

# Index Definitions

An index is a statistical composite that is not managed. It is not possible to invest directly in an index.

The **Alerian MLP Index** is the leading gauge of energy Master Limited Partnerships (MLPs). The cap-weighted index, whose constituents represent approximately 85% of total float-adjusted market capitalization, is disseminated real-time on a price-return basis (AMZ) and on a total-return basis (AMZX). It was developed with a base level of 100 as of December 29, 1995.

The **Alerian MLP Infrastructure Index** is a composite of energy infrastructure Master Limited Partnerships (MLPs). The capped, float-adjusted, capitalization-weighted index, whose constituents earn the majority of their cash flow from midstream activities involving energy commodities, is disseminated real-time on a price-return basis (AMZI) and on a total-return basis (AMZIX).

The **Bank of America (BofA) Merrill Lynch All Convertibles All Qualities Index** represents convertible securities spanning all corporate sectors and having a par amount outstanding of \$25 Mil+. Maturities must be at least one year. The coupon range must be equal to or greater than zero and all qualities of bonds are included. Preferred equity redemption stocks are not included nor are component bonds once they are converted into corporate stock.

The **Bank of America (BofA) Merrill Lynch BB US Cash Pay High Yield Index** tracks US dollar, Canadian dollar, British Pound, and Euro denominated debt rated BB+, BB, or BB- issued in major domestic or Eurobond markets. Qualifying securities must have 12 months or more until maturity, a fixed coupon, and a minimum outstanding of \$100mm. Index constituents are capitalization-weighted based on current amount outstanding, the current market price, and accrued interest.

The **Bank of America (BofA) Merrill Lynch Convertible Bonds All Qualities Index** measures the performance of USD-denominated convertibles that are sold in the US market and publicly traded in the US including coupon bonds, OIDs, and zeros. Qualifying securities must have at least \$50 million in market value. Qualifying companies must have a significant revenue footprint in the US. It is capitalization-weighted.

The **Bank of America (BofA) Merrill Lynch Core Plus Fixed Rate Preferred Securities Index** tracks the performance of fixed rate US dollar denominated preferred securities issued in the US domestic market. The index includes preference shares (perpetual preferred securities), both DRD-eligible and non-DRD eligible preferred stock and senior and subordinated debt issued in \$25, \$50 or \$100 par/liquidation increments. Qualifying securities must be rated at least B3 (based on an average of Moody's, S&P and Fitch) and must have an investment grade rated country of risk (based on an average of Moody's, S&P and Fitch foreign currency long term sovereign debt ratings).

The **Bank of America (BofA) Merrill Lynch Fixed Rate Preferred Securities Index** is an unmanaged index that tracks the performance of fixed rate US dollar denominated preferred securities issued in the US domestic market. The Index includes preference shares (perpetual preferred securities), American Depository Shares/Receipts (ADS/R), domestic and Yankee trust preferred securities having a minimum remaining term of at least one year, both DRD-eligible and non-DRD-eligible preferred stock and senior debt.

The **Bank of America (BofA) Merrill Lynch Hybrid Preferred Securities Index** is a subset of the BofA Merrill Lynch Fixed Rate Preferred Securities Index including all subordinated securities with a payment deferral feature. The BofA Merrill Lynch Fixed Rate Preferred Securities Index tracks the performance of fixed-rate US dollar denominated preferred securities issued in the US domestic market.

The **Bank of America (BofA) Merrill Lynch Preferred Stock Hybrid Index** includes investment-grade \$25 par preferred securities. It is not truly representative of the whole preferred universe. It does not include any Capital/\$1000 par securities issued by non-U.S. issuers.

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The **Bank of America Merrill Lynch US Municipal Securities Index** tracks the performance of US dollar denominated investment grade tax-exempt debt publicly issued by US states and territories, and their political subdivisions, in the US domestic market. Qualifying securities must have at least one-year remaining term to final maturity, a fixed coupon schedule and an investment grade rating (based on an average of Moody's, S&P and Fitch). Minimum size requirements vary based on the initial term to final maturity at time of issuance. Securities with an initial term to final maturity greater than or equal to one year and less than five years must have a current amount outstanding of at least \$10 million. Securities with an initial term to final maturity greater than or equal to five years and less than ten years must have a current amount outstanding of at least \$15 million. Securities with an initial term to final maturity of ten years or more must have a current amount outstanding of at least \$25 million. The call date on which a pre-refunded bond will be redeemed is used for purposes of determining qualification with respect to final maturity requirements. Original issue zero coupon bonds are included in the Index. Taxable municipal securities and 144a securities are excluded from the Index. The BofA Merrill Lynch 7-12 Year US Municipal Securities Index is a subset of The BofA Merrill Lynch US Municipal Securities Index including all securities with a remaining term to final maturity greater than or equal to 7 years and less than 12 years. Inception date: December 31, 1988.

The **Bank of America Merrill Lynch US 3-Month Treasury Bill Index** is comprised of a single issue purchased at the beginning of the month and held for a full month. At the end of the month that issue is sold and rolled into a newly selected issue. The issue selected at each month-end rebalancing is the outstanding Treasury Bill that matures closest to, but not beyond, three months from the rebalancing date. To qualify for selection, an issue must have settled on or before the month-end rebalancing date. While the index will often hold the Treasury Bill issued at the most recent 3-month auction, it is also possible for a seasoned 6-month Bill to be selected. Inception date: December 31, 1977.

The **Bank of America Merrill Lynch US Convertibles Investment Grade Index** represents convertible securities spanning all corporate sectors and having a par amount outstanding of \$25 Mil+. Maturities must be at least one year. The coupon range must be equal to or greater than zero. Preferred equity redemption stocks are not included nor are component bonds once they are converted into corporate stock.

The **Bank of America (BofA) Merrill Lynch US High Yield Master II Index** measures the performance of short-term US dollar denominated below investment-grade corporate debt publicly issued in the US domestic market. Qualifying securities must have at least 18 months to final maturity at the time of issuance, at least one year remaining term to final maturity as of the rebalancing date, a fixed-coupon and a minimum amount outstanding of \$100 million. It is capitalization-weighted.

The **Bank of America (BofA) Merrill Lynch USD 3-Month LIBOR Constant Maturity Index** is based on the assumed purchase of a synthetic instrument having 3 months to maturity and with a coupon equal to the closing quote for 3-Month LIBOR. That issue is sold the following day (priced at a yield equal to the current day closing 3-Month LIBOR rate) and is rolled into a new 3-Month instrument. The index, therefore, will always have a constant maturity to exactly 3 months.

The **Barclays Capital 1-10 Year Municipal Bond Index** measures the performance of tax-exempt muni bonds with more than one year and less than ten years remaining until maturity.

The **Barclays Capital 3-15 Year National Municipal Bond Index** consists of tax-exempt general obligation, revenue and private activity bonds and notes, which are issued by or on behalf of states, territories or possessions of the U.S. and the District of Columbia and their political subdivisions, agencies and instrumentalities with a remaining maturity of more than three years and less than 15 years.

The **Barclays Capital 7-Year Municipal Bond Index** consists of a broad selection of investment grade general obligation and revenue bonds of maturities of approximately seven years.

The **Barclays Capital Managed Money Municipal Short-Term Index** is a rules-based, market-value weighted index comprised of publicly traded municipal bonds that cover the U.S. dollar denominated short term tax exempt bond market, including state and local general obligation bonds, revenue bonds, insured bonds, and pre-refunded bonds.

The **Barclays Capital Municipal Bond 1-10 Year Blend Index** measures the performance of municipal bonds with maturities between one and 10 years.

The **Barclays Capital U.S. Intermediate Government/Credit Bond Index** measures the performance of U.S. Dollar denominated U.S. Treasuries, government-related and investment grade U.S. corporate securities that have a remaining maturity of greater than one year and less than ten years.

The **Barclays Capital U.S. Government/Credit Bond Index** measures performance of US dollar denominated US Treasuries, government-related, and investment grade US corporate securities that have a remaining maturity of greater than or equal to 1 year. In addition, the securities have \$250 million or more of outstanding face value, and must be fixed rate and non-convertible.

The **Bloomberg 30-Day Visible Supply Index** is based on Bloomberg Fixed Rate municipal calendars updated daily.

The **Bloomberg 1-3 Year Municipal Bond Index** consists of a broad selection of investment grade general obligation and revenue bonds of maturities ranging from one year to four years.

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The **Bloomberg 1-15 Year Municipal Index** consists of tax-exempt general obligation, revenue and private activity bonds and notes, which are issued by or on behalf of states, territories or possessions of the U.S. and the District of Columbia and their political subdivisions, agencies and instrumentalities with a remaining maturity of more than three years and less than 15 years.

The **Bloomberg 3 Year (2-4) Municipal Bond Index** measures the performance of USD-denominated long-term exempt bond market with maturities of 3 years (2-4), including state and local general obligation bonds, revenue bonds, and pre-refunded bonds.

The **Bloomberg 20 Year (17-22) Municipal Bond Index** is an index of fixed-rate investment-grade municipal bonds maturing between 17-22 years, and greater than \$75 million in issuance size.

The **Bloomberg Capital Municipal Bond Index** includes approximately 15,000 bonds. To be included in the index a municipal bond must have the following criteria: a minimum credit rating of at least Baa; been issued as part of a deal of at least \$50 million; been issued within the last 5 years; and has a maturity of at least 2 years. Bonds subject to the Alternative Minimum Tax are excluded. Bonds with floating or zero coupons are also excluded. This index represents asset types which are subject to risk, including loss of principal.

The **Bloomberg Capital 1-3 Year Government Index** is an unmanaged index. The Index represents securities that are US domestic, taxable, and dollar denominated. Securities included in the index are US Government securities (US Treasury and Agency securities) with a maturity from 1 year up to (but not including) 3 years that must have at least one year to final maturity regardless of call features.

The **Bloomberg Capital US Aggregate Index** is an index comprised of approximately 6,000 publicly traded bonds including US government, mortgage-backed, corporate and Yankee bonds with an average maturity of approximately 10 years. The index is weighted by the market value of the bonds included in the index. This index represents asset types which are subject to risk, including loss of principal.

The **Bloomberg Capital US Corporate High Yield 2% Issuer Cap Index** is an un-managed index of the 2% Issuer Cap component of the Bloomberg Barclays Capital High Yield Corporate Bond Index, which is a market value-weighted index of fixed rate, non-investment grade debt.

Formerly known as the Dow Jones UBS Commodity Index, the **Bloomberg Commodity Index** is calculated on an excess return basis and composed of futures contracts on 22 physical commodities. It reflects the return of underlying commodity futures price movements.

The **Bloomberg Corporate Credit Index** includes more than 5,000 corporate securities with more than \$250mm outstanding with a minimum rating of Baa3/BBB-. Issues are dollar denominated, are publicly traded and have at least one year to final maturity.

The **Bloomberg Dollar Spot Index** (BBDXY) tracks the performance of a basket of ten leading global currencies versus the U.S. Dollar. Each currency in the basket and their weight is determined annually based on their share of international trade and FX liquidity. The BBDXY Index data starts from Dec 31, 2004 with a base level of 1000.

The **Bloomberg Global Aggregate Index** measures a wide spectrum of global government, government related agencies, corporate and securitized fixed income investments, all with maturities greater than one year.

The **Bloomberg Global Aggregate ex-USD Float Adjusted RIC Capped Index** (USD Hedged) is designed to be a broad-based measure of the investment-grade fixed income markets outside the United States. Because the index reflects only the performance of hedged international bonds, the volatility posed by currency exposure is reduced. It is market-value weighted.

The **Bloomberg Global Treasury Index** tracks fixed-rate, local currency government debt of investment grade countries, including both developed and emerging markets. The index represents the treasury sector of the Global Aggregate Index and contains issues from 37 countries denominated in 24 currencies. The three major components of this index are the US Treasury Index, the Pan-European Treasury Index and the Asian-Pacific Treasury Index, in addition to Canadian, Chilean, Israeli, Mexican, South African and Turkish government bonds. The index was created in 1992, with history available from January 1, 1987.

The **Bloomberg Global Treasury Ex US Index** is a subset of the Bloomberg Barclays Global Treasury Index, excluding the US Treasury Index.

The **Bloomberg High Yield Very Liquid Index** is designed to measure the performance of publicly issued US dollar denominated high yield corporate bonds with above-average liquidity. High yield securities are generally rated below investment grade and are commonly referred to as "junk bonds." The Index includes publicly issued US dollar denominated, non-investment grade, fixed-rate, taxable corporate bonds that have a remaining maturity of at least one year, regardless of optionality, are rated high-yield (Ba1/BB+/BB+ or below) using the middle rating of Moody's Investors Service, Inc., Fitch Inc., or Standard & Poor's Financial Services, LLC, respectively, and have \$500 million or more of outstanding face value.

