

### JANUARY 2018 IN REVIEW

February Update | As of January 31, 2018

## **ECONOMY:**ON SOLID FOOTING AS 2018 BEGAN

### **Economic Data**

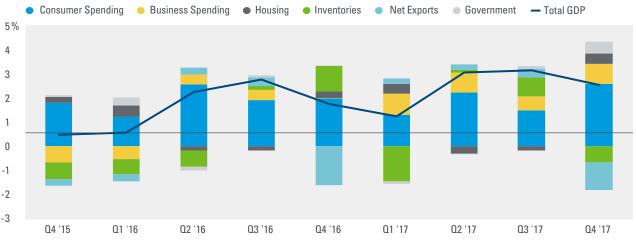
January 2018 saw December's trend of above-consensus economic reports taper off, though the data suggests strong underlying fundamentals in the U.S. economy, supported by solid consumer spending. Fourth quarter growth in real gross domestic product (GDP) of 2.6% fell short of the more optimistic 3.0% forecast by Bloomberg-surveyed consensus, dragged down largely by inventories and trade (faster growth in exports than imports). Both economic factors contributed heavily to the growth rate of GDP in the third quarter of 2017, which speaks more toward disruptions from hurricanes than a fundamental decline in momentum. Consumer spending was the standout contributor to the

GDP report, corroborated by upbeat consumer confidence reports, supported by tax cuts and the drop in the household savings rate.

Consumer-oriented data for the fourth quarter of 2017 outlined a significant acceleration relative to the third quarter. Retail sales data excluding autos were in line with expectations and the strongest since 2010. The strength, which has the potential to be inflated given post-hurricane spending, may continue in light of tax cuts and improving economic growth. Job growth (+148K) slowed and missed expectations in December (reported in January) but appeared to be dragged down by temporary factors. Wage growth at 2.5% year over year strengthened modestly. Consumers remained confident, as the University of Michigan Consumer Sentiment Index topped expectations and remains elevated.

Jobless claims posted a drop in January, though this is made less significant given the usual volatility

### CONTRIBUTION TO REAL GROSS DOMESTIC PRODUCT (GDP) GROWTH BY ECONOMIC SECTOR



Source: LPL Research, Bloomberg 01/31/18

around seasonal layoffs and construction shut-ins. The ADP National Employment Report exceeded consensus, keeping pace with December's reading and indicative of tightening labor market. Bloomberg economists expect that the unemployment rate will fall below 4% by year-end. The Employment Cost Index, which outlines the cost of labor for U.S. businesses, continued upward, confirming a tight labor market and increasing wage pressures.

Consumer inflation, detailed in the Consumer Price Index (CPI), was under scrutiny given the potential for accelerating inflation to lead to a faster pace of Federal Reserve (Fed) rate hikes. Though Core CPI, which excludes food and energy, surprised to the upside at 1.8% year over year, the core goods category pickup is viewed as unlikely to be sustained. Headline CPI (including all items) came in at +2.1% year over year, meeting expectations. Inflation may become a bigger concern should the U.S. dollar weaken further, pushing up import prices.

Productivity contracted 0.1% in the fourth quarter, though this was largely attributed to weather disruptions and is expected to normalize in the first quarter of 2018. Productivity has seen slow gains over the last few years due largely to demographic headwinds as the labor force ages, but may accelerate due to rising wage pressures and increasing labor scarcity.

Business investment continued to pick up in the fourth quarter, increasing 6.8% from the third quarter. Manufacturing surveys for December, released in January, largely came in ahead of expectations. The ISM Manufacturing Index reading for December, at 59.7, exceeded expectations. A reading above 50 indicates economic expansion.

Regional surveys showed strength as well: Dallas, Chicago, and Kansas City beat expectations though Richmond and Philadelphia surveys fell short.

Businesses remain confident based on strength in the NFIB Small Business Optimism Index.

### **Central Banks**

Fed Chair Janet Yellen presided over her last
Federal Reserve Open Market Committee meeting
as markets prepared for the transition to incoming
Fed Chair Jerome Powell. As expected, the Fed
left monetary policy unchanged, keeping the fed
funds target rate between 1.25% and 1.50%, while
allowing Treasuries and mortgage-backed securities
to roll off its balance sheet. The central bank also
upgraded its economic assessments, noting solid
gains in employment, household spending, and
business fixed investment, while taking a more
hawkish stance on inflation. Markets continued to
price in a very high likelihood of a March rate hike at
the conclusion of the meeting.

Turning to other central banks, as expected, the European Central Bank (ECB) made no changes to interest rates or forward guidance on its quantitative easing program. The ECB is still expected to begin tapering bond purchases in September but remains flexible. The strong euro currency remained a focus for its potential risk to European exports.

The Bank of Japan (BOJ) left policy unchanged on January 23. Markets had been pricing in a slight chance of a near-term taper in the BOJ's asset purchase program, following reports early in the month that it adjusted purchases of intermediate- and long-term bonds. That move was more operational in nature.

