

## Index, Indicator and Survey Definitions

**3-Month LIBOR Overnight Index Swap (OIS):** An Overnight Index Swap (OIS) is a fixed/float interest rate swap where the floating leg is computed using a published overnight index rate.

**5-Year/5-Year Forward Inflation Expectation Rate:** This is a market-based rate that measures expectations for what the five-year inflation rate will be five years hence.

**90-Day Treasury Bill Index:** Short-term obligations issued by the United States government.

**AAll Investor Sentiment Survey:** This survey measures the percentage of individual investors who are bullish, bearish and neutral on the stock market for the next six months. Individuals are polled from the ranks of AAll membership on a weekly basis.

**ADP National Employment Report:** This is a monthly snapshot of US nonfarm private sector employment based on actual transactional payroll data.

**Alerian MLP Index:** A composite of the 50 most prominent energy Master Limited Partnerships that provides investors with an unbiased, comprehensive benchmark for this emerging asset class. The index, which is calculated using a float-adjusted, capitalization-weighted methodology, is disseminated real-time on a price-return basis and on a total-return basis.

**Alerian MLP Infrastructure Index:** This capped, float-adjusted, capitalization-weighted index is a composite of energy infrastructure Master Limited Partnerships (MLPs). The constituents earn the majority of their cash flow from midstream activities involving energy commodities.

**AlphaShares Chinese Volatility Index:** This index measures the implied volatility of options on the FTSE Xinhua China 25 and Hang Seng (HSI) indices. It serves as a measure of the market's expectations of near-term volatility conveyed by the options of these two benchmark indexes.

**ATA Truck Tonnage Index:** This is a measure of the total amount of tonnage hired for transport from American freight trucking services. It is often used as a barometer of commerce and trade in general across the US, as the higher the number the more people and companies are using truck and freight services to ship goods across the country.

**Atlanta Fed Wage Growth Tracker:** This is a measure of the wage growth of individuals, constructed using micro data from the Current Population Survey (CPS), and it is the median percent change in the hourly wage of individuals observed 12 months apart.

**Baker Hughes Rig Count:** This is a weekly count of operating drilling rigs in the US and Canada and is an important barometer for the drilling industry and its survivors.

**Baltic Dry Index (BDI):** This shipping and trade index, created by the London-based Baltic Exchange, measures changes in the cost to transport raw materials such as metals, grains and fossil fuels by sea.

**Barclay CTA Index:** Industry benchmark of representative performance of commodity trading advisors. There are currently 551 programs included in the calculation of the Barclay CTA Index for the year 2014, which is unweighted and rebalanced at the beginning of each year.

**BarclayHedge BTOP50 Index:** This index seeks to replicate the composition of the managed futures industry with regard to trading style and overall market exposure. The largest investable trading advisor programs, as measured by assets under management, are selected for inclusion in the index.

**BBA 3-month USD LIBOR Index:** A benchmark rate that some of the world's leading banks charge each other for short-term loans.

**Beige Book:** A commonly used name for the Fed report called the Summary of Commentary on Current Economic Conditions by Federal Reserve District. It is published just before the FOMC meeting on interest rates and is used to inform the members on changes in the economy since the last meeting.

**BIST 30 Index:** A capitalization-weighted index composed of National Market companies except investment trusts and will also be used for trading in the Derivatives Market. The index was developed with a base value of 976 as of December 27, 1996.

**Bloomberg Asia ex-Japan Financial Conditions Index:** This index tracks the overall level of financial stress in Asia (excluding Japan) money, bond, and equity markets to help assess the availability and cost of credit.

**Bloomberg Barclays 5-10 Year US Treasury Index:** This is a measure of the performance of US Treasury securities with maturities between five and 10 years.

**Bloomberg Barclays Corporate Index:** This index is the corporate component of the Bloomberg Barclays Global Aggregate Bond Index.

**Bloomberg Barclays Emerging Markets Corporate USD Index:** Tracks total returns for external-currency-denominated debt instruments of the emerging markets.

**Bloomberg Barclays Emerging Markets High Yield Index:** This index includes US-dollar-denominated debt of sovereign, quasi-sovereign and corporate issuers in emerging market countries.

**Bloomberg Barclays Euro Government Index:** The Euro Government Index includes public obligations issued in Euro that have remaining maturities of one year or more.

**Bloomberg Barclays Global Aggregate 1-3 Year Index:** This index provides a measure of the global investment-grade, fixed-rate debt markets including instruments with a remaining maturity of 1-3 years.

**Bloomberg Barclays Global Aggregate Bond Index:** This index provides a broad-based measure of the global investment-grade, fixed-rate debt markets.

**Bloomberg Barclays Global Aggregate Credit-Corporate Index:** Represents primarily investment-grade corporate/credit bonds within the Bloomberg Barclays Global Aggregate Bond Index.

**Bloomberg Barclays Global Aggregate ex US (hedged) Index:** This index provides a broad-based measure of the global investment grade fixed-rate debt markets, excluding the United States. Currency exposure is hedged to the US dollar.

## Index, Indicator and Survey Definitions (cont'd)

**Bloomberg Barclays Global Aggregate Government Index:** Represents primarily government bonds within the Bloomberg Barclays Global Aggregate Index.

**Bloomberg Barclays Global Convertibles Index:** This index tracks the total return of convertible bonds worldwide.

**Bloomberg Barclays Global Majors Index Ex US:** This is an index that tracks government bonds issued by Australia, Belgium, Canada, Denmark, France, Germany, Italy, Japan, Netherlands, Spain, Sweden, the UK and the US.

**Bloomberg Barclays Global Treasury Index:** Tracks fixed-rate local currency sovereign debt of investment-grade countries.

**Bloomberg Barclays Global High Yield (hedged) Index:** This index provides a broad-based measure of the global high yield fixed income markets. Currency exposure is hedged to the US dollar.

**Bloomberg Barclays Global Majors ex US Index:** This is an index tracking government bonds issued by Australia, Belgium, Canada, Denmark, France, Germany, Italy, Japan, Netherlands, Spain, Sweden, the UK and the US.

**Bloomberg Barclays Government-Related Index:** Tracks the government-related securities within the Bloomberg Barclays Global Aggregate Bond Index.

**Bloomberg Barclays High Yield Loans Index:** This index measures the performance of high yield, or leveraged loans.

**Bloomberg Barclays Intermediate Term Treasury Index:** This index includes US Treasury securities that have a remaining maturity of greater than or equal to one year and less than 10 years and have \$250 million or more of outstanding face value.

**Bloomberg Barclays Japan Government Index:** This index includes public obligations of the Japanese government that have remaining maturities of one year or more.

**Bloomberg Barclays Long Term Treasury Index:** This index includes US Treasury securities that have a remaining maturity of 10 years or more and have \$250 million or more of outstanding face value.

**Bloomberg Barclays Municipal Index:** The US Municipal Index covers the US dollar denominated long term tax exempt bond market. The index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds, and prerefunded bonds.

**Bloomberg Barclays U.K. Government Index:** The UK Government Index includes UK government bonds (Gilt) that have remaining maturities of one year or more.

**Bloomberg Barclays Universal Government Inflation-Linked Bond (unhedged) Index:** This index combines the Barclays Capital World, Euro and Emerging Market government indices to measure the performance of the major developed and emerging government inflation-linked bond markets.

**Bloomberg Barclays US Aggregate Government Treasury Index:** This index includes treasuries and agencies that represent the government portion of the index.

**Bloomberg Barclays US Aggregate Index:** The US Aggregate Index covers the dollar-denominated investment-grade fixed-rate taxable bond market, including Treasuries, government-related and corporate securities, MBS pass-through securities, asset-backed securities, and commercial mortgage-based securities. These major sectors are subdivided into more specific sub-indices that are calculated and published on an ongoing basis. Total return comprises price appreciation/depreciation and income as a percentage of the original investment. This index is rebalanced monthly by market capitalization.

**Bloomberg Barclays US Aggregate 1-3 Year Index:** This index is a broad-based benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market including instruments with a remaining maturity of 1-3 years. 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).

**Bloomberg Barclays US Aggregate 10+ Index:** This index is a broad-based benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market including instruments with a remaining maturity of greater than 10 years. 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).

**Bloomberg Barclays US Aggregate Intermediate Index:** This index is a broad-based benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market including instruments with a remaining maturity of no greater than 10 years. 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).

**Bloomberg Barclays US Corporate High Yield Bond Index:** This index is composed of fixed-rate, publicly issued, non-investment grade debt.

**Bloomberg Barclays US Government Index:** This index tracks the government-related securities within the Bloomberg Barclays US Aggregate Bond Index.

**Bloomberg Barclays US Government/Credit 1-3Y Index:** This index measures the performance of U.S. dollar-denominated U.S. Treasury bonds, government related bonds, and investment grade U.S. corporate bonds that have a remaining maturity of greater than or equal to one year and less than three years.

**Bloomberg Barclays US Government/Credit Index:** This index measures the performance of US dollar-denominated US Treasury bonds, government related bonds, and investment grade US corporate bonds.

## Index, Indicator and Survey Definitions (cont'd)

**Bloomberg Barclays US Government/Credit Intermediate Index:** This index measures the performance of US dollar-denominated US Treasury bonds, government related bonds, and investment grade US corporate bonds that have a remaining maturity of greater than or less than 10 years.

**Bloomberg Barclays US Government/Credit Float Adjusted 1-5Y Index:** This index measures the performance of US dollar-denominated US Treasury bonds, government related bonds, and investment grade US corporate bonds that have a remaining maturity of greater than or equal to one year and less than five years. The index weights its constituent securities based on the value of the constituent securities that are available for public trading, rather than the value of all constituent securities.

**Bloomberg Barclays US Government Intermediate Index:** This index tracks the government-related securities within the Bloomberg Barclays US Aggregate Bond Index including instruments with a remaining maturity of no greater than 10 years.

**Bloomberg Barclays US Intermediate Credit Bond Index:** The index measures the performance of investment grade corporate debt and agency bonds that are dollar denominated and have a remaining maturity of greater than one year and less than 10 years.

**Bloomberg Barclays US Government Long Index:** This index tracks the government-related securities within the Bloomberg Barclays US Aggregate Bond Index including instruments with a remaining maturity of greater than 10 years.