The **Bloomberg Industrial Metals Index**, formerly known as Dow Jones-UBS Industrial Metals Sub-Index (DJUBSIN), is composed of futures contracts on aluminum, copper, nickel and zinc. It reflects the return of underlying commodity futures price movements only. It is quoted in USD.

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The **Bloomberg Intermediate U.S. Treasury Index** includes all publicly issued, U.S. Treasury securities that have a remaining maturity of greater than or equal to 1 year and less than 10 years, are rated investment grade, and have \$250 million or more of outstanding face value. In addition, the securities must be denominated in U.S. dollars and must be fixed rate and non-convertible. Excluded from the Intermediate U.S. Treasury Index are certain special issues, such as flower bonds, TINs, state and local government series bonds, TIPS, and coupon issues that have been stripped from bonds included in the index. The Intermediate U.S. Treasury Index is market capitalization weighted and the securities in the index are updated on the last business day of each month.

The **Bloomberg Long U.S. Treasury Index** is designed to measure the performance of U.S. dollar-denominated, fixed-rate, nominal debt issued by the U.S. Treasury with a minimum term to maturity greater than ten years. The index is market value weighted.

The **Bloomberg Municipal Bond Index** is a rules-based, market-valued-weighted index engineered for the tax-exempt bond market. The index tracks general obligation bonds, revenue bonds, insured bonds, and pre-refunded bonds rated Baa3/BBB or higher by at least two of the rating agencies: Moody's, Standard & Poor's, Fitch.

The **Bloomberg Municipal Managed Money Index** measures the performance of the tax-exempt bond market. All bonds in the index must be rated Aa3/AA- or higher by at least two of the following statistical ratings agencies: Moody's, S&P and Fitch. It is rules-based and market-value weighted.

The **Bloomberg Real Estate Investment Trust (REIT) Index** is a capitalization-weighted index of REITs having a market capitalization of \$15 million or greater. The Index excludes Mortgage-related REITs and was developed with a base of 100 as of 12/31/1993. The index is rebalanced semi-annually in February and August.

The **Bloomberg US 1–5 Year Corporate Bond Index** measures the investment return of US dollar denominated, investment-grade, fixed rate, taxable securities issued by industrial, utility, and financial companies with maturities between 1 and 5 years.

The **Bloomberg US 5–10 Year Corporate Bond Index** measures the investment return of U.S. dollar denominated, investment-grade, fixed rate, taxable securities issued by industrial, utility, and financial companies with maturities between 5 and 10 years.

The **Bloomberg US Aggregate Bond Index** is a broad-based flagship benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass throughs), ABS and CMBS (agency and non-agency).

The **Bloomberg US Aggregate Float Adjusted Statistics Index** is a broad-based benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed rate and hybrid ARM pass throughs) ABS and CMBS (agency and non-agency).

The **Bloomberg US Convertible Bond > \$500MM Index** is designed to represent the market of US convertible securities, such as convertible bonds, with outstanding issue sizes greater than \$500 million.

The **Bloomberg US Corporate Investment Grade Index** (US Corp IG) encompasses publicly issuer corporate and foreign unsecured debt that are rated Baa3/BBB- or higher by two of three rating agencies (Moody's, S&P, Fitch). In addition, issues need to be dollar denominated, fixed rate, have at least \$250 million outstanding and have more than one year to maturity.

The **Bloomberg US Corporate Bond Index** measures the investment grade, fixed-rate, taxable corporate bond market. It includes USD denominated securities publicly issued by US and non-US industrial, utility and financial issuers.

The **Bloomberg US Corporate High Yield Bond Index** measures the USD-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch and S&P is Ba1/BB+/BB+ or below. Bonds from issuers with an emerging markets country of risk, based on Bloomberg Barclays EM country definition, are excluded. The US Corporate High Yield Index is a component of the US Universal and Global High Yield Indices. The index was created in 1986, with history backfilled to July 1, 1983.

The **Bloomberg US Corporate High Yield Bond 2% Issuer Cap Index** (Bloomberg Barclays U.S. Corp. HY 2% Cap) is an unmanaged index of the 2% Issuer Cap component of the Bloomberg Barclays High Yield Corporate Bond Index, which is a market value-weighted index of fixed rate, non-investment grade debt.

The **Bloomberg U.S. Government Bond Index** measures the performance of the U.S. Treasury and U.S. Agency Indices, including Treasuries and U.S. agency debentures. It is a component of the U.S. Government/Credit Index and the U.S. Aggregate Index.

The **Bloomberg US Government/Credit Bond Index** measures performance of US dollar denominated US Treasuries, government-related, and investment grade US corporate securities that have a remaining maturity of greater than or equal to 1 year. In addition, the securities have \$250 million or more of outstanding face value, and must be fixed rate and non-convertible.

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The **Bloomberg US High Yield 350mn Cash Pay 0-5 Yr 2% Capped Index** is designed to measure the performance of short-term publicly issued US dollar-denominated high yield corporate bonds. High yield securities are generally rated below investment-grade and are commonly referred to as “junk” bonds. The Index includes publicly issued US dollar denominated, non-investment-grade, fixed rate, taxable corporate bonds that have a remaining maturity of less than 5 years regardless of optionality, are rated between Caa3/CCC-/CCC- and Ba1/BB+/BB+ using the middle rating of Moody's Investors Service, Inc., Fitch, Inc., or Standard & Poor's Financial Services, LLC, respectively, and have at least a \$350 million outstanding par value.

The **Bloomberg US High Yield Index** follows a group of bonds that are all rated below investment grade. Issues must be fixed-rate, with at least \$150 million outstanding, U.S. dollar denominated, non-convertible, with more than one year to maturity. Bond issuers can include Eurobonds and issues registered with the SEC from foreign countries denominated in U.S. dollars from countries with sovereign ratings Baa1/BBB+/BBB+ or better.

The **Bloomberg US Intermediate Credit TR Index** measures the investment grade, US dollar-denominated, fixed-rate, taxable corporate and government related bond markets. It is composed of the US corporate index and a non-corporate component that includes foreign agencies, sovereigns, supra-nationals and local authorities.

The **Bloomberg U.S. Intermediate Government/Credit Bond Index** is composed of all publicly issued, fixed-rate, nonconvertible, domestic debt in three major classifications: industrial, utility, and financial (as well as domestic debt of the US Government or any agency thereof). All corporate bonds have a minimum rating of Baa by Moody's and BBB by Standard & Poor's.

The **Bloomberg US Investment Grade Corporate Index** tracks investment grade, fixed-coupon, taxable corporate bonds greater than \$250 million outstanding that have been registered with the SEC. Qualifying securities must be U.S. dollar denominated, non-convertible and have more than one year remaining until maturity.

The **Bloomberg US Long Government/Credit Float Adjusted Bond Index** measures the investment return of all medium and larger public issues of US Treasury, agency, investment-grade corporate, and investment-grade international US Dollar denominated bonds with maturities of ten years or greater. The index excludes Treasuries, agencies and MBS held in Federal Reserve accounts. It is market-value weighted.

The **Bloomberg US Mortgage Backed Securities (MBS) Index** tracks agency mortgage backed pass-through securities (both fixed-rate and hybrid ARM) guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA) and Freddie Mac (FHLMC). The index is constructed by grouping individual TBA-deliverable MBS pools into aggregates or generics based on program, coupon and vintage.

The **Bloomberg US Municipals Index** tracks fixed-rate municipal securities with at least \$7 million outstanding and issued as part of a deal totaling at least \$75 million. Bonds must have at least one year to maturity and feature a fixed-rate coupon. Index sectors include general obligation issues, revenue issues, insured bonds and pre-refunded municipal bonds.

The **Bloomberg US Securitized Index** includes pass through securities supported by residential mortgages, commercial mortgages, and other asset backed cash flows. Similar to most Bloomberg Barclays index structures, debt issues need to be dollar denominated, fixed rate, have at least \$250 million outstanding and have more than one year to maturity.

The **Bloomberg US Treasury Inflation Protected Securities (TIPS) Index** (Series-L) includes all publicly issued, US Treasury inflation protected securities ("TIPS") that have at least one-year remaining maturity, are non-convertible, are denominated in US dollars, are rated investment grade (at least Baa3 by Moody's Investors Service or BBB- by S&P), are fixed rate, and have more than \$250 million or more par value outstanding.

The **Bloomberg US Treasury Index** measures USD denominated, fixed-rate, nominal debt issued by the US Treasury. Treasury bills are excluded by the maturity constraint.

The **Bloomberg U.S. Treasury 1-3 Year Index** is designed to measure the performance of U.S. dollar-denominated, fixed-rate, nominal debt issued by the U.S. Treasury with a minimum term to maturity greater than one year and less than or equal to three years. The index is market value weighted.

The **Bloomberg U.S. Treasury 3-10 Year Index** is designed to measure the performance of U.S. dollar-denominated, fixed-rate, nominal debt issued by the U.S. Treasury with a minimum term to maturity greater than three years and less than or equal to ten years. The index is market value weighted.

The **Bloomberg US Universal Bond Index** represents the union of the US Aggregate Index, US Corporate High Yield Index, Investment Grade 144A Index, Eurodollar Index, US Emerging Markets Index, and the non-ERISA eligible portion of the CMBS Index. The index covers USD-denominated, taxable bonds that are rated either investment grade or high-yield. Some US Universal Index constituents may be eligible for one or more of its contributing subcomponents that are not mutually exclusive. These securities are not double-counted in the index. The US Universal index was created on January 1, 1999, with index history backfilled to January 1, 1990.

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The **BNY Mellon ADR Index** tracks all Depositary Receipts traded on the NYSE, NYSE MKT and NASDAQ. In addition to the BNY Mellon ADR Index there are market, regional, country and select indices calculated on a continuous basis throughout the trading day. The Index and its Sub-Indices are market capitalization weighted and adjusted for free-float utilizing S&P Dow Jones Indices current methodology.

The **Borsa Istanbul (BIST) 100 Index** is a capitalization-weighted index composed of National Market companies except investment trusts. The constituents of the BIST National 100 Index are selected on the basis of pre-determined criteria directed for the companies to be included in the indices.

The **Ibovespa Brasil Sao Paulo Stock Exchange Index** (Bovespa) is a gross total return index weighted by market value to the free float and is comprised of the most liquid stocks traded on the Sao Paulo Stock Exchange.

The **Budapest Stock Exchange Index** is a capitalization-weighted index adjusted for free float. The index tracks the daily price only performance of large, actively traded shares on the Budapest Stock Exchange. The shares account for 58% of the domestic equity market capitalization. The index has a base value of 1,000 points as of January 2, 1991, as is a total return index.

The **CAC 40** (CAC), the most widely-used indicator of the Paris market, reflects the performance of the 40 largest equities listed in France, measured by free-float market-capitalization and liquidity. The index was developed with a base level of 1,000 as of December 31, 1987.

The **Cambridge Associates' US Private Equity Index** measures the performance of 1,219 U.S. private equity funds, including fully liquidated partnerships, formed between 1986 and 2019.

The **Chicago Board of Options Exchange (CBOE) Volatility Index®** (VIX®) Index is based on real-time prices of options on the S&P 500® Index (SPX) and is designed to reflect investors' consensus view of future (30-day) expected stock market volatility.

**CBOE Emerging Markets ETF Volatility Index:** CBOE now applies its proprietary CBOE VIX methodology to create indices that reflect expected volatility for options on select ETFs. VXEM reflects the implied volatility of the EEM ETF, the iShares MSCI Emerging Markets Index.

The **CBOE NASDAQ-100 Volatility Index<sup>SM</sup>** (VXN<sup>SM</sup>) is a key measure of market expectations of near-term volatility conveyed by NASDAQ-100 Index (NDX) option prices. It measures the market's expectation of 30-day volatility implicit in the prices of near-term NASDAQ-100 options. VXN is quoted in percentage points, just like the standard deviation of a rate of return, e.g. 19.36. CBOE disseminates the VXN index value continuously during trading hours. The VXN Index is a leading barometer of investor sentiment and market volatility relating to the NASDAQ-100 Index.

The **CBOE S&P 500 Implied Correlation Index** measures the expected average correlation of price returns of S&P 500 Index components, implied through SPX option prices and prices of single stock options on the 50 largest components of SPX, tied to options with Jan 2017 maturities.