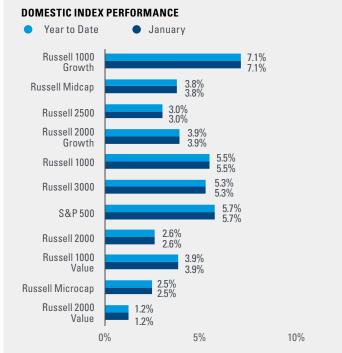
## **GLOBAL EQUITIES:**BEST JANUARY FOR THE S&P 500 SINCE 1997

### U.S.

The S&P 500 returned a strong 5.7% in January, which is the best start to a year since 1997 and the 11th best January since 1950.\* The gain brought the S&P 500's total return win streak to a remarkable 15 months, while the index has risen 10 straight months on a price basis. The Dow produced a similar monthly return (+5.9%), while the Nasdaq fared even better with a 7.4% gain bolstered by strong gains in the technology sector.

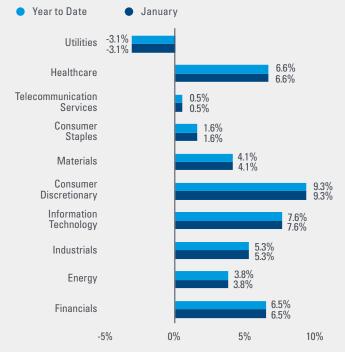
After such a strong 2017 with record-breaking low volatility, it was logical to anticipate a choppier start to 2018. However, those concerns were misplaced, at least in January (though February is off to a rocky start as we write this), as the rally continued through month end. The late-December passage of the tax law clearly supported investor sentiment during the month, although the continued stream of strong global economic data, a strong start to fourth quarter earnings season, and January's historically strong seasonal performance also played a role. Markets generally looked past the temporary factors that led to the shortfall in fourth quarter U.S. GDP, focusing on strong consumer spending and business investment. Political uncertainty had limited impact on markets despite a short government shutdown mid-month.

Sector leadership during the month was pro-cyclical, as would be expected in such a strong month for stocks. The sharp increase in interest rates also played a role, as the interest rate sensitive real estate and utilities sectors suffered losses for the month while telecommunications barely finished in positive territory. Consumer discretionary topped the sector rankings on strength in retail (both internet and traditional), while technology finished second, driven by market-beating gains in the software and internet groups.



Source: LPL Research, FactSet 01/31/18

### **S&P 500 SECTOR PERFORMANCE**



Source: LPL Research, FactSet 01/31/18

Indexes are unmanaged and cannot be invested into directly. Past performance is no guarantee of future results.

Stock investing involves risk, including loss of principal.

Because of its narrow focus, sector investing will be subject to greater volatility than investing more broadly across many sectors and companies.



 $<sup>^{\</sup>ast}$  The modern design of the S&P 500 stock index was first launched in 1957. Performance back to 1950 incorporates the performance of predecessor index, the S&P 90.

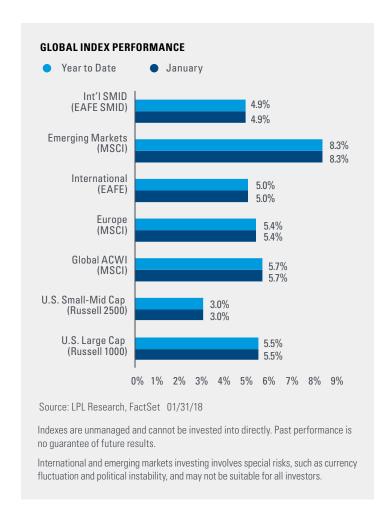
Relative underperformance continued for small caps, which struggled to keep up with large caps in 2017, despite the fact that smaller companies tend to pay higher tax rates and therefore generally benefit more from the reduction in corporate tax rates. Small caps returned 2.6% for the month, based on the Russell 2000 Index, trailing the 5.5% return for the large cap Russell 1000 Index benchmark.

In terms of style, growth's dominance over value continued in January, based on the Russell 3000 Growth and Value indexes. Growth's 6.8% return nearly doubled value's 3.7% gain for the month, as the top two growth sectors—technology and consumer discretionary—topped the month's sector rankings. Growth has now outpaced value in 11 of the past 13 months and for the majority of the ongoing bull market.

### International

Developed international and emerging market (EM) equities both posted solid gains in January, based on the MSCI EAFE and EM indexes, though only the MSCI EM Index outpaced the S&P 500 (in U.S. dollar terms). The MSCI EAFE and MSCI EM indexes returned 5.0% and 8.3%, respectively, compared with the near 6.0% return for the U.S. based S&P 500 Index. A weak U.S. dollar was the biggest driver of the monthly gains, with the U.S. Dollar Index falling more than 3.0%, though the currency was whipsawed by mixed messages from Treasury Security Mnuchin and President Trump about their views on the currency. Additional evidence of strong and steady global economic growth, the rebound in overseas corporate profits, ongoing monetary policy support from the ECB and BOJ, and relatively lower valuations all helped attract global investors to international markets.

Gains in developed international markets were broad based. The major MSCI regional and country indexes, including Europe, Asia-Pacific, United Kingdom, Germany, and Japan, all rose between 4–6% for the month, led by the Asia-Pacific region. The MSCI France Index performed particularly well on strength in financials and aerospace stocks, while



Brexit-related political uncertainty and a slight softening of the economic outlook weighed on the MSCI United Kingdom Index.