**Bloomberg Barclays US Investment Grade Corporate Index:** Represents primarily investment-grade corporate bonds within the Bloomberg Barclays Capital US Investment Grade Index.

**Bloomberg Barclays US Mortgage Backed Securities (MBS) Index:** Measures the performance of investment grade fixed-rate mortgage-backed pass-through securities of GNMA, FNMA and FHLMC.

**Bloomberg Barclays US Securitized Index:** This index is a composite of asset-backed securities, collateralized mortgage-backed securities (ERISA-eligible) and fixed rate mortgage-backed securities.

**Bloomberg Barclays US Treasury TIPS Index:** This is an unmanaged index that consists of inflation-protected securities issued by the US Treasury.

**Bloomberg Barclays World Government Inflation-Linked Bond Index:** The index measures the performance of the major government inflation-linked bond markets.

**Bloomberg Barclays Securitized Index:** A composite of asset-backed securities, collateralized mortgage-backed securities and fixed rate mortgage-backed securities.

**Bloomberg Barclays US Long Government/Credit Index:** Composed of all bonds that are of investment grade with at least ten years until maturity.

**Bloomberg Barclays US Aggregate Securitized MBS Index:** Covers the mortgage-backed pass-through securities of Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC). The MBS Index is formed by grouping the universe of over 600,000 individual fixed rate MBS pools into approximately 3,500 generic aggregates.

**Bloomberg Barclays US CMBS 2.0 Index:** is a standalone benchmark that measures the market of conduit and fusion CMBS deals issued since January 1, 2010, with a minimum deal size of \$250 million.

**Bloomberg Barclays US Municipal 8-12 Year Index:** This index measures the performance of U.S. Municipal securities that have a remaining maturity of at least 8 years and less than 12 years.

**Bloomberg Barclays US Municipal 12-17 Year Index:** This index measures the performance of U.S. Municipal securities that have a remaining maturity of at least 12 years and less than 17 years.

**Bloomberg Barclays US Treasury 10-20 Year Index:** This index measures the performance of U.S. Treasury securities that have a remaining maturity of at least 10 years and less than 20 years.

**Bloomberg Commodity Index:** Made up of 22 exchange-traded futures on physical commodities. The index currently represents 20 commodities, which are weighted to account for economic significance and market liquidity.

**Bloomberg Commodity Total Return Index:** Made up of 22 exchange-traded futures on physical commodities. The index currently represents total return of 20 commodities, which are weighted to account for economic significance and market liquidity.

**Bloomberg Consumer Comfort Index:** This index is based on responses to a weekly, random-sample national telephone survey asking Americans to rate the economy, the buying climate and their personal finances as excellent, good, not so good, or poor.

**Bloomberg Economic Surprise Index:** This index measures whether incoming economic data beat or miss expectations of surveyed economists.

**Bloomberg Financial Conditions Index:** This index is an important gauge of the overall financial and credit markets conditions in the United States.

**Bloomberg Ex Precious Metals Index:** This index is composed of futures contracts on physical commodities. It excludes the commodities included in the precious metals sector. It reflects the return on fully collateralized futures positions.

**Bloomberg Gold Index:** A commodity group subindex of the Bloomberg Commodity Index composed of futures contracts on Gold.

**Bloomberg Grains Index:** A commodity group subindex of the Dow Jones/UBS Commodity Index. This index is composed of futures contracts on corn, soybeans and wheat.

**Bloomberg Industrial Metals Index:** Composed of futures contracts on aluminum, copper, nickel and zinc.

**Bloomberg NA REITs Index:** This index is a capitalization-weighted index of real estate investment trusts having a market capitalization of \$15 million or greater.

## Index, Indicator and Survey Definitions (cont'd)

**Bloomberg Precious Metals Index:** A commodity group subindex of the Dow Jones/UBS Commodity Index. This index is composed of futures contracts on gold and silver. It reflects the return on fully collateralized futures positions.

**Bloomberg Silver Index:** A commodity group subindex of the Bloomberg Commodity Index composed of futures contracts on Silver.

**Bloomberg Smart Money Flow Index (SMFI):** Tracks the Dow Jones Industrial Average minus the first 30 minutes of trading each day.

**Bloomberg US Consumer Comfort Index:** A weekly, random-sample survey tracking Americans' views on the condition of the U.S. economy, their personal finances and the buying climate.

**Bloomberg US Dollar Index:** This is a trade-weighted index of 10 major currencies against the US dollar.

**Bloomberg World Exchange Market Capitalization:** The world exchange market capitalization is calculated from the shares of all actively traded, primary corporate securities outstanding on each individual country's exchanges. It does not include ADRs or ETFs as they do not directly represent companies.

**Bloomberg World Leisure Time Index:** This is a capitalization-weighted index of the leading leisure time stocks in the world.

**BNP Love-Panic Index:** This index is a contrarian indicator that tracks data such as fund flows, short-interest ratios and trading volume.

**Business Roundtable CEO Economic Outlook Index** This index is a composite of CEO plans for capital spending and hiring and projections for sales over the next six months.

**CAC 40 Index:** This index represents a capitalization-weighted measure of the 40 most significant values among the 100 highest market caps traded on Euronext Paris.

**Cambridge Associates U.S. Private Equity Index:** This index is based on data compiled from a substantial number of U.S. private equity funds (buyout, growth equity, private equity energy and mezzanine funds), including fully liquidated partnerships. Historic quarterly returns are updated in each year-end report to adjust for changes in the index sample.

**Capital Goods Price Index:** Economic index computed by the New Zealand government that measures the change in fixed capital-asset prices in the New Zealand economy from one period to another

**Case-Shiller 20-City Composite Home Price Index:** Tracks the value of single-family housing within the United States.

**CBOE S&P 500 BuyWrite Monthly Index:** This is a benchmark index designed to track the performance of a hypothetical buy-write strategy on the S&P 500 Index

**CBOE Skew Index:** This index is an option-based indicator that measures the perceived tail risk of the distribution of S&P log returns at a 30-day horizon. Tail risk is the risk associated with an increase in the probability of outlier returns. The index price is calculated from the prices of S&P 500 options.

**CFETS RMB Index:** This index measures the weighted average of the Chinese renminbi relative to a trade-weighted basket of 13 currencies.

**China FDI Foreign Capital Actually Utilized Index:** Foreign direct investment (FDI) is the category of international investment that tracks resident entities in one country obtaining a lasting interest in enterprises from another country.

**Chicago Fed-Adjusted National Financial Conditions Index:** This is a weekly update on US financial conditions in money markets, debt and equity markets and the traditional and shadow banking systems. The adjustment isolates a component of financial conditions uncorrelated with economic conditions.

**Chicago Fed National Activity Index:** A monthly index designed to gauge overall economic activity and related inflationary pressure.

**Chicago PMI:** Tracks manufacturing and non-manufacturing activity in the Chicago region. Investors care about this indicator because the Chicago region somewhat mirrors the nation in its distribution of manufacturing and non-manufacturing.

**China Manufacturing PMI:** Monitors employment, production inventories, new orders and supplier deliveries in China.

**China Real Effective Exchange Rate Broad Index:** This index represents the effective exchange rate (also known as a trade-weighted exchange rate) of the individual exchange rates of China with its main trading partners.

**Citigroup Economic Surprise Index:** This index measures actual economic surprises relative to expectations. A positive reading means that data have been stronger than expected, while a negative reading means that data have been worse than expected.

**Citigroup Macro Risk Index:** This index measures risk aversion in global markets, based on asset prices that are typically sensitive to risk.

**Conference Board Consumer Confidence Index:** The Conference Board Consumer Confidence Index is a proprietary monthly measure of the public's confidence in the health of the US economy.

**Conference Board Leading Economic Indicator Index:** Measures leading indicators in the economy. Leading indicators are economic variables that tend to move before changes in the overall economy. These indicators give a sense of the future state of an economy.

**Consumer Price Index:** Examines the weighted average of prices of a basket of consumer goods and services.

**Consumer Price Index for Elderly (CPI-E):** Consumer Price Index for elderly individuals at least 62 years of age.

**Continuous Commodity Index:** This is an index of 17 commodity futures prices. It is an equal-weighted geometric average of price levels relative to a base-year average price.

## Index, Indicator and Survey Definitions (cont'd)

**CoreLogic House Price Index:** Tracks increases and decreases in sales prices for the same homes over time, including single-family attached and single-family detached homes.

**CRB Commodity Total Return Index:** Measures the total returns of basic commodities.

**Credit Suisse Fear Barometer Index:** This index measures the cost of protection against a market crash.

**Credit Suisse Global Macro Hedge Fund Index:** This index is a subset of the Credit Suisse Hedge Fund Index, which measures the aggregate performance of dedicated short bias funds.

**Credit Suisse Risk Appetite Index:** This index is a widely followed measure of investor sentiment.

**Credit Suisse/Tremont Hedge Fund Index:** This index is the largest asset-weighted diversified hedge fund index representing the entire hedge fund universe.

**Cushing MLP Index:** Provides a benchmark to measure the performance of the more stable and widely held energy infrastructure master limited partnerships (MLPs).

**Dallas Federal Manufacturing Survey:** This survey, conducted on a monthly basis by the Federal Reserve Bank of Dallas, tracks sentiment among manufacturers in Texas.

**Datastream World DS Mining Index:** This index has 109 stocks and represents the mining sector of a broader world index that includes 26 developed markets and 40 emerging markets.

**DAX index:** This index represents 30 of the largest and most liquid German companies that trade on the Frankfurt Exchange.

**DB Global Government ex-US Inflation-Linked Bond Capped Index:** Measures the total return performance of inflation-linked government bonds from developed and emerging market countries outside the United States.

**Deutsche Bank Currency Volatility Index:** Measures the implied volatility of currency markets based on a basket of international currency pairs.

**Deutsche Bank Optimum Yield Diversified Commodity Index:** Aims to represent the performance of the commodity market, it invests in six commodities; Sweet Light Crude Oil (WTI), Heating Oil, Aluminum, Gold, Wheat and Corn. The weights are fixed and have been designed to be broadly representative of the commodity markets.

**Diffusion Index of Financial Expectations Index:** Diffusion index calculation applied to monthly survey data from University of Michigan in its Survey of Consumers, measuring the expected change in household income during the next year.