The **Citi USBIG Treasury/Agency Index**- See the **FTSE US Broad Investment-Grade Bond (USBIG) Treasury/Agency Index**

The **Citigroup Non-US Dollar World Government Bond Index**- See **FTSE Non-US Dollar World Government Bond Index**

The **Citigroup Three-Month Treasury Bill Index** measures the return equivalents of yield averages. It is not marked to market. The Index is an average of the last three three-month Treasury bill month-end rates.

The **Citigroup World Government Bond Index** (Citi WGBI)- See **FTSE World Government Bond Index** (FTSE WGBI)

The **Cohen & Steers Realty Majors Portfolio Index** measures the total return of selected United States Equity Real Estate Investment Trusts (REITs). The index uses a qualitative screening process to emphasize companies that the Cohen & Steers Index Committee believes are leading the securitization of real estate in the United States. The index is modified market capitalization weighted.

The **Consumer Price Index** (CPI) is an inflation indicator that measures the change in the total cost of a fixed basket of products and services, including housing, electricity, food, and transportation. The CPI is published monthly by the Commerce Department and is also commonly referred to as the cost-of-living index. Unless otherwise noted, CPI data in this report is one month trailing.

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The **Thomson Reuters/Core Commodity CRB (TR/CC CRB) Excess Return Index** is an arithmetic average of commodity futures prices with monthly rebalancing. It was first calculated by Commodity Research Bureau, Inc. (CRB) in 1957 and made its inaugural appearance in the 1958 CRB Commodity Year Book. Comprising a basket of 19 commodities, with 39% allocated to energy contracts, 41% to agriculture, 7% to precious metals and 13% to industrial metals. The Index acts as a representative indicator of today's global commodity markets.

The **CRB Raw Industrials Sub-Index** is a measure of price movements of 13 sensitive basic commodities like burlap, copper scrap, cotton, hides, lead scrap, print cloth, rosin, rubber, steel scrap, tallow, tin, wool and zinc.

The **CRB Spot Market Price Index** is a measure of price movements of 22 sensitive basic commodities whose markets are presumed to be among the first to be influenced by changes in economic conditions. As such, it serves as one early indication of impending changes in business activity.

The **Credit Suisse Convertible Arbitrage Hedge Fund Index** is a subset of the Credit Suisse Hedge Fund Index that measures the aggregate performance of convertible arbitrage funds. Convertible arbitrage funds typically aim to profit from the purchase of convertible securities and the subsequent shorting of the corresponding stock when there is a pricing error made in the conversion factor of the security. Managers of convertible arbitrage funds typically build long positions of convertible and other equity hybrid securities and then hedge the equity component of the long securities positions by shorting the underlying stock or options. The number of shares sold short usually reflects a delta neutral or market neutral ratio. As a result, under normal market conditions, the arbitrageur generally expects the combined position to be insensitive to fluctuations in the price of the underlying stock.

The **Credit Suisse Equity Market Neutral Hedge Fund Index** is a subset of the Credit Suisse Hedge Fund Index that measures the aggregate performance of equity market neutral funds typically take both long and short positions in stocks while seeking to reduce exposure to the systematic risk of the market (i.e., a beta of zero is desired). Equity market neutral funds typically seek to exploit investment opportunities unique to a specific group of stocks, while maintaining a neutral exposure to broad groups of stocks defined for example by sector, industry, market capitalization, country, or region. The index has a number of subsectors including statistical arbitrage, quantitative long/short, fundamental long/short and index arbitrage. Managers often apply leverage to enhance returns.

The **Credit Suisse Event Driven Hedge Fund Index** is a subset of the Credit Suisse Hedge Fund Index that measures the aggregate performance of event driven funds typically invest in various asset classes and seek to profit from potential mispricing of securities related to a specific corporate or market event. Such events can include: mergers, bankruptcies, financial or operational stress, restructurings, asset sales, recapitalizations, spin-offs, litigation, regulatory and legislative changes as well as other types of corporate events. Event driven funds can invest in equities, fixed income instruments (investment grade, high yield, bank debt, convertible debt and distressed), options and various other derivatives. Many event driven fund managers use a combination of strategies and adjust exposures based on the opportunity sets in each subsector.

The **Credit Suisse Fixed Income Arbitrage Hedge Fund Index** is a subset of the Credit Suisse Hedge Fund Index that measures the aggregate performance of fixed income arbitrage funds typically attempt to generate profits by exploiting inefficiencies and price anomalies between related fixed income securities. Funds often seek to limit volatility by hedging out exposure to the market and interest rate risk. Strategies may include leveraging long and short positions in similar fixed income securities that are related either mathematically or economically. The sector includes credit yield curve relative value trading involving interest rate swaps, government securities and futures; volatility trading involving options; and mortgage-backed securities arbitrage (the mortgage-backed market is primarily U.S.-based and over-the-counter).

The **Credit Suisse Global Macro Hedge Fund Index** is a subset of the Credit Suisse Hedge Fund Index that measures the aggregate performance of global macro funds typically focus on identifying extreme price valuations and leverage is often applied on the anticipated price movements in equity, currency, interest rate and commodity markets. Managers typically employ a top-down global approach to concentrate on forecasting how political trends and global macroeconomic events affect the valuation of financial instruments. Profits can be made by correctly anticipating price movements in global markets and having the flexibility to use a broad investment mandate, with the ability to hold positions in practically any market with any instrument. These approaches may be systematic trend following models, or discretionary.

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The **Credit Suisse Hedge Fund Index** is an asset-weighted hedge fund index and includes only funds, as opposed to separate accounts. The index uses the Credit Suisse Hedge Fund Database (formerly known as the “Credit Suisse/Tremont Hedge Fund Database”), which tracks approximately 8,000 funds and consists only of funds with a minimum of US\$50 million under management, a 12-month track record, and audited financial statements. The index is calculated and rebalanced on a monthly basis, and reflects performance net of all hedge fund component performance fees and expenses.

The **Credit Suisse Long/Short Equity Hedge Fund Index** is a subset of the Credit Suisse Hedge Fund Index that measures the aggregate performance of long/short equity funds typically invest in both long and short sides of equity markets, generally focusing on diversifying or hedging across particular sectors, regions or market capitalizations. Managers typically have the flexibility to shift from value to growth; small to medium to large capitalization stocks; and net long to net short. Managers can also trade equity futures and options as well as equity related securities and debt or build portfolios that are more concentrated than traditional long-only equity funds.

The **Credit Suisse Managed Futures Hedge Fund Index** is a subset of the Credit Suisse Hedge Fund Index that measures the aggregate performance of managed futures funds (often referred to as CTAs or Commodity Trading Advisors) typically focus on investing in listed bond, equity, commodity futures and currency markets, globally. Managers tend to employ systematic trading programs that largely rely upon historical price data and market trends. A significant amount of leverage may be employed since the strategy involves the use of futures contracts. CTAs tend not to have a particular bias towards being net long or net short any particular market.

The **Credit Suisse Merger Arbitrage Hedge Fund Index** is a subset of the Credit Suisse Hedge Fund Index that measures the aggregate performance merger arbitrage event driven hedge funds typically attempt to capture the spreads in merger or acquisition transactions involving public companies after the terms of the transaction have been announced. The spread is the difference between the transaction bid and the trading price. Typically, the target stock trades at a discount to the bid in order to account for the risk of the transaction failing to close. In a cash deal, the manager will typically purchase the stock of the target and tender it for the offer price at closing. In a fixed exchange ratio stock merger, one would go long the target stock and short the acquirer’s stock according to the merger ratio, in order to isolate the spread and hedge out market risk. The principal risk is usually deal risk, should the deal fail to close.

The **Credit Suisse Multi-Strategy Hedge Fund Index** is a subset of the Credit Suisse Hedge Fund Index that measures the aggregate performance of multi-strategy funds typically are characterized by their ability to allocate capital based on perceived opportunities among several hedge fund strategies. Through the diversification of capital, managers seek to deliver consistently positive returns regardless of the directional movement in equity, interest rate or currency markets. The added diversification benefits may reduce the risk profile and help to smooth returns, reduce volatility and decrease asset-class and single-strategy risks. Strategies adopted in a multi-strategy fund may include, but are not limited to, convertible bond arbitrage, equity long/short, statistical arbitrage and merger arbitrage.

The **CRSP US Large Cap Growth Index** measures the performance of US securities which are assigned to the large cap index and classified as growth securities by using CRSP’s multifactor model. CRSP classifies growth securities using the following factors: future long-term growth in earnings per share (EPS), future short-term growth in EPS, 3-year historical growth in EPS, 3-year historical growth in sales per share, current investment-to-assets ratio, and return on assets. The index is market-cap weighted.

The **CRSP US Large Cap Index** includes U.S. companies that comprise the top 85% of investable market capitalization. It includes both Mid and Mega capitalization. The index was first available on the NASDAQ GIDS<sup>SM</sup> (Global Index Data Service<sup>SM</sup>) feed on August 15, 2011.

The **CRSP US Large Cap Value Index** measures the performance of US securities which are assigned to the large-cap index and classified as value securities by using CRSP’s multifactor model. CRSP classifies value securities using the following factors: book to price, forward earnings to price, historical earnings to price, dividend-to-price ratio and sales-to-price ratio. The index is market-cap weighted.

The **CRSP US Mid Cap Index** targets inclusion of the US companies that fall between the 70%-85% of investable market capitalization. The index includes securities traded on NYSE, NYSE Market, NASDAQ or ARCA.

The **CRSP US Small Cap Growth Index** measures the performance of US securities which are assigned to the small cap index and classified as growth securities by using CRSP’s multifactor model. CRSP classifies growth securities using the following factors: future long-term growth in earnings per share (EPS), future short-term growth in EPS, 3-year historical growth in EPS, 3-year historical growth in sales per share, current investment-to-assets ratio, and return on assets. The index is market-cap weighted.

The **CRSP US Small Cap Index** includes US companies that fall between the bottom 2%-15% of the investable market capitalization. There is no lower limit in market capitalization, other than what is specified by investability screens. The index includes securities traded on NYSE, NYSE Market, NASDAQ or ARCA.

The **CRSP US Small Cap Value Index** measures the performance of US securities which are assigned to the small cap index and classified as value securities by using CRSP’s multifactor model. CRSP classifies value securities using the following factors: book to price, forward earnings to price, historical earnings to price, dividend-to-price ratio and sales-to-price ratio. The index is market-cap weighted.



## Index Definitions

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The **CRSP U.S. Total Market Index** measures the performance of mega, large, small and micro capitalizations, representing nearly 100% of the U.S. investable equity market. It is market-capitalization weighted.

The **DAX® Index** tracks the price development of the 30 largest and most actively traded German equities. It comprises the 30 most actively traded stocks (blue chips), and represents approximately 75 per cent of the aggregate capital stock of listed German stock corporations. Moreover, DAX shares account for approximately 85 per cent of trading volume in German equities.

The **DBIQ Emerging Markets USD Liquid Balanced Index** tracks the performance of a selected basket of liquid emerging markets US dollar-denominated government bonds. For each of the qualified emerging market countries, one to three bonds are selected for the index at one time - the eligible bonds with the biggest Z spread from the country at rebalancing. The methodology evaluates countries regarding eligibility for inclusion in the DBIQ Emerging Markets USD Liquid Balanced Index annually based on a defined set of qualifying criteria established by DB. The DBIQ EM USD Liquid Balanced Index has a history starting from Feb 28, 1999.

The **DBIQ Optimum Yield Diversified Commodity Index Excess Return** is a rules-based index composed of futures contracts on 14 of the most heavily traded and important physical commodities in the world. The Index is rebalanced and reconstituted annually in November.

The **Deutsche Boerse AG German Stock Index (DAX)** is a total return index of 30 selected German blue chip stocks traded on the Frankfurt Stock Exchange. The equities use free float shares in the index calculation. The DAX has a base value of 1,000 as of December 31, 1987. As of June 18, 1999, only XETRA equity prices are used to calculate all DAX indices.

The objective of the **Dow Jones EPAC Select Dividend Index** is to represent the performance of high dividend paying companies in the EPAC (Europe, Pacific, Asia and Canada) region, which covers developed markets excluding the United States. One hundred stocks are selected to the index annually based on dividend yield, subject to eligibility screens for minimum dividend-per-share growth rate, maximum payout ratio and minimum dollar volume. Components are weighted based on a combination of indicated annual dividend (to determine component weights within each country) and dividend yield (to determine country weights within the index). The Index was first calculated on November 30, 2005.

The **Dow Jones Global Select Dividend Index** represents the stock performance of 100 leading dividend-paying companies worldwide. The Index is derived from the developed-market portion of the Dow Jones Global Index. Stocks are screened by dividend-per-share-growth rate, payout ratio and average daily trading volume, and are selected based on dividend yield.