Strong EM performance in January was driven primarily by China and Brazil, with both MSCI country indexes producing double-digit gains, while South Africa and India lagged. Trade tensions, exacerbated by fresh U.S. tariffs on solar panels and washing machines, had little impact on the Chinese equity market but did contribute to some underperformance in South Korea. China continued to report generally solid economic data, while Brazilian stocks were buoyed by a rebounding economy, signs of political clarity, and rising commodity prices. The ongoing risk that the United States could pull out of NAFTA failed to meaningfully impact Mexican stocks, as the MSCI Mexico Index gained 7.8% during the month.

## FIXED INCOME: INFLATION WORRIES LED TO HIGHER YIELDS

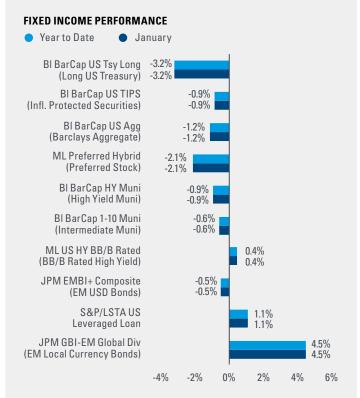
Treasury yields rose considerably across the Treasury yield curve during January. Longer-term yields were pressured upward by higher inflation expectations and higher real yields. The increasing belief over the month of an upside surprise to inflation made investors skittish that the Fed could become more aggressive in response to higher inflation. This sent short-term yields higher as well. The 2-year Treasury yield increased by 25 basis points (0.25%), while the 10- and 30-year Treasury yield increased 32 (0.32%) and 21 (0.21%) basis points, respectively, steepening the Treasury yield curve.

The upward move in interest rates at all maturities created strong headwinds for high-quality fixed income. The broad Bloomberg Barclays Aggregate Bond Index returned -1.2% during the month, with Treasuries underperforming, returning -1.4% (Bloomberg Barclays U.S. Treasury Index). Mortgage-backed securities and investment-grade corporates returned -1.2% and -1.0%, respectively.

Economically sensitive sectors of fixed income were boosted by equity market strength and a continued rally in the price of oil. High-yield bonds returned 0.4% and bank loans 1.1%. Preferred securities, with their above average interest rate sensitivity, were hit the hardest during the month, returning -2.1%. Unhedged foreign bonds, with the tailwind of a 3.3% decline in the dollar, returned 3.2%.

Investing in foreign and emerging markets debt securities involves special additional risks. These risks include, but are not limited to, currency risk, geopolitical and regulatory risk, and risk associated with varying settlement standards.

Municipal bonds are subject to availability, price, and to market and interest rate risk if sold prior to maturity. Bond values will decline as interest rate rise. Interest income may be subject to the alternative minimum tax. Federally tax-free but other state and local taxes may apply.



### **U.S. TREASURY YIELDS**

Security	12/31/17	01/31/18	Change in Yield
3 Month	1.39	1.46	0.07
2 Year	1.89	2.14	0.25
5 Year	2.20	2.52	0.32
10 Year	2.40	2.72	0.32
30 Year	2.74	2.95	0.21

### **AAA MUNICIPAL YIELDS**

Security	12/31/17	01/31/18	Change in Yield
2 Year	1.32	1.56	0.24
5 Year	1.58	1.81	0.23
10 Year	2.10	2.31	0.21
20 Year	2.64	2.83	0.19
30 Year	2.76	2.98	0.22

Source: LPL Research, Bloomberg, FactSet 01/31/18

Indexes are unmanaged and cannot be invested into directly. Past performance is no guarantee of future results.

Bonds are subject to market and interest rate risk if sold prior to maturity. Bond values and yields will decline as interest rates rise, and bonds are subject to availability and change in price.

Bank loans are loans issued by below investment-grade companies for short-term funding purposes with higher yield than short-term debt and involve risk.



06

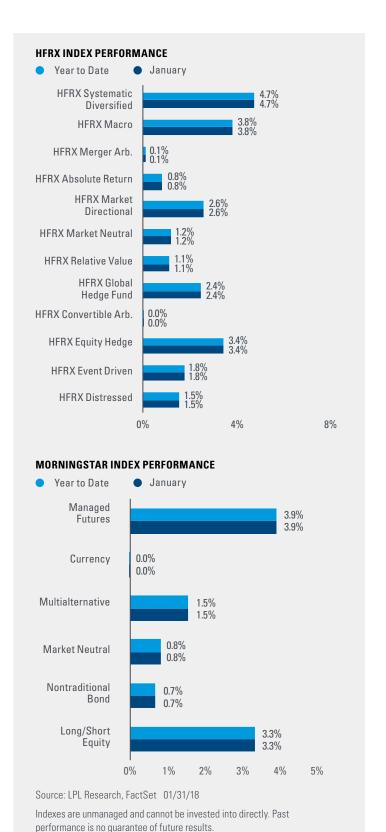
Member FINRA/SIPC

# **ALTERNATIVES:**ALTERNATIVE STRATEGIES BEGIN 2018 IN THE GREEN

All alternative investment categories delivered positive returns to begin 2018, with the HFRX Systematic Diversified CTA Index (+4.7%) and the HFRX Equity Hedge Index (+3.4%) leading individual category gains.

Returns within the long/short equity space were in line with the industries approximately 60.0% net long market exposure. Long exposure to the financials, consumer discretionary, and information technology sectors supported overall gains. Short exposure to more defensive, low-volatility sectors such as consumer staples and utilities also proved beneficial, as both underperformed the broader market. Gross market exposure, which consists of a fund's long positioning, plus their short exposure, has been marginally reduced, as many strategies have looked to cover short positioning due to the global market strength. The 3.4% return was the largest monthly return since December 2010 and 8th straight month of positive performance.