**DOE Crude Oil Lower 48 States Production Data Index:** The data presented in the weekly petroleum supply surveys include data collected by the EIA on seven weekly petroleum supply and two weekly petroleum price surveys and data released by Reuters. The seven weekly petroleum supply surveys are part of the Petroleum Supply Reporting System (PSRS). The PSRS tracks the supply and disposition of crude oil, petroleum products, and natural gas liquids in the United States.

**Dow Jones FXCM Dollar Index:** This index is an equal-weighted measure of the value of the US dollar against four major currencies.

**Dow Jones Industrial Average (DJIA):** A price-weighted average of 30 blue-chip stocks that are generally the leaders in their industry.

**Dow Jones Transportation Average Index:** This is a running average of stock prices of 20 transportation companies, with each stock's price weighted to adjust for stock splits and other factors.

**Dow Jones Travel and Leisure Index:** The Dow Jones US Travel and Leisure Index is constructed and weighted using free-float market capitalization and the index is quotes in USD. The Index consists of domestic travel and leisure companies such as airlines, food and beverage brands, hotels, car rental companies, and travel websites.

**Dow Jones-UBS Commodity Index:** A broadly diversified index that allows investors to track commodity futures through a single, simple measure.

**Dow Jones -UBS Commodity Ex Precious Metals Index:** This index is composed of futures contracts on physical commodities. It excludes the commodities included in the precious metals sector. It reflects the return on fully collateralized futures positions.

**Dow Jones-UBS Precious Metals Index:** A commodity group sub-index of the Dow Jones/UBS Commodity Index. This index is composed of futures contracts on gold and silver. It reflects the return on fully collateralized futures positions.

**Dow Jones US Select Dividend Index:** This index consists of 100 US stocks with at least a five-year history of paying dividends.

**Dow Jones U.S. Select Home Construction Index:** measures constructors of residential homes, including manufacturers of mobile and prefabricated homes intended for use in one place.

**Dow Jones Utilities Average:** A price-weighted average of 15 utility companies that are listed on the New York stock Exchange and are involved in the production of electrical energy.

**Empire Manufacturing Business Conditions Index:** An index based on the monthly survey of manufacturers in New York State which inquires about general business conditions in the state.

**Empire State Manufacturing Survey:** This index is based on the monthly survey of New York State manufacturers which inquires about general business conditions in the state.

**Employment Cost Index:** This is a quarterly report from the US Department of Labor that measures the growth of employee compensation (wages and benefits). The index is based on a survey of employer payrolls in the final month of each quarter.

**European Commission Consumer Confidence Indicator Eurozone:** This measure tracks sentiment among households or consumers based on surveys conducted among a random sample of households.

**European Union Consumer Confidence Indicator:** This indicator represents the arithmetic average of the answers to the questions on the financial situation of households and general economic situation together with the advisability of making major purchases.

**Euro STOXX 50 Index:** Provides a blue-chip representation of supersector leaders in the Eurozone.

## Index, Indicator and Survey Definitions (cont'd)

**Euro STOXX 600 Index:** 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.

**Euro Zone Composite Purchasing Managers Index (PMI):** This index is produced by Markit and is based on original survey data collected from a representative panel of around 5,000 companies based in the euro area manufacturing and service sectors. National manufacturing data are included for Germany, France, Italy, Spain, the Netherlands, Austria, the Republic of Ireland and Greece. National services data are included for Germany, France, Italy, Spain and the Republic of Ireland. The flash estimate is typically based on approximately 85%-90% of total PMI survey responses each month and is designed to provide an accurate advance indication of the final PMI data.

**Euro Zone Consumer Confidence Index:** This index tracks sentiment among households. The results are based on surveys conducted among a random sample of 23,000 households.

**Evercore ISI Hedge Fund Survey:** This survey rates the equity net exposure of a sample of hedge funds on a scale from 0 to 100 where 50 is normal.

**Federal Reserve Senior Loan Officer Opinion Survey:** This survey of up to 80 large domestic banks and 24 US branches and agencies of foreign banks asks questions about changes in the standards and terms of the banks' lending and the state of business and household demand for loans.

**FHFA US House Price Index:** Tracks changes in residential property prices.

**FTSE 3-month T-Bill Index:** Measures monthly return equivalents of yield averages that are not marked to market. The 3-Month Treasury Bill Indexes consist of the last three 3-Month T-Bill issues.

**FTSE 100 Index:** This index measures the 100 companies listed on the London Stock Exchange with the highest market capitalization.

**FTSE BIG US Corporate Index:** A comprehensive representation of the US investment grade bond market.

**FTSE Bursa Malaysia KLCI Index:** Comprises of the largest 30 companies by full market capitalization on Bursa Malaysia's Main Board. When launched, on July 6, 2009 it replaced the Bursa Malaysia KLCI Index starting at the closing value of the KLCI Index on July 3 2009, also inheriting the full history of the KLCI Index.

**FTSE Emerging Market Sovereign Bond Index:** This index includes Brady bonds and US-dollar-denominated emerging markets sovereign debt issued in the global, Yankee and Eurodollar markets, excluding loans. It comprises debt in Africa, Asia, Europe and Latin America.

**FTSE Environmental Opportunities All-Share Index:** Includes global companies for which at least 20% of their business comes from environmental markets and technologies.

**FTSE EPRA/NAREIT Developed Index:** This index is designed to measure the stock performance of companies engaged in specific real estate activities of the North American, European and Asian real estate markets. Relevant real estate activities are defined as the ownership, trading and development of income-producing real estate.

**FTSE EPRA/NAREIT Global Index:** Reflects trends in real estate equities worldwide. Relevant real estate activities are defined as the ownership, disposal, and development of income-producing real estate.

**FTSE Europe BIG Corporate Index:** A comprehensive representation of the Europe investment grade bond market.

**FTSE France GBI Currency Hedged 7 TO 10 Year USD Index:** This index measures the performance of France sovereign bonds in the seven-to-10-year maturity range and is denominated in US dollars.

**FTSE Germany GBI Currency Hedged 7 TO 10 Year USD Index:** This index measures the performance of Germany sovereign bonds in the seven-to-10-year maturity range and is denominated in US dollars.

**FTSE Global All Cap Index:** This index is a free float market capitalization-weighted index that includes constituents of the large-, mid-, and small-capitalization universes for the developed and emerging market segments.

**FTSE High Yield Market Index:** A broad measure of the North American high yield market.

**FTSE Japan GBI Currency Hedged 7 TO 10 YEAR USD Index:** This index measures the performance of Germany sovereign bonds in the seven-to-10-year maturity range and is denominated in US dollars.

**FTSE/JSE Africa All Shares Index** This is a capitalization-weighted index. Companies included make up the top 99% of the total pre free-float market capitalization of all listed companies on the Johannesburg Stock Exchange.

**FTSE Spain GBI Currency Hedged 7 TO 10 Year USD Index:** This index measures the performance of Spain sovereign bonds in the seven-to-10-year maturity range and is denominated in US dollars.

**FTSE UK GBI Currency Hedged HEDGED 7 TO 10 Year USD Index:** This index measures the performance of UK sovereign bonds in the seven-to-10-year maturity range and is denominated in US dollars.

**FTSE US BIG 7-10 Year BBB Corporate Bond Index:** This is a comprehensive representation of the seven-to-10 year segment of the BBB-rated tier of the US investment grade corporate bond market.

**FTSE US BIG Corporate Bond Index:** This is a comprehensive representation of the US investment grade corporate bond market.

**FTSE US BIG Government Sponsored Bond Index:** This is a comprehensive representation of the US government agency debt issues.

**FTSE US BIG Mortgage Index:** This is a price index based on 30- and 15-year GNMA, FNMA and FHLMC securities as well as FNMA and FHLMC balloon mortgages. It is reconstituted each month to reflect new issuance and principal paydowns.

**FTSE World Government Bond Index (WGBI):** An index of bonds issued by governments in the U.S., Europe and Asia.

## Index, Indicator and Survey Definitions (cont'd)

**GDPNOW Forecast Model:** This model, run by the Federal Reserve Bank of Atlanta, is updated five or six times a month. It incorporates reports on manufacturing, trade, housing and construction.

**Goldman Sachs Current Activity Indicator – US:** This indicator is a measure of current US economic activity. This index uses 24 high-frequency real activity indicators including manufacturing, survey, and expenditure data. The values are expressed in GDP equivalent terms.

**Goldman Sachs Financial Conditions Index:** This index tracks changes in interest rates, credit spreads, equity prices, and the value of the dollar in order to measure the overall economic strength or weakness of the U.S. economy.

**Hang Seng China Enterprises Index:** This is a free-float-adjusted, capitalization-weighted index of the "H" shares, which are shares of mainland China companies that trade in Hong Kong.

**Herfindahl-Hirschman Index (HHI):** is a commonly accepted measure of market concentration. It is calculated by squaring the market share of each firm competing in a market, and then summing the resulting numbers, and can range from close to zero to 10,000.

**HFRI Distressed Securities Index:** These strategies focus mainly on corporate credit instruments of companies trading at significant discounts to par value as a result of either formal bankruptcy proceedings or financial market expectations of near-term proceedings.

**HFRI Emerging Markets Index:** The constituents of this index are selected according to their Regional Investment Focus only. There is no Investment Strategy criteria for inclusion.

**HFRI Equity Long/Short (Equity Hedge) Index:** Measures investment managers who maintain positions both long and short in primarily equity and equity derivative securities.

**HFRI Equity Market Neutral Index:** Equity market neutral strategies employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between securities, select securities for purchase and sale.

**HFRI Event Driven Index:** Event-driven is also known as "corporate life cycle" investing. This involves investing in opportunities created by significant transactional events, such as spin-offs, mergers and acquisitions, bankruptcy reorganizations, recapitalizations and share buybacks.

**HFRI Fixed Income-Convertible Arbitrage Index:** Includes strategies in which the investment thesis is predicated on realization of a spread between related instruments in which one or multiple components of the spread is a convertible fixed income instrument.

**HFRI Fund of Funds Composite Index:** This is an equal-weighted index of 650 hedge funds with at least \$50 million in assets and 12-months of returns. Returns are reported in US dollars and are net of fees.

**HFRI Fund of Funds Index:** Fund of funds invest with multiple hedge fund managers with the objective of significantly lowering the risk (volatility) of investing with an individual manager. HFRI may revise index data from time to time, as necessary.