The **Dow Jones Industrial Average (DJIA)** is likely the most widely known measure of American stock market indicators. The index is more than 100 years old, includes only 30 individual stocks and is comprised of the largest, most established firms across a broad range of industries. The DJIA is calculated based on share price – providing a greater weighting within the index to those companies with a higher share price. Due to the small number of issues contained in the index, it does not always provide the most accurate measure of aggregate stock market performance.

The **Dow Jones Transportation Average (TRAN)** is a S&P Dow Jones price-weighted Index of 20 domestic transportation stocks. The index is a widely used gauge of the American transportation sector. However, due to the small number of issues contained in the index, it may not provide the most accurate measure of the U.S. transportation sectors aggregate stock market performance. Conceived on October 26, 1896 as the Dow Jones Railroad Average it is the oldest U.S. stock index still in use, older than even its better-known descendent, the Dow Jones Industrial Average.

The **Dow Jones US Health Care Index** measures the performance of all US stocks in the Dow Jones US Index classified into the health care sector. The sector classifications are defined by the proprietary classification system which used by S&P Dow Jones. It is a free-float weighted index.

The **Dow Jones US Select Dividend Index** represents the leading US stocks by dividend yield. One hundred stocks are selected to the index by dividend yield, subject to screens for dividend-per-share growth rate, dividend payout ratio and average daily dollar trading volume. Components are weighted by indicated annual dividend.

The **Dow Jones US Select REIT Index** intends to measure the performance of publicly traded REITs and REIT-like securities. The index is a subset of the Dow Jones US Select Real Estate Securities Index (RESI), which represents equity real estate investment trusts (REITs) and real estate operating companies (REOCs) traded in the US. The Indexes are designed to serve as proxies for direct real estate investment, in part by excluding companies whose performance may be driven by factors other than the value of real estate.

The **Dow Jones US Thematic Market Neutral Momentum Index** intends to reflect the performance of a strategy whereby an investor would express a long position on high momentum companies and a short position on low momentum companies. It is calculated in USD.

The **Dow Jones Wilshire 5000 (Full Cap) Index Total Return** is an index of over 5,000 listed and unlisted stocks weighted by capitalization, including reinvested dividends, traded on the New York Stock Exchange, American Stock Exchange and Over the Counter. The stocks represented in this index may experience loss of invested principal and are subject to investment risk.

## Index Definitions

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The **EURO STOXX 50 Index**, Europe's leading Blue-chip index for the Eurozone, provides a Blue-chip representation of super-sector leaders in the Eurozone. The index covers 50 stocks from 11 Eurozone countries: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain.

The **FirstTrust Closed-end Fund Index** is a composite index of three sub-Indexes (municipal, taxable fixed income, and equity) intended to provide a capitalization weighted representation of the entire US closed-end fund market. The Index is calculated with reinvested gross dividends.

The **FTSE 100 Index** is an equity index of the 100 companies listed on the London Stock Exchange with the highest market capitalization.

The **FTSE All-World Middle East & Africa Index** is a free-float market capitalization weighted index. FTSE All-World Indices include constituents of the Large- and Mid-capitalization universe for Developed and Emerging Market (Advance Emerging and Secondary Emerging) segments. It was developed with a base value of 100 as of December 31, 1986.

The **FTSE Developed Europe All Cap Index** is designed to measure the broad performance of developed European equity markets. The index includes large-, mid-, and small-cap companies listed in Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom. It is market-capitalization weighted.

The **FTSE Emerging Markets All Cap China A Inclusion Index** represents large-, mid-, and small-cap stocks located in emerging markets around the world. It is market-capitalization weighted.

The **FTSE EPRA/NAREIT Developed Index** is designed to track the performance of listed real estate companies and REITS worldwide. The FTSE EPRA/NAREIT Developed Index is broken down into eight index families covering the world's largest investment markets in various currencies. For each of these, a Capital and Gross Total Return Index are calculated (plus Net TRI where applicable). The index is calculated in accordance with the Industry Classification Benchmark, the global standard for industry sector analysis. Stocks are free-float weighted to ensure that only the investable opportunity set is included within the Indexes.

The **FTSE Global All Cap Index** measures the market performance of large-, mid- and small-capitalization stocks of companies located around the world. It includes approximately 8,000 holdings in over 47 countries, including both developed and emerging markets, and covers more than 98% of the global investable market capitalization. It is market-capitalization weighted.

The **FTSE Global Small Cap ex US Index** measures the investment return of stocks of small-cap companies located in developed and emerging markets around the world, excluding the United States. It includes approximately 3,300 holdings in 47 countries. It is market-capitalization weighted.

The **FTSE High Dividend Yield Index** is designed to represent the performance of US companies after implementing a forecast dividend yield ranking process. The index comprises stocks that are characterized by higher than average dividend yield. The index is market-cap weighted.

The **FTSE MIB Index** is the primary benchmark index for the Italian equity market and represents the large cap component of the FTSE Italia All-Share Index. Capturing approximately 80% of the domestic market capitalization, the FTSE MIB Index measures the performance of the 40 most liquid and capitalized Italian shares and seeks to replicate the broad sector weights of the Italian stock market.

The **FTSE NAREIT All Equity REITs Index** is a free-float adjusted, market capitalization-weighted index of U.S. Equity REITs. Constituents of the Index include all tax-qualified REITs with more than 50 percent of total assets in qualifying real estate assets other than mortgages secured by real property.

The **FTSE Non-US Dollar World Government Bond Index** measures the performance of fixed-rate, local currency, investment-grade sovereign bonds of all WGBI countries except the United States and is stated in US dollar terms. It is a subset of FTSE World Government Bond Index (WGBI).

The **FTSE RAFI US 1000 Index** is a nonmarket cap weighted index that uses four fundamental factors rather than market capitalization. These factors include dividends, cash flow, sales, and book value.

The **FTSE US Broad Investment-Grade Bond (USBIG) Treasury/Agency Index** measures the performance of US Dollar-denominated bonds issued in the US investment-grade bond market. Introduced in 1985, the index covers US Treasury, government sponsored, collateralized, and corporate debt providing a reliable representation of the US investment-grade bond market. Sub-indexes are available in any combination of asset class, maturity, and rating.

The **FTSE World Government Bond Index** (FTSE WGBI) measures the performance of fixed-rate, local currency, investment-grade sovereign bonds. The FTSE WGBI is a widely used benchmark that currently comprises sovereign debt from over 20 countries, denominated in a variety of currencies, and has more than 25 years of history available. The FTSE WGBI is a broad benchmark providing exposure to the global sovereign fixed income market. The non-U.S. Dollar WGBI (FTSE Non-USD WGBI (International Bond)) includes all WGBI markets except the United States and is stated in USD terms.

## Index Definitions

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The **Hang Seng Index** is a capitalization-weighted index of a selection of companies from the Stock Exchange of Hong Kong.

The **Hang Seng China AH Premium Index** ("AH Premium Index"), a member of the Hang Seng China AH Index Series ("China AH Series") launched on 9 July 2007, measures the absolute price premium (or discount) of A shares over H shares for the largest and most liquid mainland China companies with both A-share and H-share listings ("AH Companies").

Due to the differences in the market characteristics of the Mainland and Hong Kong stock markets - such as different market environments, different groups of investors and the inconvertibility between A shares and H shares - the A-share and H-share prices of the same company generally diverge. The AH Premium Index is designed to provide the market with a simple and easy-to-follow barometer to measure such price differences. It aims to calculate the weighted average premium (or discount) of the A-share prices versus the H-share prices of the constituents, according to the free float-adjusted market capitalization of AH Companies.

The **Hang Seng China Enterprises Index** is a free-float capitalization-weighted index comprised of H-Shares listed on the Hong Kong Stock Exchange and included in the Hang Seng Mainland Composite Index. The base value of this index is 2000 as of Jan 3, 2000. This index replaced the old HSCE index on Oct. 3, 2001.

The **IBEX 35** (IBEX) is the official index of the Spanish Continuous Market. The index is comprised of the 35 most liquid stocks traded on the Continuous market. It is calculated, supervised and published by the Sociedad de Bolsas. The equities use free float shares in the index calculation. The index was created with a base level of 3000 as of December 29, 1989. For options please run IDA Index OMON.

The **ICE US Treasury Bond Index Series™** is market value weighted and is designed to measure the performance of US dollar-denominated, fixed rate securities with minimum term to maturity greater than one year and less than or equal to three years. The index has an inception date of December 31, 2015.

The **ICE US Treasury Bond Index Series™** is market value weighted and is designed to measure the performance of US dollar-denominated, fixed rate securities with minimum term to maturity greater than seven years and less than or equal to ten years. The index has an inception date of December 31, 2015.

The **ISE Revere Natural Gas Index** measures the performance of securities that derive a substantial portion of their revenues from the exploration and production of natural gas. The index consists of 28 different component stocks, most of which are focused in North America. It is equal-weighted.

The **iSTOXX® FactSet Automation & Robotics Index** is defined as all stocks from the STOXX Global Total Market index that derive more than 50% of their most recent total annual revenues from sectors linked to the Automation & Robotics business and which are classified as belonging to a defined set of developed and emerging countries. The companies in the index universe are screened for all of the following criteria: country classification (stocks classified as part of the eligible countries list); minimum liquidity (3-month average daily trading value greater than one million EUR); minimum size (free-float market capitalization greater than 200 million EUR); revenues (more than 50% of revenues generated within the sectors associated with the Automation & Robotics theme). The index aims to have a minimum number of 80 constituents at each annual review.

The **Jakarta Stock Price Index** is a modified capitalization-weighted index of all stocks listed on the regular board of the Indonesia Stock Exchange. The index was developed with a base index value of 100 as of August 10, 1982.

The **JPMorgan EMBI Global Diversified Index** tracks returns for actively traded external debt instruments in emerging market, and is also J.P. Morgan's most liquid U.S-dollar emerging markets debt benchmark. The index segments further the universe of emerging markets as defined by the broader EMBI Global and EMBI Global Diversified, by placing a strict liquidity requirement rule for inclusion. Included in the EMBI+ are US-dollar denominated Brady bonds, Eurobonds, and traded loans issued by sovereign entities. The EMBI+ is a market capitalization-weighted index and is rebalanced on the last business day of each month. Only issues with a current face amount outstanding of \$500 million or more and a remaining life of greater than 2 1/2 years are eligible for inclusion in the index. Index returns are available hedged or unhedged in a variety of currencies.

The **JPMorgan Emerging Market Bond Global Index** measures the performance of fixed-rate for external-currency denominated debt instruments including brady bonds, loans, and Eurobonds in emerging markets. Countries covered are Argentina, Brazil, Bulgaria, Mexico, Morocco, Nigeria, the Philippines, Poland, Russia, and South Africa. It covers more of the eligible instruments than the EMBI+ by relaxing somewhat the strict EMBI+ limits on secondary market trading liquidity.

The **JPMorgan Emerging Market Bond Index** is comprised of sovereign debt issued in U.S. dollars from more than 50 emerging market countries around the world.

The **JPMorgan Emerging Market Currency Index (EMCI)** is a tradable benchmark for emerging markets currencies from Brazil, Mexico, Chile, Offshore China, India, Singapore, Turkey, Russia, Hungary and South Africa, versus the U.S. Dollar.

## Index Definitions

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The **KBW Nasdaq Bank Index** is a modified market capitalization weighted index designed to track the performance of leading banks and thrifts that are publicly traded in the U.S. The Index includes banking stocks representing large U.S. national money centers, regional banks and thrift institutions. Index compilation, maintenance, and calculation are the responsibility of Nasdaq and Keefe, Bruyette & Woods, Inc.

The Korea **KOSPI Index** is a capitalization-weighted index of all common shares of the Korean Stock Exchanges. The Index was developed with a base value of 100 as of January 4, 1980.

The **Pakistan Stock Exchange (PSX)** (FKA Karachi Stock Exchange) KSE100 Index comprises the top company from each of the 34 sectors on the PSX, in terms of market capitalization. The rest of the companies are picked on market capitalization ranking, without any consideration for the sector to make a sample of 100 common stocks with a base value of 1,000. This is a total return index.

The **London Inter-bank Offered Rate (LIBOR)** is an interest-rate average calculated from estimates submitted by the leading banks in London. Each bank estimates what it would be charged were it to borrow from other banks.

The **Markit iBoxx USD Liquid Investment Grade Index** is designed to provide a balanced representation of the USD investment grade corporate market and to meet the investors demand for a USD denominated, highly liquid and representative investment grade corporate index.