Within the managed futures category, long global equity exposure continued to drive gains, while short exposure to intermediate- and long-term fixed income holdings added to profits as interest rates continued their ascent. The recent increase in oil prices also contributed to gains and has acted as a strong source of positive diversification for many strategies. Suitable investors should remain mindful of the long equity exposure in most managed futures programs; this positioning is expected to remain in place to some degree until the market experiences a protracted drawdown. Historically, managed futures have delivered attractive returns relative to the equity market during sell-offs; however, until a more sustained negative trend develops, we expect there to be a positive correlation to equities for many of the intermediate-term trend followers. As previously mentioned, we continue to favor either multi-managers or a combination of uncorrelated trading strategies to smooth and diversify return profiles.



Alternative strategies may not be suitable for all investors and should be considered as an investment for the risk capital portion of the investor's

portfolio. The strategies employed in the management of alternative investments may accelerate the velocity of potential losses.

# **REAL ASSETS:**STRONG MONTH FOR MLPS AND INTERNATIONAL REAL ESTATE

January was a strong month for liquid real assets overall, though most had a hard time keeping up with the strong gains in global equities. Investors generally favored more economically sensitive investments over defensive, yield-oriented choices while a weaker U.S. dollar supported overseas returns. Master limited partnerships (MLP) and international real estate produced the category's best gains, while U.S. REITs suffered declines.

### **MLPs**

Following up on a strong December, MLPs had another solid month in January as oil prices rose, investors got clarity on the tax law changes, and markets became increasingly comfortable with the industry's ongoing transition to self-funding models (rather than relying on the capital markets). Gains came despite slowing distribution growth prospects and rising interest rates.

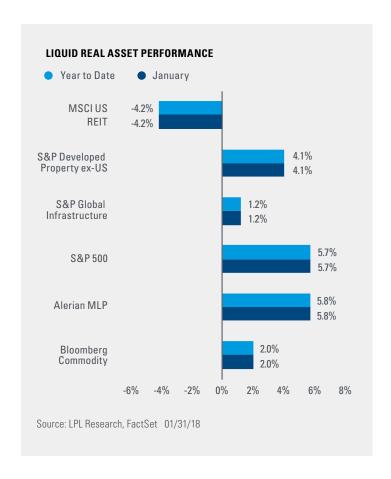
### **REITs & Global Listed Infrastructure**

Domestic REITs significantly underperformed the broad equity markets to start the year, posting negative returns in January as cyclical sectors outperformed interest rate sensitives. The hotel/lodging sector, the only sector with a positive return for the month, performed relatively well, due in part to the sector's shorter-duration assets relative to other property types given the market's preference for less interest rate sensitivity as interest rates rose. Retail was the worst performing sector, particularly regional malls, which is a trend that persisted throughout most of 2017.

Although the S&P Global Infrastructure Index produced a positive return and outperformed REITs for the month, it also significantly underperformed the broad equity markets due to its greater interest

Investing in real estate/REITs involves special risks such as potential illiquidity and may not be suitable for all investors. There is no assurance that the investment objectives of this program will be attained.

Investing in MLPs involves additional risks as compared with the risks of investing in common stock, including risks related to cash flow, dilution, and voting rights.



rate sensitivity and defensive characteristics. The index's industrials component generated positive returns, offset by weakness in the energy and utilities components.

### **Commodities**

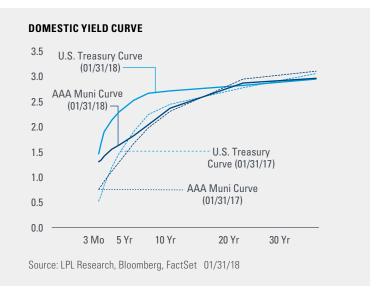
The Bloomberg Commodity Index gained 2.0% in January driven by strong performance in energy and grains, supported by a weak U.S. dollar. Oil was particularly strong, with crude up more than 7% on continued solid demand, inventory drawdowns, and capped production overseas. Gasoline and natural gas were also higher. Agriculture, corn, soybeans, and wheat all positively contributed to overall performance in the index, while agriculture softs, including sugar and coffee were weak. Metals prices were mixed with modest gains for gold, while silver was little changed and copper and aluminum fell.

MLPs may trade less frequently than larger companies due to their smaller capitalizations, which may result in erratic price movement or difficulty in buying or selling. MLPs are subject to significant regulation and may be adversely affected by changes in the regulatory environment, including the risk that an MLP could lose its tax status as a partnership. Additional management fees and other expenses are associated with investing in MLP funds.



