow Jones Indices have no obligation to take the needs of Citigroup Inc., its affiliates or the holders of the securities into consideration in determining, composing or calculating the Select Sector Indices. S&P Dow Jones Indices are not responsible for and have not participated in the determination of the timing of, prices at or quantities of the securities to be issued or in the determination or calculation of the equation by which the securities are to be converted into cash. S&P Dow Jones Indices have no obligation or liability in connection with the administration, marketing or trading of the securities.

S&P DOW JONES INDICES DO NOT GUARANTEE THE ACCURACY AND/OR THE COMPLETENESS OF THE SELECT SECTOR INDICES OR ANY DATA INCLUDED THEREIN AND S&P DOW JONES INDICES SHALL HAVE NO LIABILITY FOR ANY ERRORS, OMISSIONS, OR INTERRUPTIONS THEREIN. S&P DOW JONES INDICES MAKE NO WARRANTY, EXPRESS OR IMPLIED, AS TO RESULTS TO BE OBTAINED BY CITIGROUP INC., HOLDERS OF THE SECURITIES, OR ANY OTHER PERSON OR ENTITY FROM THE USE OF THE SELECT SECTOR INDICES OR ANY DATA INCLUDED THEREIN. S&P DOW JONES INDICES MAKE NO EXPRESS OR IMPLIED WARRANTIES, AND EXPRESSLY DISCLAIM ALL WARRANTIES, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE WITH RESPECT TO THE SELECT SECTOR INDICES OR ANY DATA INCLUDED THEREIN. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT SHALL S&P DOW JONES INDICES HAVE ANY LIABILITY FOR ANY LOST PROFITS OR INDIRECT, PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES, EVEN IF NOTIFIED OF THE POSSIBILITY THEREOF. THERE ARE NO THIRD PARTY BENEFICIARIES OF ANY AGREEMENTS OR ARRANGEMENTS BETWEEN S&P DOW JONES INDICES AND CITIGROUP INC.”

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 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.

License Agreement

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,” “S&P 500,” “S&P 100,” “S&P MidCap 400” and “S&P SmallCap” 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:

“The securities are not sponsored, endorsed, sold or promoted by S&P Dow Jones, Dow Jones, S&P or their respective affiliates (collectively, “S&P Dow Jones Indices”). S&P Dow Jones Indices make no representation or warranty, express or implied, to the holders of the securities or any member of the public regarding the advisability of investing in securities generally or in the securities particularly. S&P Dow Jones Indices’ only relationship to Citigroup Inc. and its affiliates (other than transactions entered into in the ordinary course of business) is the licensing of certain trademarks, trade names and service marks of S&P Dow Jones Indices and of the S&P U.S. Indices, which are determined, composed and calculated by S&P Dow Jones Indices without regard to Citigroup Inc., its affiliates or the securities.

S&P Dow Jones Indices have no obligation to take the needs of Citigroup Inc., its affiliates or the holders of the securities into consideration in determining, composing or calculating the S&P U.S. Indices. S&P Dow Jones Indices are not responsible for and have not participated in the determination of the timing of, prices at or quantities of the securities to be issued or in the determination or calculation of the equation by which the securities are to be converted into cash. S&P Dow Jones Indices have no obligation or liability in connection with the administration, marketing or trading of the securities.

S&P DOW JONES INDICES DO NOT GUARANTEE THE ACCURACY AND/OR THE COMPLETENESS OF THE S&P U.S. INDICES OR ANY DATA INCLUDED THEREIN AND S&P DOW JONES INDICES SHALL HAVE NO LIABILITY FOR ANY ERRORS, OMISSIONS, OR INTERRUPTIONS THEREIN. S&P DOW JONES INDICES MAKE NO WARRANTY, EXPRESS OR IMPLIED, AS TO RESULTS TO BE OBTAINED BY CITIGROUP INC., HOLDERS OF THE SECURITIES, OR ANY OTHER PERSON OR ENTITY FROM THE USE OF THE S&P U.S. INDICES OR ANY DATA INCLUDED THEREIN. S&P DOW JONES INDICES MAKE NO EXPRESS OR IMPLIED WARRANTIES, AND EXPRESSLY DISCLAIM ALL WARRANTIES, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE WITH RESPECT TO THE S&P U.S. INDICES OR ANY DATA INCLUDED THEREIN. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT SHALL S&P DOW JONES INDICES HAVE ANY LIABILITY FOR ANY LOST PROFITS OR INDIRECT, PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES, EVEN IF NOTIFIED OF THE POSSIBILITY THEREOF. THERE ARE NO THIRD PARTY BENEFICIARIES OF ANY AGREEMENTS OR ARRANGEMENTS BETWEEN S&P DOW JONES INDICES AND CITIGROUP INC.”

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