The **Markit iTraxx Europe Index** is composed of the most liquid 125 CDS referencing European investment grade credits, subject to certain sector rules as determined by the IIC and also as determined by the SEC.

The **Mexican Stock Exchange Mexican Bolsa IPC Index**, or MEXBOL, is a capitalization weighted index of the leading stocks traded on the Mexican Stock Exchange. The index was developed with a base level of 0.78 as of October 30, 1978.

The **MICEX 10 Index** is a major indicator of average price change of 10 most liquid stocks of Russian Companies. The MICEX 10 Index was launched on December 30, 1997 with a base value of 100.

The **MICEX Index** is cap-weighted composite index calculated based on prices of the 50 most liquid Russian stocks of the largest and dynamically developing Russian issuers presented on the Moscow Exchange. MICEX Index was launched on September 22, 1997 at base value 100. The MICEX Index is calculated in real time and denominated by Moscow Exchange in Russian rubles.

**The MMA AAA-rated GO Index- See Municipal Market Advisors AAA-rated General Obligation Indices**

The **Moody's Investors Service, Inc.'s Corporate Bond Indices** (e.g., Corporate Average, Corporate AAA, Corporate AA, Corporate A, and Corporate Baa) include notes with a minimum maturity of 20 years, with an aggregate average maturity of 30 years. Bonds in this index are dropped from the list if their remaining life falls below 20 years and are susceptible to redemption, or if their ratings change. All yields are yield-to-maturity and are calculated on a semi-annual basis. Each observation is an unweighted average, with average corporate yields representing the unweighted average of the corresponding average industrial and average public utility observations. Yields are released by Moody's on a one-day lag basis and are available for the previous day at approximately 11 am NY time the following day. Moody's Long-Term Corporate Bond Yield Averages are derived from pricing data on a regularly replenished population of nearly 100 seasoned corporate bonds in the US market, each with in excess of \$100 million outstanding.

The **Morgan Stanley Technology Index** is an equal dollar-weighted index of 35 stocks from 9 technology subsectors: computer services, design software, server software, PC software and new media, networking and telecom equipment, server hardware, PC hardware and peripherals, specialized systems, and semiconductors.

The **Morningstar Conservative Target Risk Index** is part of the Morningstar Target Risk Index family, which is designed to meet the needs of investors who would like to maintain a target level of equity exposure through a portfolio diversified across equities, bonds, and inflation-hedged instruments. The Morningstar Conservative Target Risk Index seeks approximately 20% exposure to global equity markets.

The **Morningstar Global Allocation Index** measures the performance of a multi-asset class portfolio of global equities, global bonds and cash. This portfolio is held in a static allocation that is appropriate for investors who seek average exposure to global equity market risk and returns.

The **Morningstar Global Equity Infrastructure Index** is part of the Morningstar Global Equity Index family. The Infrastructure Index provides global, diversified exposure to equity issuers identified as infrastructure-related companies from the 18 industries that meet the Morningstar definition of the infrastructure asset class. These 18 industries fall into five segments of social or economic categories defined by Morningstar.

The **Morningstar Global Multi-Asset Infrastructure Index** is a broadly diversified multi-asset-class index that seeks to represent the combined performance of global equity and global fixed-income securities that meet Morningstar's infrastructure asset-class definition. To achieve this, Morningstar creates a composite portfolio that holds the Morningstar® Global Equity Infrastructure Index<sup>SM</sup> and the Morningstar® Global Bond Infrastructure Index<sup>SM</sup> in equal proportions at each rebalance.

## Index Definitions

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The **Morningstar Long-Only Commodity Index** measures the performance of future contracts on eligible long commodities. Eligibility is defined as a commodity that has future contracts traded on one of the US exchanges and rank in the top 95% by the 12-month average of total dollar value of open interest. The index is reconstituted annually, on the third Friday of December each year. It is a fully collateralized commodity futures index.

The **Morningstar Moderate Aggressive Target Risk Index** is part of the Morningstar Target Risk Index family, which is designed to meet the needs of investors who would like to maintain a target level of equity exposure through a portfolio diversified across equities, bonds, and inflation-hedged instruments. The Morningstar Moderate Aggressive Target Risk Index seeks approximately 80% exposure to global equity markets.

The **Morningstar Moderate Target Risk Index** is part of the Morningstar Target Risk Index family, which is designed to meet the needs of investors who would like to maintain a target level of equity exposure through a portfolio diversified across equities, bonds, and inflation-hedged instruments. The Morningstar Moderate Target Risk Index seeks approximately 60% exposure to global equity markets.

The **MSCI All Country (AC) Asia ex Japan Index** captures large and mid-cap representation across two developed market countries; Hong Kong and Singapore and eight Emerging Markets; China, India, Indonesia, Korea, Malaysia, the Philippines, Taiwan and Thailand. With 624 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country. The MSCI AC Asia ex Japan Index is a free-float weighted equity index developed with a base value of 100 as of December 31, 1987.

The **MSCI All Country World Index (ACWI)** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. The MSCI ACWI consists of 47 country indexes comprising 23 developed and 24 emerging market country indexes. The developed market country indexes included are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the United States. The emerging market country indexes included are: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Pakistan, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates, as of June 2017.

The **MSCI ACWI Ex USA Index** captures large and mid-cap representation across 22 of 23 Developed Markets (DM) countries (excluding the United States) and 24 Emerging Markets (EM) countries. The index targets coverage of approximately 85% of the global equity opportunity set outside the US. DM countries include: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland and the UK. EM countries include: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Russia, Qatar, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates.

The **MSCI ACWI Ex USA Index (net of taxes)** (MSCI ACWI ex U.S. – net) captures large and mid-cap representation across 22 of 23 Developed Markets (DM) countries (excluding the United States) and 24 Emerging Markets (EM) countries. The index targets coverage of approximately 85% of the global equity opportunity set outside the US. DM countries include: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland and the UK. EM countries include: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Russia, Qatar, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates.

The **MSCI ACWI ex USA Growth Index** captures large and mid-cap securities exhibiting overall growth style characteristics across 22 Developed Markets (DM) countries and 23 Emerging Markets (EM) countries. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend. With 1,055 constituents, the index targets 50% coverage of the free float-adjusted market capitalization of the MSCI ACWI ex USA Index.

The **MSCI ACWI Ex USA Health Care Index** includes large and mid-cap securities across 22 of 23 Developed Markets (DM) countries (excluding the US) and 24 Emerging Markets (EM) countries. All securities in the index are classified in the Health Care sector as per the Global Industry Classification Standard (GICS).

The **MSCI ACWI ex USA Small Cap Index** captures small cap representation across 22 of 23 Developed Markets (DM) countries (excluding the US) and 23 Emerging Markets (EM) countries. With 4,330 constituents, the index covers approximately 14% of the global equity opportunity set outside the US.

The **MSCI ACWI ex USA Small Cap Growth Index** captures small cap securities exhibiting overall growth style characteristics across 22 of 23 Developed Markets (DM) countries (excluding the US) and 23 Emerging Markets (EM) countries. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend.

The **MSCI ACWI ex USA Telecommunications Index** includes large and mid-cap securities across 22 of 23 Developed Markets (excluding the US) and 24 Emerging Markets countries. All securities in the index are classified in the Information Telecommunications sector as per the Global Industry Classification Standard.

## Index Definitions

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The **MSCI ACWI ex USA Value Index** captures large and mid-cap securities exhibiting overall value style characteristics across 22 Developed and 23 Emerging Markets countries. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield. With 1,036 constituents, the index targets 50% coverage of the free float-adjusted market capitalization of the MSCI ACWI ex USA Index.

The **MSCI ACWI ex US** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global developed and emerging markets excluding the United States.

The **MSCI ACWI Growth Index** captures large and mid-cap securities exhibiting overall growth style characteristics across 23 Developed Markets (DM) countries and 23 Emerging Markets (EM) countries. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend.

The **MSCI ACWI Value Index** captures large and mid-cap securities exhibiting overall value style characteristics across 23 Developed Markets countries and 23 Emerging Markets (EM) countries. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield. With 1,352 constituents, the index targets 50% coverage of the free float-adjusted market capitalization of the MSCI ACWI Index.

The **MSCI Brazil Index** is a free-float weighted equity index. It was developed with a base value of 100 as of December 31, 1987.

The **MSCI Canada Index** is a free-float weighted equity index. It was developed with a base value of 100 as of December 31, 1969.

The **MSCI China Index** captures large and mid-cap representation across China H shares, B shares, Red chips and P chips. With 140 constituents, the index covers about 85% of this China equity universe.

The **MSCI EAFE (Europe, Australasia, Far East) 100% Hedged Index** represents a close estimation of the performance that can be achieved by hedging the currency exposures of its parent index, the MSCI EAFE Index, to the US Dollar (USD). The index is 100% hedged to the USD by selling each foreign currency forward at the one-month forward weight. The parent index is composed of large- and mid-cap stocks across 21 developed market countries. It is free float-adjusted market-capitalization weighted.

The **MSCI EAFE (Europe, Australasia, Far East) Growth Index** captures large and mid-cap securities exhibiting overall growth style characteristics across Developed Markets countries around the world, excluding the US and Canada. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend. With 540 constituents, the index targets 50% coverage of the free float-adjusted market capitalization of the MSCI EAFE Index.

The **MSCI EAFE (Europe, Australasia, Far East) Index** is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the US & Canada. The MSCI EAFE Index consists of the following 21 developed market country indexes: 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, as of June 2017.

The **MSCI EAFE (Europe, Australasia, Far East) Investable Market Index (IMI)**, is an equity index which captures large, mid and small cap representation across Developed Markets countries\* around the world, excluding the US and Canada. With 3,152 constituents, the index is comprehensive, covering approximately 99% of the free float-adjusted market capitalization in each country.

The **MSCI EAFE (Europe, Australasia, Far East) Minimum Volatility Index** aims to reflect the performance characteristics of a minimum variance strategy applied to the large- and mid-cap equity universe across developed markets countries around the world, excluding the US and Canada. The index is calculated by optimizing the MSCI EAFE Index, its parent index, for the lowest absolute risk within a given set of constraints. Historically, the index has shown lower volatility characteristics relative to the MSCI EAFE Index.

The **MSCI EAFE (Europe, Australasia, Far East) Small Cap Index** is an equity index which captures small cap representation across Developed Markets countries around the world, excluding the US and Canada. With 2,221 constituents, the index covers approximately 14% of the free float-adjusted market capitalization in each country.

The **MSCI EAFE (Europe, Australasia, Far East) Small Cap Growth Index** captures small cap securities exhibiting overall growth style characteristics across Developed Markets countries around the world, excluding the US and Canada. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend.

The **MSCI EAFE (Europe, Australasia, Far East) Small Cap Value Index** captures small cap securities exhibiting overall value style characteristics across Developed Markets countries around the world, excluding the US and Canada. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield. With 1,358 constituents, the index targets 14% coverage of the free float-adjusted market capitalization of the MSCI EAFE Index.

## Index Definitions

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The **MSCI EAFE** (Europe, Australasia, Far East) **Value Index** captures large and mid-cap securities exhibiting overall value style characteristics across Developed Markets countries around the world, excluding the US and Canada. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield. With 482 constituents, the index targets 50% coverage of the free float-adjusted market capitalization of the MSCI EAFE Index.

The **MSCI Emerging Market Eastern Europe Index** captures large and mid-cap representation across four Emerging Market countries in Eastern Europe; Czech Republic, Hungary, Poland and Russia. With 49 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

The **MSCI Emerging Markets Latin America Index** captures large and mid-cap representation across five emerging markets countries in Latin America. With 137 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

The **MSCI Emerging Markets Growth Index** captures large and mid-cap securities exhibiting overall growth style characteristics across 23 Emerging Markets (EM) countries. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend. With 454 constituents, the index targets 50% coverage of the free float-adjusted market capitalization of the MSCI EM Index.

The **MSCI Emerging Markets Index** captures large- and mid-cap representation across 24 Emerging Markets (EM) countries. With 843 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country. The MSCI Emerging Markets Index consists of the following 24 EM country indexes: 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 United Arab Emirates, as of December 2017.

The **MSCI Emerging Markets Index (net of taxes)** (MSCI Emerging Markets – net) captures large- and mid-cap representation across 24 Emerging Markets (EM) countries. With 843 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country. The MSCI Emerging Markets Index consists of the following 24 EM country indexes: 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 United Arab Emirates, as of December 2017.

The **MSCI Emerging Markets Investable Market Index** captures large-, mid- and small-cap representation across 23 emerging markets countries. It is free float-adjusted market capitalization weighted.