### MONTHLY PERFORMANCE REPORT





		1 Mo	3 Mos	YTD	12 Mos
ap	S&P 500	5.73	10.18	5.73	26.41
	DJIA	5.88	12.49	5.88	34.80
Large Cap	Russell 1000	5.49	9.92	5.49	25.84
Lar	Russell 1000 Value	3.87	8.61	3.87	17.22
	Russell 1000 Growth	7.08	11.19	7.08	34.89
	Russell 2000	2.61	5.14	2.61	17.18
Ф	Russell 2000 Value	1.23	3.17	1.23	9.95
Small/Mid Cap	Russell 2000 Growth	3.90	7.00	3.90	24.90
Ξ	Russell Microcap	2.45	4.47	2.45	17.72
mall	Russell Midcap	3.76	8.25	3.76	20.08
S	Russell Midcap Value	2.30	7.06	2.30	14.03
	Russell Midcap Growth	5.66	9.78	5.66	28.09
d.	Russell 3000	5.27	9.55	5.27	25.16
AII Cap	Russell 3000 Value	3.67	8.20	3.67	16.65
⋖	Russell 3000 Growth	6.84	10.87	6.84	34.11
ţ	MSCIEAFE	5.02	7.86	5.02	28.20
International Markets	MSCI ACWI ex US	5.58	8.86	5.58	30.27
	MSCI Europe	5.41	7.28	5.41	30.35
	MSCI Japan	4.58	8.49	4.58	25.42
	MSCI AC Asia Pacific ex Japan	6.72	10.74	6.72	38.51
	MSCI EAFE SMID	4.92	8.76	4.92	32.83

		1 Mo	3 Mos	YTD	12 Mos
Ď	MSCI ACWI ex US SMID	4.94	9.37	4.94	31.94
inue	MSCI Emerging Mkts	8.34	12.52	8.34	41.49
Cont	MSCIEMEA	6.14	17.48	6.14	30.16
Int'l -Continued	MSCI Latin America	13.17	14.75	13.17	30.55
드	MSCI Frontier Markets	5.73	10.33	5.73	31.17
	Consumer Discretionary	9.34	17.64	9.34	29.00
	Consumer Staples	1.59	9.72	1.59	13.42
SOI	Energy	3.81	10.80	3.81	6.60
-S&P 500 GICS	Financials	6.48	12.36	6.48	29.79
, P 5	Healthcare	6.65	9.05	6.65	27.33
	Industrials	5.31	11.45	5.31	25.68
Sectors	Information Technology	7.63	8.87	7.63	43.11
	Materials	4.14	7.21	4.14	23.26
	Telecom Services	0.55	12.77	0.55	1.81
	Utilities	-3.07	-6.52	-3.07	7.32

Source: LPL Research, Bloomberg, FactSet 01/31/18

(Data continued on following page.)

All data represent total returns, where applicable. Information contained in this report is from sources deemed to be reliable. We cannot guarantee the accuracy or completeness of such information and we assume no liability for damages resulting from or arising out of the use of such information. Further, please note that past performance is not indicative of future results.



		1 Mo	3 Mos	YTD	12 Mos
	BI BarCap US Agg	-1.15	-0.83	-1.15	2.15
	Bl BarCap 1-10 Muni	-0.40	-0.81	-0.40	1.83
	BI BarCap HY Muni	-0.94	0.60	-0.94	7.16
	BI BarCap Inv. Grade Credit	-0.96	-0.20	-0.96	5.08
	BI BarCap Muni Long Bond -22+	-1.84	-0.12	-1.84	5.56
	BI BarCap US Agg Securitized MBS	-1.17	-0.99	-1.17	1.31
	BI BarCap US TIPs	-0.86	0.18	-0.86	1.27
	BI BarCap US Treasury Interm	-0.98	-1.25	-0.98	-0.04
come	BI BarCap US Treasury Long	-3.23	-0.86	-3.23	4.62
Fixed Income	BI BarCap US High Yield Loans	1.07	1.47	1.07	4.07
	ML Preferred Stock Hybrid	-2.11	-1.15	-2.11	6.77
	ML US High Yield BB/B Rated	0.43	0.37	0.43	6.23
	ML US Convert ex Mandatory	2.94	2.84	2.94	15.84
	JPM GBI Global ex US Hedged	-0.41	-0.01	-0.41	2.99
	JPM GBI Global ex US Unhedged	3.15	5.46	3.15	11.83
	JPM GBI-EM Global Div	4.48	8.39	4.48	17.72
	JPM ELMI+	2.89	5.53	2.89	12.68
	JPM EMBI+ Composite	-0.50	-0.69	-0.50	6.20

		1 Mo	3 Mos	YTD	12 Mos
	HFRX Absolute Return	0.81	0.51	0.81	3.91
	HFRX Market Directional	2.58	3.78	2.58	4.68
	HFRX Convertible Arb.	0.01	0.90	0.01	6.44
	HFRX Distressed	1.52	2.93	1.52	4.35
	HFRX Equity Hedge	3.41	5.39	3.41	12.78
	HFRX Market Neutral	1.19	0.51	1.19	2.18
/es	HFRX Event Driven	1.76	1.80	1.76	7.22
Alternatives	HFRX Merger Arb.	0.11	0.60	0.11	2.63
Iteri	HFRX Relative Value Arb.	1.09	1.51	1.09	4.28
⋖	HFRX Global Hedge Fund	2.45	3.27	2.45	8.04
	HFRX Macro Index	3.80	4.50	3.80	7.43
	HFRX Systematic Diversified	4.73	8.21	4.73	12.03
	Bloomberg Commodity	1.99	4.55	1.99	3.58
	DJ Wilshire REIT	-3.96	-0.98	-3.96	0.51
	Alerian MLP	5.76	9.28	5.76	-5.75