**HFRI Fund Weighted Composite Index:** Includes over 2200 constituent funds. Includes both domestic and offshore funds; equal-weighted index; all funds report assets in USD; no fund of funds included in index; all funds report net of all fees returns on a monthly basis; constituents must have at least \$50 million under management or have been actively trading for at least 12 months.

**HFRI Macro Index:** This index tracks investment managers who trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets.

**HFRI Merger Arbitrage Index:** Represents strategies which employ an investment process primarily focused on opportunities in equity and equity related instruments of companies which are currently engaged in a corporate transaction.

**HFRI Relative Value Index:** Comprised of investment managers whose investment thesis is based on realization of a valuation discrepancy in the relationship between multiple securities.

**HFRI Relative Value Fixed Income-Corporate Index:** This index includes strategies that attempt to realize of a spread between related instruments in which one or multiple components of the spread is a corporate fixed income instrument. These strategies seek to isolate attractive opportunities between a variety of fixed income instruments, typically realizing an attractive spread between multiple corporate bonds or between a corporate and risk free government bond.

**HFRI Relative Value Multi-Strategy Index:** This index employs an investment thesis that is predicated on realization of a spread between related yield instruments in which one or multiple components of the spread contains a fixed income, derivative, equity, real estate, MLP or combination of these or other instruments.

**HFRI Equity Hedge Index:** Designed to be representative of the overall composition of the equity hedge segment of the hedge fund universe. Equity Hedge strategies maintain positions both long and short in primarily equity and equity derivative securities.

**HFRI Equity Hedge Equity Market Neutral Index:** Designed to be representative of the overall composition of the equity hedge-equity market neutral segment of the hedge fund universe. Market neutral strategies employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between securities and select securities for purchase and sale.

**HFRI Event Driven Index:** Designed to be representative of the overall composition of the event driven segment of the hedge fund universe. Event driven managers maintain positions in companies currently or prospectively involved in corporate transactions of a wide variety including but not limited to mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments.

## Index, Indicator and Survey Definitions (cont'd)

**HFRX Event Driven: Distressed Restructuring Index:** Designed to be representative of the overall composition of the equity hedge-equity market neutral segment of the hedge fund universe. These strategies focus mainly on corporate credit instruments of companies trading at significant discounts to par value as a result of either formal bankruptcy proceedings or financial market expectations of near-term proceedings.

**HFRX Event Driven: Merger Arbitrage Index:** Designed to be representative of the overall composition of the event driven merger arbitrage segment of the hedge fund universe. Merger arbitrage strategies employ an investment process primarily focused on opportunities in equity and equity related instruments of companies which are currently engaged in a corporate transaction.

**HFRX Global Hedge Fund Index:** Designed to be representative of the overall composition of the hedge fund universe. It is comprised of all eligible hedge fund strategies; including but not limited to convertible arbitrage, distressed securities, equity hedge, equity market neutral, event driven, macro, merger arbitrage, and relative value arbitrage.

**HFRX Macro/CTA Index:** Designed to be representative of the overall composition of the macro segment of the hedge fund universe. Such macro strategy managers employ a broad range of strategies predicated on movements in underlying economic variables and the impact these have on the equity, fixed income, currency, and commodity markets.

**HFRX Relative Value Arbitrage Index:** Designed to be representative of the overall composition of the relative value segment of the hedge fund universe. Relative value investment managers maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities.

**HFRX Relative Value: Fixed Income – Corporate Index:** Designed to be representative of the overall composition of the equity hedge-equity market neutral segment of the hedge fund universe. This index includes strategies that attempt to realize of a spread between related instruments in which one or multiple components of the spread is a corporate fixed income instrument. These strategies seek to isolate attractive opportunities between a variety of fixed income instruments, typically realizing an attractive spread between multiple corporate bonds or between a corporate and risk free government bond.

**Housing Affordability Composite Index:** Tracks the affordability of housing, typically based on a mix of median home prices, median income, and mortgage rates.

**HSBC CDS Spread:** Captures the average CDS spread performance of 47 leading US Financial institutions.

**Ibbotson US 30-Day Treasury Bills Index:** An unweighted index which measures the performance of one-month maturity US Treasury Bills.

**Ibbotson US Intermediate-Term Government Bond Index:** An unweighted index which measures the performance of five-year maturity US Treasury Bonds.

**Ibbotson US Long-term Corporate Bond Index:** A market value-weighted index which measures the performance of long-term US corporate bonds.

**Ibbotson US Long-term Government Bond Index:** Unweighted index which measures the performance of 20-year maturity US Treasury Bonds.

**Ibbotson US Small Cap Stocks Index:** A capitalization-weighted index which measures the performance of US equities in the ninth and tenth deciles of market capitalization.

**iBoxx USD Liquid Investment Grade Index:** This is a modified market-value-weighted index that represents the US dollar investment grade corporate market through a broad basket of liquid corporate bonds.

**Ibovespa Brasil Sao Paulo Stock Exchange Index:** A gross total return index weighted by market value to the free float & is comprised of the most liquid stocks traded on the Sao Paulo Stock Exchange. The Ibovespa Index has been divided 10 times by a factor of 10 since Jan 1, 1985.

**ICE BofAML 1-5 Year US Inflation-Linked Treasury Index:** An unmanaged index comprised of US Treasury Inflation Protected Securities with at least \$1 billion in outstanding face value and a remaining term to final maturity of at least 1 year and less than 5 years.

**ICE BofAML All US Convertible Index:** An unmanaged market capitalization-weighted index of domestic corporate convertible securities that are convertible to common stock only.

**ICE BofAML Core Plus Fixed Rate Preferred Securities Index:** This is a capitalization-weighted index that tracks the performance of fixed-rate US-dollar-denominated preferred securities issued in the US domestic market.

**ICE BofAML Fixed Rate Preferred Securities Index:** Tracks the performance of fixed rate US dollar denominated preferred securities in the US domestic market.

**ICE BofAML Global Emerging Markets Credit Index:** This index tracks the performance of USD- and EUR-denominated emerging market quasi-government and corporate debt publicly issued in the eurobond or US domestic market.

**ICE BofAML US Corporate BBB Index:** Tracks the performance of US dollar denominated investment grade corporate debt publicly issued in the US domestic market.

**ICE BofAML US Emerging Markets External Sovereign Index:** This index tracks the performance of US dollar emerging markets sovereign debt publicly issued in the US and eurobond markets.

**ICE BofAML US High Yield Index:** This index tracks the performance of US dollar-denominated, below-investment-grade corporate debt publicly issued in the US domestic market.

**ICE BofAML US Investment Grade Institutional Capital Securities Index:** This is a capitalization-weighted index that tracks the performance of fixed-rate US-dollar-denominated preferred securities issued in the US domestic market.

**ICE US Treasury 20+ Years Bond Index:** This index is part of a series of indexes intended to assess US Treasury-issued debt. Only US-dollar-denominated, fixed rates securities with minimum term to maturity greater than 20 years are included.

## Index, Indicator and Survey Definitions (cont'd)

**IFO Business Climate Index:** This key monthly survey of German businesses is based on approximately 7,000 monthly responses from firms in manufacturing, construction, wholesale and retail.

**IMF World Exports Volume Index:** This index covers external trade statistics, which provides data on the values, volume, and prices for exports and imports.

**International Tax Competitiveness Index (ITCI):** Seeks to measure the business competitiveness of national tax systems. In order to do this, the ITCI looks at over 40 tax policy variables, including corporate income taxes, individual income and payroll taxes, consumption taxes, property taxes, and the treatment of foreign earnings.

**iShares MSCI Emerging Markets ETF:** An exchange-traded fund incorporated in the USA. The ETF tracks the performance of the MSCI TR Emerging Markets Index. The ETF holds emerging market stocks that can predominantly be classified as large and mid-cap. It weights the holdings using a market capitalization methodology and rebalances quarterly.

**ISM New York Report on Business:** The purpose of this survey is to quickly assess business conditions among firms in the New York City area. The survey results are compiled as diffusion indexes.

**ISM Manufacturing PMI:** Monitors employment, production inventories, new orders and supplier deliveries.

**ISM Non-Manufacturing PMI:** An index based on surveys of more than 400 non-manufacturing firms' purchasing and supply executives.

**ISM Prices Paid Index:** This index represents business sentiment toward future inflation.

**iTraxx Main Index:** Comprises 125 equally weighted credit default swaps on investment grade European corporate entities.

**Jakarta Stock Price Index:** 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.

**Japan All Industry Activity Index:** This index measures the monthly change in overall production of all sectors in the Japanese economy. The index encompasses services, manufacturing, construction and the public sector.

**Japan Consumer Confidence Index:** This is based on a monthly survey of 8,400 households conducted by Japan's Economic and Social Research Institute.

**Japan Economy Watchers Survey:** This survey tracks the general state of the economy as it relates to businesses. It can include broad economy-wide conditions or specific economic conditions of a particular industry.

**Japan Leading Composite Index:** This index is composed of various economic, survey, stock market and bond market data. These indicators give a sense of the future state of Japan's economy.

**Jobs Openings and Labor Turnover Survey (JOLTS):** This monthly survey, conducted by the Bureau of Labor Statistics, collects data on job openings, hires and separations from some 16,000 US businesses. It covers all nonagricultural industries in the public and private sectors for the 50 states and the District of Columbia.

**JP Morgan Broad Real Effective Exchange Rate Index (USD):** Measures the weighted average of the US dollar relative to an index or basket of other major currencies, adjusted for the effects of inflation.

**JP Morgan China Nominal Broad Effective Exchange Rate Index:** This index measures the weighted average of the renminbi relative to an index or basket of other major currencies, not adjusted for the effects of inflation.

**JPMorgan EMBI Global Index:** This index tracks returns for actively traded external debt instruments in emerging markets.

**JP Morgan EMBI+ Asia Index:** Tracks total returns for traded external debt instruments in Asian emerging markets.

**JP Morgan EMBI+ Composite Index:** This index tracks total returns for traded external debt instruments in the emerging markets.

**JP Morgan EMBI+ Europe Index:** This index tracks total returns for traded external debt instruments in European emerging markets.

**JP Morgan EMBI+ Latin Index:** This index tracks total returns for traded external debt instruments in Latin American emerging markets.