The **MSCI Emerging Markets Minimum Volatility Index** aims to reflect the performance characteristics of a minimum variance strategy applied to large- and mid-cap equities across 23 emerging markets countries. It is free float-adjusted market capitalization weighted.

The **MSCI Emerging Markets Value Index** captures large and mid-cap securities exhibiting overall value style characteristics across 23 Emerging Markets (EM) countries. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield. With 487 constituents, the index targets 50% coverage of the free float-adjusted market capitalization of the MSCI EM Index.

The **MSCI EMU Index** measures the performance of the large- and mid-cap equity segments of countries within the EMU. The index covers approximately 85% of the market capitalization of the EMU. It is free float-adjusted market-capitalization weighted.

The **MSCI Europe 100% Hedged Index** represents a close estimation of the performance that can be achieved by hedging the currency exposures of its parent index, the MSCI Europe Index, to the US Dollar (USD). The index is 100% hedged to the USD by selling each foreign currency forward at the one-month forward weight. The parent index is composed of large- and mid-cap stocks across 15 developed markets countries. It is free float-adjusted market-capitalization weighted.

The **MSCI Europe Index** captures large- and mid-cap representation across 15 Developed Markets (DM) countries in Europe. With 446 constituents, the index covers approximately 85% of the free float-adjusted market capitalization across the European Developed Markets equity universe.

The **MSCI Europe ex UK Index** captures large and mid-cap representation across 14 developed market countries in Europe. With 331 constituents, the index covers approximately 85% of the free float adjusted market capitalization across European Developed Markets excluding the UK. The MSCI Europe ex UK Index is a free-float weighted equity index developed with a base value of 100 as of December 31, 1998.

The **MSCI Frontier Markets Index** captures large- and mid-cap representation across 30 Frontier Markets (FM) countries. The index includes 124 constituents, covering about 85% of the free float-adjusted market capitalization in each country. Frontier Markets countries include: Argentina, Bahrain, Bangladesh, Burkina Faso, Benin, Croatia, Estonia, Guinea-Bissau, Ivory Coast, Jordan, Kenya, Kuwait, Lebanon, Lithuania, Kazakhstan, Mauritius, Mali, Morocco, Niger, Nigeria, Oman, Pakistan, Romania, Serbia, Senegal, Slovenia, Sri Lanka, Togo, Tunisia and Vietnam. The MSCI Frontier Markets Index was launched on Dec 18, 2007.

## Index Definitions

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The **MSCI Global Small Cap Indexes** provide an exhaustive representation of the small cap size segment. The indexes target companies that are in the Investable Market Index (IMI) but that are not in the Standard Index in each market.

The **MSCI Global Value and Growth Indexes** cover the full range of MSCI Developed, Emerging and All Country Indexes across large, mid and small cap size segmentations. They also cover large and mid-cap size segments for the MSCI Frontier Markets Indexes. The indexes are constructed using an approach that provides a precise definition of style using eight historical and forward-looking fundamental data points for every security. Each security is placed into either the Value or Growth Indexes, or may be partially allocated to both (with no double counting). The objective of this index design is to divide constituents of an underlying MSCI Equity Index into respective value and growth indexes, each targeting 50% of the free float adjusted market capitalization of the underlying market index.

The **MSCI Japan 100% Hedged Index** represents a close estimation of the performance that can be achieved by hedging the currency exposures of its parent index, the MSCI Japan Index, to the US Dollar (USD). The index is 100% hedged to the USD by selling the Japanese Yen (JPY) forward at the one-month forward weight. The parent index is composed of large- and mid-cap stocks. It is free float-adjusted market-capitalization weighted.

The **MSCI Japan Index** is designed to measure the performance of the large- and mid-cap segments of the Japanese market. With 314 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Japan. The MSCI Japan Index is a free-float weighted equity JPY index developed with a base value of 100 as of December 31, 1969.

The **MSCI Mexico Index** is designed to measure the performance of the large and mid-cap segments of the Mexican market. With 30 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Mexico.

The **MSCI Pacific ex Japan Index** measures the performance of the large- and mid-cap segments of the developed Pacific region, excluding Japan equity securities. It is free float-adjusted market-capitalization weighted.

The **MSCI United Kingdom Index** is designed to measure the performance of the large and mid-cap segments of the UK market. With 112 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the UK.

The **MSCI United Kingdom REITs Index** is a free-float weighted equity index. This is a level 3 Global Industry Classification Standard (GICS) index.

The **MSCI US Investable Market Health Care 25/50 Index** measures the performance of the large-, mid- and small-cap health care sector of US equity securities. It is constructed using the Global Industry Classification Standards (GICS). The index is free float-adjusted market-capitalization weighted.

The **MSCI US Investable Market Information Technology 25/50 Index** measures the performance of the large-, mid- and small-cap information technology sector of US equity securities. It is constructed using the Global Industry Classification Standards (GICS). The index is free float-adjusted market-capitalization weighted.

The **MSCI US Investable Market Materials 25/50 Index** measures the performance of the large-, mid- and small-cap materials sector of US equity securities. It is constructed using the Global Industry Classification Standards (GICS). The index is free float-adjusted market-capitalization weighted.

The **MSCI US Investable Market Telecommunication Services 25/50 Index** measures the performance of the large-, mid- and small-cap telecommunication services sector of US equity securities. It is constructed using the Global Industry Classification Standards (GICS). The index is free float-adjusted market-capitalization weighted.

The **MSCI US REIT Index** measures the performance of the large-, mid- and small-cap segments of US equity REIT securities. The index represents most of the US REIT universe and securities classified in the REIT sector according to the Global Industry Classification Standard (GICS). It is a free float market capitalization weighted index.

The **MSCI USA High Dividend Yield Index** is based on the MSCI USA Index, its parent index, and includes large- and mid-cap stocks. The index is designed to reflect the performance of equities in the parent index (excluding REITs) with higher dividend income and quality characteristics than average dividend yields that are both sustainable and persistent. The index also applies quality screens and reviews 12-month past performance to omit stocks with potentially deteriorating fundamentals that could force them to cut or reduce dividends.

The **MSCI USA Index** is designed to measure the performance of the large- and mid-cap segments of the US market. With 616 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the US.

The **MSCI USA Quality Index** is based on the MSCI USA Index, its parent index, which includes large and mid-cap stocks in the US equity market. The index aims to capture the performance of quality growth stocks by identifying stocks with high quality scores based on three main fundamental variables: high return on equity (ROE), stable year-over-year earnings growth and low financial leverage. The MSCI Quality Indexes complement existing MSCI Factor Indexes and can provide an effective diversification role in a portfolio of factor strategies.



## Index Definitions

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The **MSCI USA Sector Neutral Quality Index** captures large and mid-cap representation across the US equity markets. The index aims to capture the performance of securities that exhibit stronger quality characteristics relative to their peers within the same GICS® sector by identifying stocks with high quality scores based on three main fundamental variables: high return-on-equity (ROE), low leverage and low earnings variability.

The **MSCI World Dividend Tilt Index** is based on the MSCI World Index, its parent index, and includes large and mid-cap securities across 23 Developed Markets (DM) countries. The MSCI World Dividend Tilt Index is designed to reflect the performance of equities in the parent index (excluding REITs) with high investment capacity. The index is created by including all the dividend-paying constituents in the MSCI World Index and tilting the market capitalization weights of these securities based on MSCI's calculation of a Dividend Yield Score.

The **MSCI World Equal Weighted Index** represents an alternative weighting scheme to MSCI's market cap-weighted parent index, the MSCI World Index. The index includes the same constituents as the MSCI World Index. However, at each quarterly rebalance date, all index constituents are weighted equally, effectively removing the influence of each constituent's current price.

The **MSCI World ex USA Index** captures large- and mid-cap representation across 22 of 23 Developed Markets (DM) countries—excluding the United States. With 1,024 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

The **MSCI World Growth Index** captures large and mid-cap securities exhibiting overall growth style characteristics across 23 Developed Markets countries. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend.

The **MSCI World Index** captures large- and mid-cap representation across 23 Developed Markets (DM) countries. With 1,652 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country. DM countries include: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the UK and the US. The MSCI World Index was launched on Mar 31, 1986.

The **MSCI World Metals and Mining Index** is composed of large and mid-cap stocks across 23 Developed Markets (DM) countries. All securities in the index are classified in the Metals & Mining industry (within the Materials sector) according to the Global Industry Classification Standard.

The **MSCI World Minimum Volatility (USD) Index** aims to reflect the performance characteristics of a minimum variance strategy applied to the MSCI large and mid-cap equity universe across 23 Developed Markets countries. The MSCI World Minimum Volatility Index is calculated by optimizing the MSCI World Index, its parent index, for the lowest absolute risk, based on an internally generated set of constraints. Historically, the index has shown lower beta and volatility characteristics relative to the MSCI World Index.

The **MSCI World Momentum Index** is based on MSCI World, its parent index, which includes large and mid-cap stocks across 23 Developed Markets (DM) countries. The MSCI World Momentum Index is designed to reflect the performance of an equity momentum strategy by emphasizing stocks with high price momentum, while maintaining reasonably high trading liquidity, investment capacity and moderate index turnover.

The **MSCI World Quality Index** is based on MSCI World Index, its parent index, which includes large and mid-cap stocks across 23 Developed Market (DM) countries. The MSCI World Quality Index aims to capture the performance of quality growth stocks by identifying stocks with high quality scores based on three main fundamental variables: high return on equity (ROE), stable year-over-year earnings growth and low financial leverage.

The **MSCI World REIT Index** is a free float-adjusted market capitalization index that captures large and mid-cap representation across 23 Developed Markets (DM) countries, which generate a majority of their revenue and income from real estate rental and leasing operations. With 67 constituents, it represents about 85% of the REIT universe in each country and all securities are classified in the REIT sector according to the Global Industry Classification Standard (GICS).

The **MSCI World Small Cap Index** represents small cap companies that are in MSCI's Investable Market Index but that are not included in MSCI's Standard Index in a particular developed market.

The **MSCI World Value Index** captures large and mid-cap securities exhibiting overall value style characteristics across 23 Developed Markets countries. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield. With 865 constituents, the index targets 50% coverage of the free float-adjusted market capitalization of the MSCI World Index.

The **Municipal Market Advisors AAA-Rated General Obligation Indices** (1-30 years) are calculated whereby Municipal Market Analytics polls a range of primary municipal underwriters each day to determine an evaluation level for AAA-rated general obligation debt maturing in each year from one through thirty.

## Index Definitions

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The **NASDAQ Composite Index** is a market-capitalization weighted index of all common stocks listed on National Association of Securities Dealers Automated Quotation system (NASDAQ). The NASDAQ Composite dates back to 1971, which is when the NASDAQ exchange was first formalized. Given that this is a market-capitalization weighted index and the fact that the largest market capitalization stocks trading on the exchange are technology related issues; the index is commonly referenced as a measure of technology stock performance, and thus may not be a good indicator of the market as a whole.

The **NASDAQ International Dividend Achievers Index** is comprised of non-US incorporated securities with at least five consecutive years of increasing annual regular dividend payments. The NASDAQ International Dividend Achievers Index is a dividend yield weighted index.

The **NASDAQ US Dividend Achievers Select Index** measures the performance of dividend paying companies that trade on the NYSE or NASDAQ. It covers companies that have increased annual regular dividend payments for the last ten or more consecutive years. The index is market-cap weighted.

The **Nikkei 225 Index**, more commonly called the Nikkei, is a stock market index for the Tokyo Stock Exchange and is calculated on a price-weighted index basis.

The **Nikkei Stock Average Volatility Index** indicates the expected degree of fluctuation of the Nikkei stock Average in the future. The greater the index values are, the larger fluctuation investors expect in the market. The Nikkei Stock Average Volatility Index signals the expected volatility of the Nikkei 225 in one-month period. The Index is calculated using prices of Nikkei 225 futures and Nikkei 225 options on the Osaka Exchange (OSE).

The **Oslo Stock Exchange OBX Index** is a capitalization-weighted index of the largest companies traded on the Oslo Stock Exchange. The equities use free-float shares in the index calculation. Effective April 21, 2006, the index became a total return index and had a price history split by a factor of 4.

The **OMX Helsinki 25 Index** is a modified-capitalization weighted index that consists of the 25 most traded series on Helsinki Stock Exchange's Main List. The index is used as a benchmark for the Finnish Market. The index calculation includes free float factors and each company in the index is limited to a weight of 10%.

The **Personal Consumption Expenditure Index** tracks the overall price changes for goods and services purchased by consumers.