		Latest Mo End (01/31/18)	3 Mos Ago (10/31/17)	Latest Yr End (12/31/17)	12 Mos Ago (01/31/17)
Currency	U.S. Dollar Index Value	89.13	94.55	92.12	99.55
	USD vs. Yen	109.19	113.64	112.71	112.78
	Euro vs. USD	1.24	1.16	1.20	1.08
Cmdtys	Gold (\$ per Troy Ounce)	1345.00	1270.40	1302.50	1210.30
	Crude Oil (\$ per Barrel)	64.73	54.38	60.42	52.81

Source: LPL Research, Bloomberg, FactSet 01/31/18



#### IMPORTANT DISCLOSURES

The economic forecasts set forth in the presentation may not develop as predicted. The opinions voiced in this material are for general information only and are not intended to provide or be construed as providing specific investment advice or recommendations for any individual security. There is no assurance that the techniques and strategies discussed are suitable for all investors or will yield positive outcomes. The purchase of certain securities may be required to affect some of the strategies.

Small cap is a term used to classify companies with a relatively small market capitalization. The definition of small cap can vary, but it is generally a company with a market capitalization of between \$300 million and \$2 billion. The prices of small cap stocks are generally more volatile than large cap stocks.

All information is believed to be from reliable sources; however LPL Financial makes no representation as to its completeness or accuracy.

All performance referenced is historical and is no guarantee of future results.

### Stock and Pooled Investment Risks

There is no guarantee that a diversified portfolio will enhance overall returns or outperform a non-diversified portfolio. Diversification does not ensure against market risk.

### Bond and Debt Equity Risks

Government bonds and Treasury bills are guaranteed by the U.S. government as to the timely payment of principal and interest and, if held to maturity, offer a fixed rate of return and fixed principal value. However, the value of fund shares is not guaranteed and will fluctuate.

High-yield/junk bonds are not investment-grade securities, involve substantial risks, and generally should be part of the diversified portfolio of sophisticated investors.

Treasury Inflation-Protected Securities (TIPS) are subject to interest rate risk and opportunity risk. If interest rates rise, the value of your bond on the secondary market will likely fall. In periods of no or low inflation, other investments, including other Treasury bonds, may perform better.

Preferred stock investing involves risk, which may include loss of principal, and are subject to many of the same risks which affect fixed income securities.

### Alternative Risks

Currency risk is a form of risk that arises from the change in price of one currency against another. Whenever investors or companies have assets or business operations across national borders, they face currency risk if their positions are not hedged.

Long/short equity funds are subject to normal alternative investment risks, including potentially higher fees; while there is additional management risk, as the manager is attempting to accurately anticipate the likely movement of both their long and short holdings. There is also the risk of "beta-mismatch," in which long positions could lose more than short positions during falling markets.

Global macro strategies attempt to profit from anticipated price movements in stock markets, interest rates, foreign exchange and physical commodities. Global macro risks include but are not limited to imperfect knowledge of macro events, divergent movement from macro events, loss of principal, and related geopolitical risks.

Event driven strategies, such as merger arbitrage, consist of buying shares of the target company in a proposed merger and fully or partially hedging the exposure to the acquirer by shorting the stock of the acquiring company or other means. This strategy involves significant risk as events may not occur as planned and disruptions to a planned merger may result in significant loss to a hedged position.

Selling short can result in losses should the borrowed security increase in price, rather than decline. The theoretical potential loss is unlimited. Additionally, short sales will incur interest on the borrowed shares while also being subject to margin calls, or early sales in the event that the original owner wishes to sell their position.

Commodity-linked investments may be more volatile and less liquid than the underlying instruments or measures, and their value may be affected by the performance of the overall commodities baskets as well as weather, geopolitical events, and regulatory developments.

Managed futures strategies use systematic quantitative programs to find and invest in positive and negative trends in the futures markets for financials and commodities. Futures and forward trading is speculative, includes a high degree of risk that the anticipated market outcome may not occur, and may not be suitable for all investors.

### Definitions

Yield curve is a line that plots the interest rates, at a set point in time, of bonds having equal credit quality, but differing maturity dates. The most frequently reported yield curve compares the 3-month, 2-year, 5-year, and 30-year U.S. Treasury debt. This yield curve is used as a benchmark for other debt in the market, such as mortgage rates or bank lending rates. The curve is also used to predict changes in economic output and growth.

Different agencies employ different rating scales for credit quality. Standard & Poor's (S&P) and Fitch both use scales from AAA (highest) through AA, A, BBB, BB, B, CCC, CC, Cto D(lowest). Moody's uses a scale from Aaa (highest) through Aa, A, Baa, Ba, B, Caa, Ca to C (lowest).

The Consumer Sentiment report refers to a report published by the University of Michigan, in which the University's Consumer Survey Center questions 500 households each month on their financial conditions and attitudes about the economy. Consumer sentiment is important because it is directly related to the strength of consumer spending. Preliminary estimates for a month are released at mid-month. Final estimates for a month are released near the end of the month.

Gross Domestic Product (GDP) is the monetary value of all the finished goods and services produced within a country's borders in a specific time period, though GDP is usually calculated on an annual basis. It includes all of private and public consumption, government outlays, investments and exports less imports that occur within a defined territory.