**JP Morgan Emerging Market (local currency, unhedged) Index:** This index tracks debt issued in local currencies by emerging market governments.

**JPMorgan Emerging Markets Bond Index Global:** This index tracks total return for traded external debt in the emerging markets, including US-dollar Brady Bonds, loans and Eurobonds with an outstanding face value of at least \$500 million.

**JP Morgan Emerging Markets Currency Index:** This is a market-cap weighted index of 10 emerging market currencies versus the US dollar.

**JP Morgan Global FX Volatility Index:** Tracks the level of implied volatility in G7 and emerging market economies.

**JP Morgan Global Manufacturing Index:** Provides an overview of the global manufacturing sector.

**JP Morgan Gov't Bond Index-EM Diversified Index:** Provides a measure of local currency denominated, fixed rate, government debt issued in emerging markets. Weightings among the countries are more evenly distributed within the diversified index compared to its three main composite indices consisting of the GBI-EM, GBI EM Global, and GBI EM Broad indices.

**JP Morgan Gov't Bond Index-EM Global Diversified (Unhedged) Index:** This is a comprehensive global local emerging markets index that consists of regularly traded, liquid fixed rate, domestic currency government bonds.

## Index, Indicator and Survey Definitions (cont'd)

**JP Morgan VXY-EM Index:** This index is designed to allow investors to measure aggregate risk premiums in currency markets, calibrate trading strategies and express views on volatility as an asset class.

**JP Morgan VXY-G7 Index:** This index measures volatility in a basket of G7 currencies.

**JPX-NIKKEI Index 400:** This is an index of Japanese companies that meet requirements of global investment standards, such as the efficient use of capital and investor-focused management perspectives.

**Kansas City Federal Manufacturing Survey:** This survey, conducted on a monthly basis by the Federal Reserve Bank of Kansas City, tracks sentiment among manufacturers in the Kansas City Fed's district which includes Kansas, Colorado, Nebraska, Oklahoma, Wyoming, the northern half of New Mexico and the western third of Missouri.

**KBW Bank Index:** This index is weighted according to capitalization and represents major banks and money centers from across the country.

**KOSPI:** A capitalization-weighted index of all common shares on the Korean Stock Exchanges. The Index was developed with a base value of 100 as of January 4, 1980. Note: The preferred shares are excluded in calculating the KOSPI Index from June 14, 2002.

**Markit CDX Emerging Markets Index:** This is an index of credit default swaps covering 14 sovereign issuers in Latin America, Eastern Europe and the Middle East and Africa, and Asia.

**Markit Eurozone Composite PMI:** Based on original survey data collected from a representative panel of around 5,000 manufacturing and services firms.

**Markit iBoxx EUR Corporate Index:** This is an index of investment grade euro-denominated corporate bonds.

**Markit iBoxx EUR High Yield Index:** This index tracks the performance of euro-denominated corporate high yield debt, and is designed to provide high yield investors with appropriate benchmarks. This index represents the sub-investment grade fixed income market for euro-denominated corporate bonds.

**MBA Purchase Applications Index:** This index tracks the volume of mortgage loan applications that have been submitted to lenders.

**Merrill Lynch Option Volatility Estimate Index (MOVE):** A yield curve-weighted index of the normalized implied volatility on one-month treasury options.

**MICEX Index:** This is a capitalization-weighted composite index based on the prices of the 50 most-liquid stocks on the Moscow Interbank Currency Exchange.

**Misery Index:** An economic indicator found by adding the unemployment rate to the inflation rate. It is assumed that both a higher rate of unemployment and a worsening of inflation create economic and social costs for a country.

**Moody's BAA Industrial Bond Index:** The minimum maturity for the bonds in this index is 20 years, with an average of 30 years. The bonds have maturities as close as possible to 30 years; they are dropped from the list if their remaining life falls below 20 years, if they are susceptible to redemption, or if their ratings change. All yields are yield-to-maturity 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.

**Moody's/RCA Commercial Property Price Indices:** These indices are transaction-based indices that measure property prices at a national level. Indices cover Apartment, Retail, Office, and Industrial sectors. The Moody's/RCA CPPI is based on repeat-sales (RS) transactions that occurred at any time up through the month prior to the current report. Because CPPI allows for backward revisions and incorporates any new data we receive subsequent to publishing, full history (from inception to current month) of future indices will reflect adjustments due to additional transaction data.

**Morgan Stanley Alphawise Real-Time Indicator of Activity (MS ARIA):** This is a monthly US macro indicator based on data collected through primary research on key US sectors (consumer, autos, housing, employment and business investment).

**Morgan Stanley Asset Co-Movement Indicator:** Tracks weekly returns of 16 different asset classes (e.g., equities, fixed income, commodities, etc.) and how much of their cross-variation can be explained by a single factor.

**Morgan Stanley Backwardated Basket Index:** This is a broad-based commodity index enhanced by the returns from backwardation. Backwardation is when forward prices for a commodity are below the spot price, offering a risk premium to long-only investors.

**Morgan Stanley Business Conditions Index (MSBCI):** This index is an economic barometer that is based on an internal monthly canvass of Morgan Stanley & Co.'s industry analysts in North America Equity Research. Specifically, the MSBCI is comprised of a "headline" index that measures general analyst sentiment as well as component indicators that gauge financing, advance bookings, pricing, hiring, capital spending and expectations.

**Morgan Stanley Capex Plans Index** tracks how much businesses are likely to spend in the coming months.

**Morgan Stanley China Economic Index (MS CHEX):** This proprietary index measures economic activity through six components: electricity production, steel production, fiscal revenue, real exports, real imports and car sales.

**Morgan Stanley Combined Market Timing Indicator (CMTI):** The CMTI is an average across the risk, fundamentals and composite valuation Indicators.

**Morgan Stanley Cycle Indicator:** This is weighted average of each metric's reading as a percentile of its own history. The metrics include employment/unemployment, industrial production, consumer confidence, the two-year/10-year yield-curve spread, corporate and consumer loan growth, announced mergers-and-acquisitions transactions and capacity utilization.

## Index, Indicator and Survey Definitions (cont'd)

**Morgan Stanley Emerging Markets (EM) Funding Stress Index:** A composite of three metrics, aimed at gauging the extent of stress in global funding markets. A reading below 20 indicates easier funding conditions, while a reading above 20 indicates escalating funding market stresses.

**Morgan Stanley Equity Risk Indicator:** This is a proprietary sentiment and risk indicator for US equities.

**Morgan Stanley Europe Cyclical vs. Defensives Basket:** This is a custom index that represents an equal notional pair trade of going long the MSSTHBC (EU high-beta cyclicals) and short the MSSTDEFS (EU defensives). Performance reflects each side rebalanced back to equal notional at the close of each trading day.

**Morgan Stanley Financial Conditions Index:** Weighted index comprised of changes in equities, short-term interest rates, long-term interest rates & USD currency.

**Morgan Stanley Global FX Index:** This is a broad gauge of global currency volatility comprised of three-month implied volatility for all major currencies.

**Morgan Stanley Global Risk Demand Index:** Gauges the change in risk demand from the price performance of risky assets relative to safe ones.

**Morgan Stanley Global Trade Leading Indicator (MSGTLI):** Uses the average of the z-scores of the following indicators to forecast global trade dynamics with a one-month lead: Brent crude oil prices, CRB Future Price Index, USD NEER, Baltic Exchange Dry Index, US ISM, IFO Business expectations for the next six months.

**Morgan Stanley Inflation/Deflation Indicator:** This is a market-based indicator of global inflation expectations. It is calculated using an equally weighted average of annual growth rates of copper, gold and oil prices; levels of US and emerging market two-year breakeven inflation rates; and one-year/two-year interest rate spreads for the G4 and China.

**Morgan Stanley Leading Earnings Indicator (MSLEI):** is a macro factor-based earnings model that leads actual earnings growth by one year with a 0.7 12-month leading correlation.

**Morgan Stanley Liquidity Index:** Proprietary index measuring the discretionary cash available for US households.

**Morgan Stanley USD Trade-Weighted Index:** This is a trade-weighted index for the US dollar, indexed to 100 on Jan. 1, 2010. The index is updated once daily.

**Mortgage Bankers Association Purchasing Index:** This index, which is seasonally adjusted, tracks the volume of mortgage loan applications that have been submitted to lenders.

**Mortgage Bankers Association Refinance Index:** This is a trade-weighted index for the US dollar, indexed to 100 on Jan. 1, 2010. The index is updated once daily.

**MSCI All-Country World Index:** The Morgan Stanley Capital International (MSCI) All Country World Index (ACWI) is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global developed and emerging markets.

**MSCI All-Country World ex USA Index:** A free-float-adjusted market-capitalization index that is designed to measure equity market performance in developed and emerging markets, excluding the United States.

**MSCI Argentina Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Argentina-based equities.

**MSCI Asia ex-Japan Index:** This is a free-float weighted equity index. It was developed with a base value of 100 as of December 31, 1987.

**MSCI Australia Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Australia-based equities.

**MSCI Austria Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Austria-based equities.

**MSCI Bahrain Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Bahrain-based equities.

**MSCI Bangladesh Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Bangladesh-based equities.

**MSCI Belgium Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Belgium-based equities.

**MSCI Brazil Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Brazil-based equities.

**MSCI Bulgaria Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Bulgaria-based equities.

**MSCI Canada Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Canada-based equities.

**MSCI Chile Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Chile-based equities.

**MSCI China Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of China-based equities.

**MSCI Colombia Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Colombia-based equities.

**MSCI Croatia Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Croatia-based equities.

**MSCI Czech Republic Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Czech Republic-based equities.

**MSCI Denmark Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Denmark-based equities.

**MSCI EAFE Index:** The Morgan Stanley Capital International Europe, Australia, Far East (MSCI EAFE) Index is a capitalization-weighted index that tracks the total return of common stocks in 21 developed-market countries within Europe, Australia and the Far East.

**MSCI Egypt Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Egypt-based equities.

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## Index, Indicator and Survey Definitions (cont'd)

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**MSCI Emerging Markets Asia Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of emerging market equities in Asia.

**MSCI Emerging Markets Currency Index** sets the weights of each currency equal to the relevant country weight in the MSCI Emerging Markets Index.