The **PHLX (Philadelphia Stock Exchange) Semiconductor Sector Index (SOX)** is a modified capitalization-weighted index comprised of companies that are involved in the design, distribution, manufacturing, and sale of semiconductors. The index was developed with a base value of 100 as of December 1, 1993. The methodology changed from a price-weighted index as of 12/21/2009.

The **Russell 1000 Index** measures the performance of the large-cap segment of the US equity universe representing approximately 92% of the US market. The Russell 1000 is constructed to provide a comprehensive and unbiased barometer for the large-cap segment and is completely reconstituted annually to ensure new and growing equities are reflected. The Russell 1000 includes the largest 1000 securities in the Russell 3000.

The **Russell 1000 Growth Index** measures the performance of the large-cap growth segment of the US equity universe. The Russell 1000 Growth is constructed to provide a comprehensive and unbiased barometer of the large-cap growth market. Based on ongoing empirical research of investment manager behavior, the methodology used to determine growth probability approximates the aggregate large-cap growth manager's opportunity set.

The **Russell 1000 Low Volatility Focused Factor Total Return Index** seeks to capture low volatility exposure at lower relative valuations by focusing on stocks with lower price-to-book value multiples.

The **Russell 1000 Value Index** measures the performance of the large-cap value segment of the US equity universe. The Russell 1000 Value is constructed to provide a comprehensive and unbiased barometer of the large-cap value market. Based on ongoing empirical research of investment manager behavior, the methodology used to determine growth probability approximates the aggregate large-cap value manager's opportunity set.

The **Russell 2000 Growth Index** measures the performance of the small-cap growth segment of the US equity universe. The Russell 2000 Growth is constructed to provide a comprehensive and unbiased barometer of the small-cap growth market. Based on ongoing empirical research of investment manager behavior, the methodology used to determine growth probability approximates the aggregate small-cap growth manager's opportunity set.

The **Russell 2000 Index** measures the performance of the small-cap segment of the US equity universe. The Russell 2000 is constructed to provide a comprehensive and unbiased small-cap barometer and is completely reconstituted annually to ensure larger stocks do not distort the performance and characteristics of the true small-cap opportunity set. The Russell 2000 includes the smallest 2000 securities in the Russell 3000.

## Index Definitions

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The **Russell 2000 Value Index** measures the performance of the small-cap value segment of the US equity universe. The Russell 2000 Value is constructed to provide a comprehensive and unbiased barometer of the small-cap value market. Based on ongoing empirical research of investment manager behavior, the methodology used to determine value probability approximates the aggregate small-cap value manager's opportunity set.

The **Russell 2500 Growth Index** measures the performance of the small to mid-cap growth segment of the US equity universe. The Russell 2500 Growth is constructed to provide a comprehensive and unbiased barometer of the small to mid-cap growth market. Based on ongoing empirical research of investment manager behavior, the methodology used to determine growth probability approximates the aggregate small to mid-cap growth manager's opportunity set.

The **Russell 2500 Index** measures the performance of the small to mid-cap segment of the US equity universe, commonly referred to as "smid" cap. The Russell 2500 is constructed to provide a comprehensive and unbiased barometer for the small to mid-cap segment and is completely reconstituted annually to ensure larger stocks do not distort the performance and characteristics of the true small to mid-cap opportunity set. The Russell 2500 includes the smallest 2500 securities in the Russell 3000.

The **Russell 2500 Value Index** measures the performance of the small to mid-cap value segment of the US equity universe. The Russell 2500 Value is constructed to provide a comprehensive and unbiased barometer of the small to mid-cap value market. Based on ongoing empirical research of investment manager behavior, the methodology used to determine value probability approximates the aggregate small to mid-cap value manager's opportunity set.

The **Russell 3000 Growth Index** measures the performance of the broad growth segment of the US equity universe. The Russell 3000 Growth Index is constructed to provide a comprehensive and unbiased barometer of the broad growth market. Based on ongoing empirical research of investment manager behavior, the methodology used to determine growth probability approximates the aggregate broad market growth manager's opportunity set.

The **Russell 3000 Index** is composed of 3000 large US companies, as determined by market capitalization. This portfolio of securities represents approximately 98% of the investable US equity market. The Russell 3000 Index is comprised of stocks within the Russell 1000 and the Russell 2000 Indices. The index was developed with a base value of 140.00 as of 12/31/1986.

The **Russell 3000 Utilities Index** measures the performance of utilities companies in the Russell 3000.

The **Russell 3000 Value Index** measures the performance of the broad value segment of US equity value universe. The Russell 3000 Value Index is constructed to provide a comprehensive and unbiased barometer of the broad value market. Based on ongoing empirical research of investment manager behavior, the methodology used to determine value probability approximates the aggregate broad market value manager's opportunity set.

The **Russell Midcap Growth Index** measures the performance of the mid-cap growth segment of the US equity universe. The Russell Midcap Growth Index is constructed to provide a comprehensive and unbiased barometer of the mid-cap growth market. Based on ongoing empirical research of investment manager behavior, the methodology used to determine growth probability approximates the aggregate mid-cap growth manager's opportunity set.

The **Russell Midcap Index** measures the performance of the mid-cap segment of the US equity universe. The Russell Midcap Index is constructed to provide a comprehensive and unbiased barometer for the mid-cap segment and is completely reconstituted annually to ensure larger stocks do not distort the performance and characteristics of the true mid-cap opportunity set. The Russell Midcap Index is a subset of the Russell 1000 Index. It includes approximately 800 of the smallest securities based on a combination of their market and current index membership.

The **Russell Midcap Value Index** measures the performance of the mid-cap value segment of the US equity universe. The Russell Midcap Value Index is constructed to provide a comprehensive and unbiased barometer of the mid-cap value market. Based on ongoing empirical research of investment manager behavior, the methodology used to determine value probability approximates the aggregate mid-cap value manager's opportunity set.

The **S&P 500 Buyback Index** measures the performance of the top 100 stocks with the highest buyback ratio (cash paid for common shares buyback in the last four calendar quarters divided by the total market capitalization of common shares) in the S&P 500.

The **S&P 500 Consumer Discretionary Select Sector Index** measures the performance of consumer discretionary stocks, as classified by the Global Industry Classification Standard (GICS). Every Select Sector stock is also a constituent of the S&P 500 Index. It is float-adjusted market capitalization weighted.

The **S&P 500 Consumer Staples Select Sector Index** measures the performance of consumer staples stocks, as classified by the Global Industry Classification Standard (GICS). Every Select Sector stock is also a constituent of the S&P 500 Index. It is float-adjusted market capitalization weighted.

## Index Definitions

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The **S&P 500 Dividend Aristocrats Index** measures the performance of large cap, blue chip companies within the S&P 500 that have followed a policy of increasing dividends every year for at least 25 consecutive years.

The **S&P 500 E-mini Active Contract Index** is a stock market index futures contract traded on the Chicago Mercantile Exchange's Globex electronic trading platform. The futures contract is one fifth the size of standard S&P future. E-mini S&P 500 futures and options are based on the underlying Standard & Poor's 500 stock index.

The **S&P 500 Energy Select Sector Index** measures the performance of energy stocks, as classified by the Global Industry Classification Standard (GICS). Every Select Sector stock is also a constituent of the S&P 500 Index. It is float-adjusted market capitalization weighted.

The **S&P 500 Equal Weight Index** is the equal-weight version of the widely-used S&P 500. The index includes the same constituents as the capitalization weighted S&P 500, but each company in the S&P 500 EWI is allocated a fixed weight, or 0.2%, of the index total at each quarterly rebalance.

The **S&P 500 Financial Select Sector Index** measures the performance of financial stocks, as classified by the Global Industry Classification Standard (GICS). Every Select Sector stock is also a constituent of the S&P 500 Index. It is float-adjusted market capitalization weighted.

The **S&P 500 Global Industry Classification Standard (GICS) Level 1 Sector Indices** are capitalization-weighted & encompass industries intraday values calculated by Bloomberg and not supported by Standard & Poor's.

The **S&P 500 Growth Index** is a market capitalization weighted index. All the stocks in the underlying parent index are allocated into value or growth. Stocks that do not have pure value or pure growth characteristics have their market caps distributed between the value and growth indices. Prior to 12/19/2005 this index represented the S&P 500/Barra Growth Index.

The **S&P 500 Health Care Index** comprises those companies included in the S&P 500 that are classified as members of the Global Industry Classification Standard (GICS) health care sector.

The **S&P 500 High Beta Index** is designed to measure the performance of the constituents of the S&P 500 that are most sensitive to changes in market returns. The market is considered to be all the stocks included in the S&P 500 Index. Sensitivity is measured by the beta of the stock.

The **S&P 500 High Quality Rankings Index** is designed to provide exposure to constituents of the S&P 500 identified as high-quality stocks - stocks with Quality Rankings of A- and above. The Standard & Poor's Quality Rankings System attempts to measure the growth and stability of earnings and the dividends record within a single rank, and has been calculated on common stocks since 1956.

The **S&P 500 Index** is a basket of 500 stocks that are considered to be widely held. The S&P 500 index is weighted by market value (shares outstanding times share price), and its performance is thought to be representative of the stock market as a whole. The S&P 500 index was created in 1957 although it has been extrapolated backwards to several decades earlier for performance comparison purposes. This index provides a broad snapshot of the overall US equity market. Over 70% of all US equity value is tracked by the S&P 500. Inclusion in the index is determined by Standard & Poor's and is based upon their market size, liquidity, and sector.

The **S&P 500 Industrials Select Sector Index** measures the performance of industrial stocks, as classified by the Global Industry Classification Standard (GICS). Every Select Sector stock is also a constituent of the S&P 500 Index. It is float-adjusted market capitalization weighted.

The **S&P 500 Information Technology Index** comprises those companies included in the S&P 500 that are classified as members of the Global Industry Classification Standard (GICS) information technology sector.

The **S&P 500 Low Volatility High Dividend Index** is made up of 50 stocks from S&P 500 that offer high dividend yields. The index is designed to provide exposure to high yield stocks in the US while meeting stability and diversification requirements.

The **S&P 500 Low Volatility Index** is designed to measure the performance of the 100 least volatile stocks of the S&P 500 Index. Volatility is defined as the standard deviation (a measure of the dispersion of a set of data from its mean) of the security computed using the daily price returns over the trailing 252 trading days. It is volatility-weighted.

The **S&P 500 Materials Index** comprises those companies included in the S&P 500 that are classified as members of the Global Industry Classification Standard (GICS) materials sector.

The **S&P 500 Real Estate Index** comprises stocks included in the S&P 500 that are classified as members of the Global Industry Classification Standard (GICS)<sup>®</sup> real estate sector.

The **S&P 500 Telecommunication Services Index** comprises those companies included in the S&P 500 that are classified as members of the Global Industry Classification Standard (GICS) telecommunication services sector.

## Index Definitions

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The **S&P 500 Total Return Index**, calculated intraday by S&P based on the price changes and reinvested dividends of the S&P 500 Index with a starting date of 01/04/1988.

The **S&P 500 Utilities Select Sector Index** measures the performance of utility stocks, as classified by the Global Industry Classification Standard (GICS). Every Select Sector stock is also a constituent of the S&P 500 Index. It is float-adjusted market capitalization weighted.

The **S&P 500 Value Index** is a market-capitalization-weighted index developed by Standard and Poor's consisting of those stocks within the S&P 500 Index that exhibit strong value characteristics. The S&P 500 Citigroup Value Index uses a numerical ranking system based on four value factors (book value to price ratio, cash value to price ratio, sales to price ratio, and dividend yield) (5yr earnings per share growth rate, 5yr sales per share growth rate, and 5yr internal growth rate) and three growth factors to determine the constituents and their weightings.

The **S&P Asia 50 Index** measures the performance of 50 leading blue-chip companies that are drawn from four major Asian markets. It is market-capitalization weighted.

The **S&P BSE SENSEX** (S&P Bombay Stock Exchange Sensitive Index), also-called Bombay Sensex, is a free-float market-weighted stock market index of 30 well established companies listed on Bombay Stock Exchange. The 30 component companies are some of the largest and most actively traded stocks, are representative of various industrial sectors of the Indian economy.

The **S&P Composite 1500® Index** combines three leading indices, the S&P 500®, the S&P MidCap 400®, and the S&P SmallCap 600® to cover approximately 90% of the U.S. market capitalization. It is designed for investors seeking to replicate the performance of the U.S. equity market or benchmark against a representative universe of tradable stocks.

The **S&P Composite 1500® Utilities Index** comprises those companies included in the S&P Composite 1500 that are classified as members of the GICS® utilities sector.

The **S&P Europe 350 Index** measures the performance of 350 leading blue-chip companies drawn from 16 developed European markets. The index mirrors the sector and country weights of the broader universe of stocks from: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom, while including only the largest, most liquid stocks. It is float-adjusted market-capitalization weighted.