The U.S. Institute for Supply Managers (ISM) manufacturing index is an economic indicator derived from monthly surveys of private sector companies, and is intended to show the economic health of the U.S. manufacturing sector. A PMI of more than 50 indicates expansion in the manufacturing sector, a reading below 50 indicates contraction, and a reading of 50 indicates no change.





The Consumer Confidence Index is based on consumers' perceptions of current business and employment conditions, as well as their expectations for six months hence regarding business conditions, employment, and income. Three thousand households across the country are surveyed each month. In general, while the level of consumer confidence is associated with consumer spending, the two do not move in tandem each and every month.

Beta measures a portfolio's volatility relative to its benchmark. A Beta greater than 1 suggests the portfolio has historically been more volatile than its benchmark. A Beta less than 1 suggests the portfolio has historically been less volatile than its benchmark.

### INDEX DEFINITIONS

The Alerian MLP Index is 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 in real time on a price-return basis (NYSE: AMZ) and on a total-return basis (NYSE: AMZX).

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

The Bloomberg Barclays U.S. Aggregate Securitized MBS Index tracks agency mortgage backed pass-through securities (both fixed-rate and hybrid (ARM) guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC).

The Bloomberg Barclays Capital High Yield Index covers the universe of publicly issued debt obligations rated below investment grade. Bonds must be rated below investment grade or high yield (Ba1/BB+ or lower), by at least two of the following ratings agencies: Moody's, S&P, and Fitch. Bonds must also have at least one year to maturity, have at least \$150 million in par value outstanding, and must be U.S. dollar denominated and nonconvertible. Bonds issued by countries designated as emerging markets are excluded.

The Bloomberg Barclays 1-10 Year Municipal Blend Index is a market value-weighted index which covers the short and intermediate components of the Barclays Municipal Bond Index—an unmanaged, market value-weighted index which covers the U.S. investment-grade tax-exempt bond market. The 1-10 Year Municipal Blend index tracks tax-exempt municipal General Obligation, Revenue, Insured, and Prerefunded bonds with a minimum \$5 million par amount outstanding, issued as part of a transaction of at least \$50 million, and with a remaining maturity from 1 up to (but not including) 12 years. The index includes reinvestment of income.

The Bloomberg Barclays Corporate Investment Grade Credit Index is a broad-based benchmark that measures the investment-grade, U.S. dollar-denominated, fixed rate, taxable corporate bond market. It includes USD-denominated securities publicly issued by U.S. and non-U.S. industrial, utility, and financial issuers that meet specified maturity, liquidity, and quality requirements.

The Bloomberg Barclays U.S. High-Yield Loan Index tracks the market for dollar-denominated floating-rate leveraged loans. Instead of individual securities, the U.S. High-Yield Loan Index is composed of loan tranches that may contain multiple contracts at the borrower level.

The Bloomberg Barclays Municipal High Yield Bond Index is comprised of bonds with maturities greater than one year, having a par value of at least \$3 million issued as part of a transaction size greater than \$20 million, and rated no higher than 'BB+' or equivalent by any of the three principal rating agencies. (The long and the short are subindexes of the Municipal Bond Index, based on duration length.)

The Bloomberg Barclays U.S. TIPS Index is a rules-based, market value-weighted index that tracks Inflation-Protected Securities issued by the U.S. Treasury. The U.S. TIPS Index is a subset of the Global Inflation-Linked Index, with a 36% market value weight in the index (as of December 2007), but is not eligible for other nominal treasury or aggregate indexes In order to prevent the erosion of purchasing power, TIPS are indexed to the nonseasonally adjusted Consumer Price Index for All Urban Consumers, or the CPI-U (CPI).

The Bloomberg Barclays U.S. Treasury Index is an unmanaged index of public debt obligations of the U.S. Treasury with a remaining maturity of one year or more. The index does not include T-bills (due to the maturity constraint), zero coupon bonds (strips), or Treasury Inflation-Protected Securities (TIPS). (The long and the intermediate are subindexes of the U.S. Treasury Index, based on duration length.)

The Bloomberg Commodity Index is calculated on an excess return basis and composed of futures contracts on 22 physical commodities. It reflects the return of underlying commodity futures price movements.

The BofA Merrill Lynch Preferred Stock Hybrid Securities Index is an unmanaged index consisting of a set of investment-grade, exchange-traded preferred stocks with outstanding market values of at least \$50 million that are covered by Merrill Lynch Fixed Income Research.

The BofA Merrill Lynch BB-B U.S. High Yield Constrained Index contains all securities in the BofA Merrill Lynch US High Yield Index rated BB+ through B- by S&P (or equivalent as rated by Moody's or Fitch), but caps issuer exposure at 2%. Index constituents are capitalization-weighted, based on their current amount outstanding, provided the total allocation to an individual issuer does not exceed 2%.

The BofA Merrill Lynch U.S. Convertibles Ex-Mandatory Index is a rule-driven Index designed to capture the organic evolution of the U.S. convertible market and adjust automatically based on any changes in the market such as size of the market, industry skew, structure popularity, issuer size or equity sensitivity. The index rules include issues: U.S. dollar denominated greater than \$50M in aggregate market value that are publicly traded (including 144A) in the U.S. market but are not currently in bankruptcy. Exclusions are synthetic convertibles and mandatory convertibles.