**MSCI Emerging Markets EMEA Index:** This index captures large and mid cap representation across 8 Emerging Markets (EM) countries\* in Europe, the Middle East and Africa (EMEA). With 139 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

**MSCI Emerging Markets IMI:** This index captures large, mid and small cap representation across 21 emerging market countries.

**MSCI Emerging Markets India Index:** Measures performance of the large and mid cap segments of the Indian market. With 64 constituents, the index covers approximately 85% of the Indian equity universe.

**MSCI Emerging Markets Indonesia Index:** Designed to measure the performance of the large and mid cap segments of the Indonesian market. With 30 constituents, the index covers about 85% of the Indonesian equity universe.

**MSCI Emerging Markets Latin America Index:** A free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of emerging markets in Latin America.

**MSCI Emerging Markets Mexico Index:** Measures 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.

**MSCI Emerging Markets Russia Index:** Measures the performance of the large and mid cap segments of the Russian market. With 22 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Russia.

**MSCI Emerging Markets South Africa Index:** Measures the performance of the large and mid cap segments of the South African market. With 51 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in South Africa.

**MSCI Emerging Markets Thailand Index:** Measures performance of the large and mid cap segments of the Thailand market. With 32 constituents, the index covers about 85% of the Thailand equity universe.

**MSCI Emerging Markets Turkey Index:** Measures performance of the large and mid cap segments of the Turkish market. With 25 constituents, the index covers about 85% of the equity universe in Turkey.

**MSCI EMU INDEX (European Economic and Monetary Union):** This index captures large- and mid-cap representation across the 10 developed countries in the European Economic and Monetary Union. With 241 constituents, the index covers approximately 85% of the free-float-adjusted market capitalization of the EMU.

**MSCI Estonia Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Estonia-based equities.

**MSCI Europe Banks Index:** This free-float weighted index is composed of large- and mid-cap stocks across 15 developed markets countries in Europe. All securities in the index are classified in the Banks industry group (within the Financials sector) according to the Global Industry Classification Standard (GICS®).

**MSCI Europe IMI:** This index captures large, mid and small cap representation across 16 Developed Markets countries in Europe. With 1,372 constituents, the index covers approximately 99% of the free float-adjusted market capitalization across the Developed Markets countries of Europe.

**MSCI Europe Large Cap Index:** This index captures large cap representation across 15 Developed Markets (DM) countries in Europe.

**MSCI Europe SMID Index:** This is a capitalization-weighted index tracking the total return of stocks in 21 developed-market countries within Europe, Australia and the Far East.

**MSCI Finland Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Finland-based equities.

**MSCI France Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of France-based equities.

**MSCI Frontier Markets Index:** Includes large, mid and small cap representation and covers approximately 99% of the investable equity universe across all Frontier Market countries.

**MSCI Germany Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Germany-based equities.

**MSCI Greece Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Greece-based equities.

**MSCI Hong Kong Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Hong Kong-based equities.

**MSCI Hungary Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Hungary-based equities.

**MSCI India Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of India-based equities.

**MSCI Indonesia Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Indonesia-based equities.

## Index, Indicator and Survey Definitions (cont'd)

- MSCI Ireland Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Ireland-based equities.
- MSCI Israel Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Israel-based equities.
- MSCI Italy:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Italy-based equities.
- MSCI Japan IMI:** This index is designed to measure the performance of the large, mid and small cap segments of the Japan market. With 1,134 constituents, the index covers approximately 99% of the free float-adjusted market capitalization in Japan.
- MSCI Jordan Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Jordan-based equities.
- MSCI Kazakhstan Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Kazakhstan-based equities.
- MSCI Kenya Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Kenya-based equities.
- MSCI KLD 400 Social Index:** This capitalization-weighted index of 400 US securities provides exposure to companies with outstanding Environmental, Social and Governance (ESG) ratings and excludes companies whose products have negative social or environmental impacts.
- MSCI Korea Index:** This free-float-adjusted, capitalization-weighted index is designed to measure the performance of Korea-based equities.
- MSCI Kuwait Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Kuwait-based equities.
- MSCI Latin America Index:** This free-float-adjusted, capitalization-weighted index is designed to measure the performance of five emerging markets countries in Latin America. With 121 constituents, the index covers about 85% of the market capitalization in each country.
- MSCI Lebanon Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Lebanon-based equities.
- MSCI Lithuania Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Lithuania-based equities.
- MSCI Malaysia Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Malaysia-based equities.
- MSCI Mauritius Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Mauritius-based equities.
- MSCI Mexico Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Mexico-based equities.
- MSCI Morocco Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Morocco-based equities.
- MSCI Netherlands Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Netherlands-based equities.
- MSCI New Zealand Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of New Zealand-based equities.
- MSCI Nigeria Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Nigeria-based equities.
- MSCI Norway Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Norway-based equities.
- MSCI Oman Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Oman-based equities.
- MSCI Pacific ex Japan IMI:** This index captures large, mid and small cap representation across 4 of 5 Developed Markets (DM) countries in the Pacific region (excluding Japan). With 510 constituents, the index covers approximately 99% of the free float-adjusted market capitalization in each country.
- MSCI Pakistan Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Pakistan-based equities.
- MSCI Peru Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Peru-based equities.
- MSCI Philippines Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Philippines-based equities.
- MSCI Poland Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Poland-based equities.
- MSCI Portugal Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Portugal-based equities.
- MSCI Qatar Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Qatar-based equities.
- MSCI Romania Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Romania-based equities.
- MSCI Russia Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Russia-based equities.
- MSCI Serbia Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Serbia-based equities.
- MSCI Singapore Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Singapore-based equities.

## Index, Indicator and Survey Definitions (cont'd)

**MSCI Slovenia Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Slovenia-based equities.

**MSCI South Africa Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of South Africa-based equities.

**MSCI South Korea Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of South Korea-based equities.

**MSCI Spain Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Spain-based equities.

**MSCI Sri Lanka Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Sri Lanka-based equities.

**MSCI Sweden Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Sweden-based equities.

**MSCI Switzerland Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Switzerland-based equities.

**MSCI Taiwan Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Taiwan-based equities.

**MSCI Thailand Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Thailand-based equities.

**MSCI Tunisia Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Tunisia-based equities.

**MSCI Turkey Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Turkey-based equities.

**MSCI Ukraine Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Ukraine-based equities.

**MSCI United Arab Emirates Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of United Arab Emirates-based equities.

**MSCI United Kingdom Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of United Kingdom-based equities.

**MSCI United States Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of United States-based equities.

**MSCI US Large Cap Growth Index:** This free-float adjusted capitalization-weighted index is a subset of the MSCI US Large Cap 300 Index, which represents the universe of large capitalization companies in the US equity market. MSCI uses the following five variables to define growth characteristics: long-term forward earnings per share growth rate; short-term forward EPS growth rate; current internal growth rate; long-term historical EPS growth trend; long-term historical sales per share growth trend.

**MSCI US Large Cap Index:** This free-float adjusted weighted equity index represents the universe of large capitalization companies in the US equity market.

**MSCI US Large Cap Value Index:** This free-float adjusted capitalization-weighted index is a subset of the MSCI US Large Cap 300 Index, which represents the universe of large capitalization companies in the US equity market. MSCI uses the following three variables to define value characteristics: book-value-to-price ratio; 12-month forward earnings-to-price ratio; dividend yield.

**MSCI US Mid Cap Growth Index:** This free-float adjusted capitalization-weighted index is a subset of the MSCI US Mid Cap 450 Index, which represents the universe of medium capitalization companies in the US equity market. MSCI uses the following five variables to define growth characteristics: long-term forward earnings per share growth rate; short-term forward EPS growth rate; current internal growth rate; long-term historical EPS growth trend; long-term historical sales per share growth trend.

**MSCI US Mid Cap Value Index:** This free-float adjusted capitalization-weighted index is a subset of the MSCI US Mid Cap 450 Index, which represents the universe of medium capitalization companies in the US equity market. MSCI uses the following three variables to define value characteristics: book-value-to-price ratio; 12-month forward earnings-to-price ratio; dividend yield.

**MSCI US REIT Index This index** is a free float-adjusted market capitalization index that is comprised of equity REITs. The index is based on MSCI USA Investable Market Index (IMI) its parent index which captures large, mid and small caps securities.

**MSCI US Small Cap Growth Index:** This free-float adjusted capitalization-weighted index is a subset of the MSCI US Small Cap 1750 Index, which represents the universe of small capitalization companies in the US equity market. MSCI uses the following five variables to define growth characteristics: long-term forward earnings per share growth rate; short-term forward EPS growth rate; current internal growth rate; long-term historical EPS growth trend; long-term historical sales per share growth trend.

**MSCI US Small Cap Value Index:** This free-float adjusted capitalization-weighted index is a subset of the MSCI US Small Cap 1750 Index, which represents the universe of small capitalization companies in the US equity market. MSCI uses the following three variables to define value characteristics: book-value-to-price ratio; 12-month forward earnings-to-price ratio; dividend yield.

**MSCI USA Index:** The MSCI USA Index is a free float-adjusted market capitalization index that is designed to measure equity market performance in the USA.

**MSCI USA Diversified Multiple-Factor Index** This index is based on a traditional market cap weighted parent index, the MSCI USA Index, which includes US large and mid cap stocks. The index aims to maximize exposure to four factors—value, momentum, quality and low size—while maintaining a risk profile similar to that of the underlying parent index.

**MSCI USA Low Volatility Index:** This index is designed to serve as a transparent benchmark for minimum variance (or managed volatility) equity strategies. The index aims to reflect the performance characteristics of a minimum variance strategy focused on absolute returns as well as volatility with the lowest absolute risk.

**MSCI USA Momentum Index:** This index is based on MSCI USA Index, its parent index, which captures large and mid cap stocks of the US market. It 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.

## Index, Indicator and Survey Definitions (cont'd)

**MSCI USA Sector-Neutral Quality Index:** This 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.

**MSCI Vietnam Index:** This free-float adjusted capitalization-weighted index is designed to measure the performance of Vietnam-based equities.

**MSCI World Index:** This index captures large-cap and mid-cap representation across 23 developed market countries. With 1,653 constituents, it accounts for about 85% of the free-float-adjusted market capitalization in each country.

**MSCI World Ex USA Index:** The MSCI World Index ex USA is a free float-adjusted market capitalization index that is designed to measure global developed market equity performance excluding the United States.

**MSCI World Growth Index:** This index captures large- and mid-cap securities exhibiting overall growth style characteristics across 23 developed market countries. The characteristics for the index's construction are 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.