The **S&P Global Clean Energy Index** provides liquid and tradable exposure to 30 companies from around the world that are involved in clean energy related businesses. The index comprises a diversified mix of clean energy production and clean energy equipment & technology companies.

The **S&P Global Infrastructure Index** is designed to track 75 companies from around the world chosen to represent the listed infrastructure industry while maintaining liquidity and tradability. To create diversified exposure, the index includes three distinct infrastructure clusters: energy, transportation, and utilities.

The **S&P Global REIT Index** includes REITs from both developed and emerging markets.

The **S&P Goldman Sachs Commodity Index (GSCI) Gold Index**, a sub-index of the S&P GSCI, provides investors with a reliable and publicly available benchmark tracking the COMEX gold future. The index is designed to be tradable, readily accessible to market participants, and cost efficient to implement.

The **S&P Goldman Sachs Commodity Index** is a world-production weighted total return index, including reinvested dividends, measuring investor returns from a fully-collateralized commodity futures investment. Due to market fluctuation, the commodities represented by this index may experience loss of invested principal and are subject to investment risk.

S&P Select Industry Indices are designed to measure the performance of narrow GICS® sub-industries. The **S&P Insurance Select Industry Index** comprises stocks in the S&P Total Market Index that are classified in the GICS insurance brokers, life & health insurance, multi-line insurance, property and casualty insurance and reinsurance sub-industries.

The **S&P Latin America 40 Index** is an equity index drawn from five major Latin American markets: Brazil, Chile, Columbia, Mexico, and Perú. It is designed for investors seeking broad market exposure through an index that is efficient to replicate. The index constituents are leading, large, liquid, blue chip companies for the Latin American markets, capturing 70% of their total market capitalization.

The **S&P Midcap 400 Index** is a capitalization-weighted index which measures the performance of the mid-range sector of the US stock market. The index was developed with a base level of 100 as of December 31, 1990.

The **S&P MLP Index** is designed to measure leading partnerships that trade on major US exchanges. The index includes both master limited partnerships as well as publicly traded limited liability companies (LLCs), which have a similar legal structure to MLPs and share the same tax benefits. As the vast majority of traded partnerships have operations in the oil and gas industries, the S&P MLP Index focuses on companies in the GICS1 Energy Sector and the GICS Gas Utilities Industry.

## Index Definitions

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The **S&P Short Term National AMT-Free Municipal Bond Index** is a broad, comprehensive index designed to measure the performance of the investment-grade tax-exempt U.S. municipal bond market. Bonds that have an effective maturity of 1 month to 5 years are included. Bonds issued by U.S. territories, including Puerto Rico, are excluded from this index. The index is market value weighted.

Introduced in 1994, the **S&P SmallCap 600 Index** is designed to measure the performance of 600 small-size companies in the US, reflecting this market segment's distinctive risk and return characteristics. Measuring a segment of the market that is typically known for less trading liquidity and financial instability, the index was constructed to be an efficient benchmark composed companies that meet specific inclusion criteria to ensure that they are investable and financially viable.

The **S&P SmallCap 600 Growth Index** measures growth stocks using three factors: sales growth, the ratio of earnings change to price, and momentum. S&P Style Indices divide the complete market capitalization of each parent index into growth and value segments. Constituents are drawn from the S&P SmallCap 600®.

The **S&P SmallCap 600 Value Index** measures value stocks using three factors: the ratios of book value, earnings, and sales to price. S&P Style Indices divide the complete market capitalization of each parent index into growth and value indices. Constituents are drawn from the S&P SmallCap 600®.

The S&P Select Industry Indices are designed to measure the performance of narrow Global Industry Classification Standard (GICS) sub-industries. The **S&P Transportation Select Industry Index** comprises stocks in the S&P Total Market Index that are classified in the GICS transportation sub-industry.

The **S&P US REIT Index** measures the securitized US Real Estate Investment Trust (REIT) market. REITs act as operating companies that purchase, manage, invest in, maintain, and market real estate. The S&P US REIT covers approximately 89% of the US REIT market capitalization, and maintains a constituency that reflects the market's overall composition.

The **S&P/ASX 200 Index** is a market-capitalization weighted and float-adjusted stock market index of Australian stocks listed on the Australian Securities Exchange.

The **S&P/LSTA US Leveraged Loan 100 Index** is designed to reflect the performance of the largest facilities in the leveraged loan market. It mirrors the market-weighted performance of the largest institutional leveraged loans based upon market weightings, spreads, and interest payments. The index consists of 100 loan facilities drawn from a larger benchmark, the S&P/LSTA (Loan Syndications and Trading Association) Leveraged Loan Index (LLI).

The **Secured Overnight Financing Rate (SOFR)** measures the cost of borrowing cash overnight in a transaction secured or collateralized by U.S. Treasuries. SOFR includes all Broad General Collateral Rate trades as well as bilateral Treasury repurchase agreement (repo) transactions cleared by delivery-versus-payment (DVP) with the Fixed Income Clearing Corporation (FICC). Prior to computation, transactions regarded as "specials" are removed. SOFR is the volume-weighted median data spanning tri-party repo transactions reported by the Bank of New York Mellon, GCF repo transaction data, and DVP transactions obtained from DTCC. The rate is published on the website of the Federal Reserve Bank of New York (New York Fed) reflecting the median from the previous day.

The **Shanghai Composite Index** is a stock market index of all stocks (A shares and B shares) that are traded at the Shanghai Stock Exchange.

The **Shenzhen Composite Index** is a market-capitalization-weighted index that tracks the performance of all the A-share and B-share lists on the Shenzhen Stock Exchange.

The **Singapore Straits Times Index (STI)** is the most globally-recognized benchmark index and market barometer for Singapore. With a history dating back to 1966, it tracks the performance of the top 30 largest and most liquid companies listed on the Singapore Exchange.

The **STOXX Europe 600 Index** is derived from the STOXX Europe Total Market Index (TMI) and is a subset of the STOXX Global 1800 Index. With a fixed number of 600 components, the STOXX Europe 600 Index represents large, mid and small capitalization companies across 18 countries of the European region.

The **SummerHaven Dynamic Commodity Index** measures the performance of a fully collateralized portfolio of 14 commodity futures, selected each month from a universe of 27 eligible commodities based on observable price signals, subject to a diversification requirement across major commodity sectors. It is equal-weighted.

The **Tokyo Stock Exchange Price Index (TOPIX)** is a capitalization-weighted index of all companies listed on the First Section of the Tokyo Stock Exchange.

The **Tunis Stock Exchange (TSE) TUNINDEX** is a capitalization weighted index containing equities from the TSE. This index is open to listed companies admitted in the capital market with minimum period of quotation of one month. The index was launched on December 31, 1997 with an initial base level of 1,000. As of January 2, 2009, the index has become a free float weighted index.

## Index Definitions

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The **US Corporate AAA/10-Yr Spread** is calculated by taking the Moody's Bond Indices Corporate AAA yield minus the US Generic Government 10 Year Yield, expressed in basis points, and calculated once daily at 5pm EST.

The **US Dollar Index (USD)** indicates the general international value of the USD. The USDX does this by averaging the exchange rates between the USD and major world currencies. This is computed by using rates supplied by approximately 500 banks.

The **US Trade Weighted Broad Dollar Index** reflects a weighted average of the foreign exchange value of the US dollar against the currencies of a broad group of major US trading partners distributed by the Federal Reserve. The index was developed with a base value of 100 as of March 1973.

The volatility index **VDAX®**, that indicates the fluctuations in DAX® expected in the derivatives market for the following 45 days. VDAX® was introduced on December 5, 1994. Since July 14, 1997, Deutsche Börse AG has calculated VDAX every minute using the Black-Scholes formula. The index is based on DAX option prices, and thus on the implicit volatility of DAX, i.e. how significant the market expects future price fluctuations to be.

The volatility index **VDAX-NEW®**, which was developed by Deutsche Börse and Goldman Sachs, tracks the degree of fluctuation expected by the derivatives market – i.e. the implied volatility – for the DAX index. The index expresses in percentage terms what degree of volatility is to be expected for the following 30 days. The calculation of this index is based on DAX option contracts, which are quoted both “at the money” and “out of the money”. Thus, VDAX-NEW has a broader volatility surface than VDAX®, which only takes into account options that are “at the money”. VDAX-NEW will supersede VDAX in the medium-term.

The **Wilshire 5000 Total Market Index<sup>SM</sup>** is widely accepted as the definitive benchmark for the U.S. equity market, and measures performance of all U.S. equity securities with readily available price data. Named for the nearly 5,000 stocks it contained at launch, it then grew to a high count of 7,562 on July 31, 1998. Since then, the count fell steadily to 3,776 as of December 31, 2013, where it has then bounced back to 3,818 as of September 30, 2014. The last time the Wilshire 5000 actually contained 5,000 or more companies was December 29, 2005.

The **Wilshire Liquid Alternative Index<sup>SM</sup>** measures the collective performance of the five Wilshire Liquid Alternative strategies that make up the Wilshire Liquid Alternative Universe. The Wilshire Liquid Alternative Index (WLIQA) is designed to provide a broad measure of the liquid alternative market by combining the performance of the Wilshire Liquid Alternative Equity Hedge Index<sup>SM</sup> (WLIQAEH), Wilshire Liquid Alternative Global Macro Index<sup>SM</sup> (WLIQAGM), Wilshire Liquid Alternative Relative Value Index<sup>SM</sup> (WLIQARV), Wilshire Liquid Alternative Multi-Strategy Index<sup>SM</sup> (WLIQAMS), and Wilshire Liquid Alternative Event Driven Index<sup>SM</sup> (WLIQAED).

The **WisdomTree Emerging Markets High Dividend Index** measures the performance of the highest dividend yielding stocks selected from the WisdomTree Emerging Markets Dividend Index. At the index measurement date, companies within the WisdomTree Emerging Markets Dividend Index are ranked by dividend yield. Securities ranking in the highest 30% by dividend yield are selected for inclusion. Companies are weighted in the index based on annual cash dividends paid.

The **WisdomTree Europe Hedged Equity Total Return Index** is designed to provide exposure to European equities while at the same time neutralizing exposure to fluctuations between the Euro and the US Dollar. It is free float-adjusted market-capitalization weighted.

The **WisdomTree Global Dividend Index** consists of companies included in WisdomTree's three primary dividend indexes: in the United States, the WisdomTree Dividend Index, in the developed world, the WisdomTree International Equity Index, and in the emerging markets the WisdomTree Emerging Markets Dividend Index. Companies are weighted in the Index based on annual cash dividends paid. The Index was established with a base value of 300 on June 30, 2008 and is calculated in US dollars and is updated to reflect market prices and exchange rates. Closing or last-sale prices are used when non-U.S. markets are closed.

The **WisdomTree Global High Dividend Index** measures the performance of high dividend-yielding companies selected from the WisdomTree Global Dividend Index, which measures the performance of dividend-paying companies in the US, developed and emerging markets. Companies are weighted in the index based on annual cash dividends paid. Regional weights are set according to the respective float-adjusted market capitalization weights of the universe of dividend and non-dividend payers of the regional allocations to the US, developed and emerging markets.

The **WisdomTree MidCap Dividend Index** is a fundamentally weighted index that measures the performance of the mid-capitalization segment of the US dividend-paying market. The Index is comprised of the companies that compose the top 75% of the market capitalization of the WisdomTree Dividend Index after the 300 largest companies have been removed. The index is dividend weighted annually to reflect the proportionate share of the aggregate cash dividends each component company is projected to pay in the coming year, based on the most recently declared dividend per share. This index was established with a base value of 200 on May 31, 2006.

The **World Government Bond Index (WGBI)** measures the performance of fixed-rate, local currency, investment-grade sovereign bonds. The WGBI is a widely used benchmark that currently comprises sovereign debt from over 20 countries, denominated in a variety of currencies, and has more than 25 years of history available. The WGBI is a broad benchmark providing exposure to the global sovereign fixed income market. The **non-US Dollar WGBI** includes all WGBI markets except the United States and is stated in USD terms.

## Index Definitions

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The **WTI Active Futures Contract** is a NYMEX Division light, sweet crude oil futures contract. It is one of the world's most liquid forums for crude oil trading, as well as one of the world's largest-volume futures contract trading on a physical commodity. The contract trades in units of 1,000 barrels, and the delivery point is Cushing, Oklahoma, which is also accessible to the international spot markets via pipelines. The contract provides for delivery of several grades of domestic and internationally traded foreign crudes, and serves the diverse needs of the physical market.