**MSCI World Value Index:** This index captures large- and mid-cap securities exhibiting overall value style characteristics across 23 developed markets countries. The characteristics for the index's construction are book value to price, 12-month forward earnings to price and dividend yield.

**MS M1KE Index:** This Morgan Stanley & Co. proprietary index captures the market's expected timing of rate hikes. It provides the number of months to the first rate hike as derived from the average of market participants' expectations for the fed funds rate. Average outcomes are not 100% certain.

**MS PoKE Index:** This Morgan Stanley & Co. proprietary index tracks the market-implied number of 25-basis-point rate hikes over the next 12 months.

**MSRISK Index:** The Morgan Stanley Recession Risk model (MSRISK) provides a timely and definitive warning of the short-term risk of recession. The model is based on a regime-switching scheme anchored to the Conference Board's Composite Index of Leading Economic Indicators (LEI). Its high risk/low risk signals aim to provide a "yes/no" answer as to whether the US economy is heading towards recession. The suggested threshold for this series is 95%.

**MSRISKVOLIndex:** This index tracks the volatility of the Morgan Stanley recession Risk Model (MSRISK). While the level of the MSRISK provides a signal of an imminent recession, volatility in the MSRISK historically provides a consistent lead time to that signal. Volatility greater than three times the normal three-month moving average has provided, on average, a six-month lead time. The suggested threshold for this series is 300%.

**NABE Business Conditions Survey:** This quarterly survey of business conditions is based on responses from members of the National Association of Business Economics and select industry economists.

**NAHB/Wells Fargo Housing Market Index:** This index is based on a monthly survey of members belonging to the National Association of Home Builders (NAHB) that is designed to measure sentiment for the US single-family housing market.

**NASDAQ Composite Index:** A broad-based capitalization-weighted index of stocks in all three NASDAQ tiers: Global Select, Global Market and Capital Market.

**NASDAQ Dividend Achievers Select Index:** A modified market capitalization index designed to track the performance of companies that have at least 10 years of increasing dividends and are listed for trading on AMEX, NYSE or NASDAQ NMS.

**National Association of Home Builders Market Index:** This concept tracks sentiment among participants in the housing industry. A reading above 50 indicates more builders view conditions as good than poor.

**National Federation of Independent Small Business Optimism Index:** This index of small business sentiment is based on monthly surveys of the federation's members. Small business is defined as a for-profit enterprise that employs between one and 250 people, not including the owners.

**National Federation of Independent Small Business Uncertainty Index:** This index of small business uncertainty is based on monthly surveys of the federation's members. The index is based on the frequency of "don't know" and "uncertain" responses over six questions.

**NCREIF Property Index:** A quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only.

**New York Federal Reserve Underlying Inflation Gauge:** captures sustained movements in inflation from information contained in a broad set of price, real activity, and financial data.

**NFIB Companies Planning to Raise Wages Survey:** Tracks the general state of the economy as it relates to businesses. It can include broad economy-wide conditions or specific economic conditions of a particular industry.

**NIKKEI 225 Index:** This price-weighted index is comprised of Japan's top 225 blue-chip companies on the Tokyo Stock Exchange.

## Index, Indicator and Survey Definitions (cont'd)

**NYSE Arca Steel Index:** This is a modified market capitalization-weighted index comprised of publicly traded companies involved primarily in the production of steel products or mining and processing of iron ore.

**NYSE FANG+ Index:** This equal-dollar weighted index is designed to represent a segment of the technology and consumer discretionary sectors consisting of highly traded growth stocks of technology and tech-enabled companies such as Facebook, Apple, Amazon, Netflix, and Alphabet's Google.

**OECD Leading Indicator:** Measures leading indicators in the economy. Leading indicators are economic variables that tend to move before changes in the overall economy. These indicators give a sense of the future state of an economy.

**Oil Exploration & Production Index:** An equal-dollar-weighted index composed of 22 companies that own, lease, and operate oil and natural gas facilities.

**Oil Service Sector Index:** A price-weighted index composed of 15 companies that provide oil drilling and production services, oil field equipment, support services and geophysical/reservoir services.

**Overnight Swap Index:** This is a fixed/floating interest rate swap in which the floating leg is computed using a published overnight index rate.

**Personal Consumption Expenditures Index:** Measures price changes in consumer goods and services.

**Philadelphia Fed Business Conditions Index:** Indicates the direction of change in overall business activity and in the various measures of activity at plants in the Third Federal Reserve District: employment, working, hours, new and unfilled orders, shipments, inventories, delivery times, prices paid, and prices received.

**Philadelphia Federal Reserve State Coincident Indexes:** These indexes combine four state-level indicators to summarize current economic conditions in a single statistic. The four state-level variables in each coincident index are nonfarm payroll employment, average hours worked in manufacturing, the unemployment rate, and wage and salary disbursements deflated by the Consumer Price Index (US city average). The trend for each state's index is set to the trend of its GDP, so long-term growth in the state's index matches long-term growth in its GDP.

**Philadelphia Stock Exchange Oil Services Sector Index:** This is a price-weighted index comprising 15 companies that provide oil drilling and production services, oil-field equipment, support services and geophysical/reservoir systems.

**Philadelphia Stock Exchange SIG Oil Exploration & Production Index:** This is an equal-dollar-weighted index comprising 22 companies that own, lease and operate oil and gas facilities.

**PrEQIn All Private Equity Index** is a quarterly index for the whole private equity industry, enabling comparison of the performance of private equity funds against other asset classes. This index tracks industry returns information from December 31, 2000, to the most recent quarter-end date available. The Index pools performance information across all private equity strategies including buyout, venture, private equity real estate, fund of funds and distressed private equity, and is calculated on a quarterly basis using data from Preqin's Performance Analyst database.

**Prodco Retail Traffic Index:** This weekly index is a benchmark report on consumer traffic trends across North America.

**Producer Price Index (PPI):** is an inflationary indicator used to evaluate wholesale price levels in the economy.

**Purchasing Managers Index (PMI):** Tracks sentiment among purchasing managers at manufacturing, construction and/or services firms. An overall sentiment index is generally calculated from the results of queries on production, orders, inventories, employment, prices, etc.

**Rasmussen Consumer Index:** This index is derived by nightly telephone surveys of 1,500 adults and reported on a three-day rolling average basis.

**Relative Strength Index (RSI)** is a momentum oscillator that measures the speed and change of price movements. The RSI oscillates between zero and 100. Traditionally, the RSI is considered overbought when above 70 and oversold when below 30.

**Retail Sales Index:** A monthly measurement of all goods sold by retailers based on a sampling of retail stores of different types and sizes. The retail sales index is often taken as an indicator of consumer confidence.

**Richmond Fed Manufacturing Conditions Index:** Tracks sentiment among manufacturers in the Richmond Fed's district.

**Russell 1000 Equal Weight Index:** This index takes the 1,000 largest US companies by market capitalization, and then measures their performance on an equal-weight basis.

**Russell 1000 Index:** Russell 1000 Index measures the performance of the 1,000 largest US companies based on total market capitalization.

**Russell 1000 Growth Index:** Russell 1000 Growth Index measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

**Russell 1000 Value Index:** Russell 1000 Value Index measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

**Russell 2000 Index:** Russell 2000 Index measures the performance of the 2,000 smallest companies in the Russell 3000 Index.

**Russell 2000 Growth Index:** Russell 2000 Growth Index measures the performance of those Russell 2000 companies with higher price-to-book ratios and higher forecasted growth values.

**Russell 2000 Value Index:** Russell 2000 Value Index measures the performance of those Russell 2000 companies with lower price-to-book ratios and lower forecasted growth values.

**Russell 2500 Index:** This index is a market cap-weighted index that includes the smallest 2,500 companies covered in the Russell 3000 universe of United States-based listed equities.

## Index, Indicator and Survey Definitions (cont'd)

**Russell 3000 Index:** Russell 3000 Index measures the performance of the 3,000 largest US companies based on total market capitalization.

**Russell 3000 Growth Index:** Russell 3000 Growth Index measures the performance of those Russell 3000 Index companies with higher price-to-book ratios and higher forecasted growth values. The stocks in this index are also members of either the Russell 1000 Growth or the Russell 2000 Growth indexes.

**Russell 3000 Value Index:** Russell 3000 Value Index measures the performance of those Russell 3000 Index companies with lower price-to-book ratios and lower forecasted growth values. The stocks in this index are also members of either the Russell 1000 Value or the Russell 2000 Value indexes.

**Russell Midcap Index:** This index measures the performance of the mid-cap segment of the US equity universe. 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 cap and current index membership.

**Russell Midcap Growth Index:** Measures the performance of the mid-cap growth segment of the US equity universe.

**Russell Midcap Value Index:** Measures the performance of the mid-cap value segment of the US equity universe.

**Ryan Labs 3-Month US Treasury Index:** Measures monthly return equivalents of yield averages that are not marked to market. The 3-Month Treasury Bill Indexes consist of the last three 3-Month T-Bill issues.

**S&P 100 Index:** The Standard and Poor's 100 index is a capitalization-weighted index based on 100 highly capitalized stocks for which options are listed on the CBOE (Chicago Board of Exchange).

**S&P 400 Index:** This index provides investors with a benchmark for mid-sized companies. The index measures the performance of mid-sized companies, reflecting the distinctive risk and return characteristics of this market segment.

**S&P 500 Index:** The Standard & Poor's (S&P) 500 Index tracks the performance of 500 widely held, large-capitalization US stocks.

**S&P 500 Equal Weight Index:** The equal-weighted version of the widely-used S&P 500 where each company is allocated a fixed weight at each quarterly rebalance.

**S&P 500 Ex Energy Index:** Designed to provide broad market exposure except for members of the energy sector.

**S&P 500 High Beta Index:** The index consists of the 100 stocks from the S&P 500 Index with the highest sensitivity to market movements, or beta, over the past 12 months as determined by Standard & Poor's.

**S&P 500 Pure Growth Index:** This index is a style-concentrated index designed to track the performance of stocks that exhibit the strongest growth characteristics by using a style-attractiveness-weighting scheme.

**S&P 500 Pure Value Index:** This index is a style-concentrated index designed to track the performance of stocks that exhibit the strongest value characteristics by using a style-attractiveness-weighting scheme.

**S&P 600 Index:** This index measures the small-cap segment of the U.S. equity market. The index is designed to track companies that meet specific inclusion criteria to ensure that they are liquid and financially viable.

**S&P 1500 Index:** A broad-based capitalization-weighted index of 1500 U.S. companies and is comprised of the S&P 400, S&P 500, and the S&P 600.

**S&P/ASX 200 Index:** This index measures performance of the 200 largest index-eligible stocks listed on the ASX by float-adjusted capitalization. It covers approximately 80% of the Australian equity market capitalization.

**S&P BSE Sensex Index:** A cap-weighted index. The index members have been selected on the basis of liquidity, depth, and floating-stock-adjustment depth and industry representation. Sensex has a base date and value of 100 in 1978-1979. The Index shifted to free-float methodology since 09/01/03.

**S&P/Case-Shiller 20-City Home Index:** A value-weighted average of 20 major metro areas in the United States.

**S&P/Case-Shiller Home Price Index:** This is a leading measure of residential real estate prices both nationally and in 20 metropolitan regions.

**S&P Consumer Discretionary Index:** A market capitalization weighted index that tracks the performance of consumer discretionary companies.

**S&P Consumer Staples Index:** A market capitalization weighted index that tracks the performance of consumer staples companies.

**S&P 500 Consumer Staples GICS Level 1 Index:** This index comprises those companies in the S&P 500 that are classified as members of the GICS® consumer staples sector.

**S&P 500 Daily Sentiment Index:** provides daily market sentiment readings. High % bullish readings (i.e., 90% or higher) suggest that a short-term top is developing or has been made. Low % bullish readings (i.e., 10% or lower) suggest that a short-term bottom is developing or has been made.

**S&P 500 High Yield Dividend Aristocrats Index:** This index is designed to measure the performance of S&P 500 index constituents that have followed a policy of consistently increasing dividends every year for at least 25 consecutive years.

**S&P 500 Utilities Sector GICS Level 1 Index:** This index comprises those companies included in the S&P 500 that are classified as members of the GICS® utilities sector.

**S&P Energy Index:** A market capitalization weighted index that tracks the performance of energy companies.

## Index, Indicator and Survey Definitions (cont'd)

**S&P Europe 350 Dividend Aristocrats Index:** This index measures the performance S&P 500 companies that have increased dividends every year for the last 25 consecutive years.

**S&P Financials Index:** A market capitalization weighted index that tracks the performance of financial companies.

**S&P Global Natural Resources Index Total Return Index:** The index includes 90 of the largest publicly-traded companies in natural resources and commodities businesses that meet specific investability requirements, offering investors diversified and investable equity exposure across 3 primary commodity-related sectors: agribusiness, energy, and metals & mining.

**S&P GSCI Crude Oil Index:** This index provides investors with a reliable and publicly available benchmark for investment performance in the crude oil market.

**S&P GSCI Gold Official Close Index:** A sub-index of the S&P GSCI Official Close Index that provides investors with benchmark tracking of the COMEX gold future.

**S&P GSCI® Light Energy Index:** A sub-index of the S&P GSCI, provides investors with a reliable and publicly available benchmark for investment performance in the energy commodity market.

**S&P Health Care Index:** A market capitalization weighted index that tracks the performance of health care companies.

**S&P Industrials Index:** A market capitalization weighted index that tracks the performance of industrial companies.

**S&P/LSTA Leveraged Loan Index:** Reflects the market-weighted performance of institutional leveraged loans in the US loan market based upon real-time market weightings, spreads and interest payments. All of the index components are the institutional tranches (Term Loan A, Term Loan B and higher and Second Lien) of loans syndicated to US loan investors.

**S&P Banks Index:** This capitalization-weighted index tracks the performance of the banks in the S&P 500.

**S&P Biotechnology Index:** This capitalization-weighted index captures the performance of the biotechnology stocks in the S&P 500.

**S&P Materials Index:** A market capitalization weighted index that tracks the performance of materials companies.

**S&P Municipal Bond High Yield Index:** This index consists of bonds in the S&P Municipal Index that are not rated or are rated at below investment grade.

**S&P Municipal Bond Index:** This is a broad, market value-weighted index that seeks to measure the performance of the US municipal bond market.

**S&P Technology Index:** A market capitalization weighted index that tracks the performance of technology companies.

**S&P Telecommunications Index:** A market capitalization weighted index that tracks the performance of telecommunication companies.

**S&P Tobacco Index:** This capitalization-weighted index captures the performance of the tobacco stocks that appear in the S&P 500.

**S&P Transportation Index:** This is a capitalization-weighted index of companies in the transportation sector. It includes airlines, railroads, truckers and delivery companies.

**S&P US Preferred Stock Index:** This index is composed of US-traded preferred stocks that meet criteria relating to size, liquidity, issuance type, exchange listing and time to maturity.

**S&P Utilities Index:** A market capitalization weighted index that tracks the performance of utility companies.

**Shanghai Stock Exchange A-Shares Index:** This index is a market-capitalization-based index of all "A" shares trading on the Shanghai Stock Exchange.

**Shanghai Stock Exchange Composite Index:** A capitalization-weighted index. The index tracks the daily price performance of all A-shares and B-shares listed on the Shanghai Stock Exchange. The index was developed on December 19, 1990 with a base value of 100.

**SIFMA Municipal Swap Index:** The Securities Industry and Financial Markets Association Municipal Swap Index is a seven-day high-grade market index comprised of tax-exempt variable rate demand obligations with certain characteristics. The Index is calculated and published by Bloomberg. The Index is overseen by SIFMA's Municipal Swap Index Committee.

**Small Business Compensation Plans Index:** Based on surveys of NFIB members, the monthly index measures the net percentage of small businesses who have raised worker compensation over the past 3 to 6 months.

**St Louis Financial Stress Index:** Measures the degree of financial stress in the markets and is constructed from 18 weekly data series: seven interest rate series, six yield spreads and five other indicators.

**Taiwan Stock Exchange Index** This is a capitalization-weighted index of all listed common shares traded on the Taiwan Stock Exchange.

**Thomson One Venture Economics Global Private Equity Survey:** This survey provides a time-weighted average of internal rates of return on a sample of US private equity funds. The data are updated quarterly with a lag of several months.

**Thomson Reuters/Core Commodity Index:** This index is an arithmetic average of commodity futures prices with monthly rebalancing.

**Thomson Reuters/Jefferies CRB Index:** This is a futures price index of 19 exchange-traded commodities.

**Tankan Survey:** This is a quarterly economic survey of Japanese business issued by the Bank of Japan, which it then uses to formulate monetary policy.

**Texas Manufacturing Outlook Survey:** This monthly survey is based on responses from 112 Texas manufacturers who are asked whether output, employment, orders, prices and other indicators increased, decreased or remained unchanged during the previous month.

**TOPIX:** This free-floated-adjusted index tracks all domestic companies of the exchange's First Section.

**TWSE or TAIEX:** A capitalization-weighted index of all listed common shares traded on the Taiwan Stock Exchange. The index was based in 1966.

**University of Michigan Uncertain Business Conditions Index:** This index answers the question, "Now turning to business conditions in the country as a whole do you think that during the next 12 months we'll have good times financially, or bad times, or what?"

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## Index, Indicator and Survey Definitions (cont'd)

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**University of Michigan Consumer Confidence Index:** Measures three broad areas of consumer sentiment: personal finances, business conditions, and buying conditions.

**US 30-Day Treasury Bill Index:** Measures short-term obligations issued by the US government.

**US Broad Trade-Weighted Dollar Index:** Published weekly by the Federal Reserve Board, this index is a weighted average of the dollar's value against the currencies of 26 US trading partners.

**US Climate Extremes Index:** Measures the percent of the United States experiencing extreme temperatures, drought, precipitation, and tropical storms. **US Dollar Index:** Indicates the general international value of the USD by averaging exchange rates between the USD and major world currencies.

**US Economic Policy Uncertainty Index:** This index is based on three components: search results from 10 large newspapers of news articles on economic uncertainty; reports by the Congressional Budget Office of tax code provisions scheduled to expire in the next 10 years; and results from the Federal Reserve Bank of Philadelphia's Survey of Professional Forecasters.

**US Industrial Production Index:** The industrial production index (IPI) is a monthly economic indicator measuring real output in the manufacturing, mining, electric and gas industries, relative to a base year.

**US Labor Market Conditions Index:** This Federal Reserve index is derived from 19 labor market indicators designed to gauge the strength of the jobs market.

**US Trade-Weighted Dollar Index:** A weighted average of the foreign exchange value of the US dollar against a subset of the broad index currencies that circulate widely outside the US.

**VIX:** This is a trademarked ticker symbol for the Chicago Board Options Exchange Market Volatility Index, a popular measure of the implied volatility of S&P 500 Index options. Often referred to as the fear index or the fear gauge, it represents one measure of the market's expectation of stock market volatility over the next 30-day period.

**VSTOXX Index:** This index is based on the EURO STOXX 50 Index options, which trade on the Eurex Exchange. It measures implied volatility on options with a rolling 30-day expiry.

**Wage Growth Diffusion Index:** This index is a measure of how widespread changes in employment are across various industries; it measures the breadth of job creation.

**Wage Growth Tracker:** Published by the Federal Reserve Bank of Atlanta, this index is a measure of the wage growth of individuals. It is constructed using micro data from the Current Population Survey, and is the median percent change in the hourly wage of individuals observed 12 months apart.

**Wells Fargo Business Development Company Index** is intended to measure the performance of all business development companies listed on the New York Stock Exchange or NASDAQ that satisfies market capitalization and other eligibility requirements. This index is a total return index.

**Westpac Nominal Effective Exchange Rate Index:** A nominal effective exchange rate or trade-weighted exchange rate is a geometric average of a country's bilateral exchange rate. Westpac calculates trade weights using IMF Direction of Trade Statistics.

**Wilshire 5000 Total Market Index:** This index measures the performance of all US equity securities with readily available price data. Over 5,000 capitalization weighted security returns are included.

**ZEW Economic Sentiment Index:** This index is based on a monthly survey of investor optimism in Germany.

**ZEW Euro Zone Economic Sentiment Index:** This index is based on a monthly survey of investor optimism in the Euro Zone.