The Dow Jones Industrial Average Index is comprised of U.S.-listed stocks of companies that produce other (non-transportation and non-utility) goods and services. The Dow Jones industrial averages are maintained by editors of The Wall Street Journal. While the stock selection process is somewhat subjective, a stock typically is added only if the company has an excellent reputation, demonstrates sustained growth, is of interest to a large number of investors, and accurately represents the market sectors covered by the average. The Dow Jones averages are unique in that they are price weighted; therefore, their component weightings are affected only by changes in the stocks' prices.

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





The HFRX Absolute Return Index is 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.

The HFRX Distressed Restructuring Index strategies employ an investment process focused on corporate fixed income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near term proceedings. Managers are typically actively involved with the management of these companies, frequently involved on creditors' committees in negotiating the exchange of securities for alternative obligations, either swaps of debt, equity, or hybrid securities. Managers employ fundamental credit processes focused on valuation and asset coverage of securities of distressed firms; in most cases portfolio exposures are concentrated in instruments that are publicly traded, in some cases actively and in others under reduced liquidity, but in general for which a reasonable public market exists. In contrast to special situations, distressed strategies employ primarily debt (greater than 60%) but also may maintain related equity exposure.

The HFRX Equity Hedge Index, also known as long/short equity, combines core long holdings of equities with short sales of stock or stock index options. Equity hedge portfolios may be anywhere from net long to net short, depending on market conditions. Equity hedge managers generally increase net long exposure in bull markets and decrease net long exposure (or even are net short) in a bear market. Generally, the short exposure is intended to generate an ongoing positive return in addition to acting as a hedge against a general stock market decline. Stock index put options are also often used as a hedge against market risk. Profits are made when long positions appreciate and stocks sold short depreciate. Conversely, losses are incurred when long positions depreciate or the value of stocks sold short appreciates. Equity hedge managers' source of return is similar to that of traditional stock pickers on the upside, but they use short selling and hedging to attempt to outperform the market on the downside.

The HFRX Equity Market Neutral Index 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. These can include both factor-based and statistical arbitrage/trading strategies. Factor-based investment strategies include strategies in which the investment thesis is predicated on the systematic analysis of common relationships between securities. In many but not all cases, portfolios are constructed to be neutral to one or multiple variables, such as broader equity markets in dollar or beta terms, and leverage is frequently employed to enhance the return profile of the positions identified. Statistical arbitrage/trading strategies consist of strategies in which the investment thesis is predicated on exploiting pricing anomalies that may occur as a function of expected mean reversion inherent in security prices; high frequency techniques may be employed and trading strategies may also be employed on the basis on technical analysis or opportunistically to exploit new information the investment manager believes has not been fully, completely, or accurately discounted into current security prices. Equity market neutral strategies typically maintain characteristic net equity market exposure no greater than 10% long or short.

The HFRX Event Driven Index 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. Security types can range from most senior in the capital structure to most junior or subordinated, and frequently involve additional derivative securities. Event driven exposure includes a combination of sensitivities to equity markets, credit markets and idiosyncratic, company-specific developments. Investment theses are typically predicated on fundamental characteristics (as opposed to quantitative), with the realization of the thesis predicated on a specific development exogenous to the existing capital structure

The HFRX Global Hedge Fund Index is 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. The strategies are asset weighted based on the distribution of assets in the hedge fund industry.

The HFRX Macro Index strategy managers 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. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top-down and bottom-up theses, quantitative and fundamental approaches, and long- and short-term holding periods. Although some strategies employ RV techniques, macro strategies are distinct from RV strategies in that the primary investment thesis is predicated on predicted or future movements in the underlying instruments, rather than realization of a valuation discrepancy between securities. In a similar way, while both macro and equity hedge managers may hold equity securities, the overriding investment thesis is predicated on the impact movements in underlying macroeconomic variables may have on security prices, as opposed to EH, in which the fundamental characteristics on the company are the most significant and integral to investment thesis.

The HFRX Macro: Systematic Diversified CTA Index strategies have investment processes typically as function of mathematical, algorithmic, and technical models, with little or no influence of individuals over the portfolio positioning. Strategies employ an investment process designed to identify opportunities in markets exhibiting trending or momentum characteristics across individual instruments or asset classes. Strategies typically employ a quantitative process that focuses on statistically robust or technical patterns in the return series of the asset, and they typically focus on highly liquid instruments and maintain shorter holding periods than either discretionary or mean reverting strategies. Although some strategies seek to employ counter trend models, strategies benefit most from an environment characterized by persistent, discernible trending behavior. Systematic diversified strategies typically would expect to have no greater than 35% of the portfolio in either dedicated currency or commodity exposures over a given market cycle.

The HFRX Market Directional Index 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. As a component of the optimization process, the index selects constituents which characteristically exhibit higher volatilities and higher correlations to standard directional benchmarks of equity, bond market, and hedge fund industry.

The HFRX Merger Arbitrage Index strategies employ an investment process primarily focused on opportunities in equity and equity-related instruments of companies that are currently engaged in a corporate transaction. Merger arbitrage involves primarily announced transactions, typically with limited or no exposure to situations that pre- or post-date, or situations in which no formal announcement is expected to occur. Opportunities are frequently presented in cross border, collared, and international transactions that incorporate multiple geographic regulatory institutions, with typically involve minimal exposure to corporate credits. Merger arbitrage strategies typically have over 75% of positions in announced transactions over a given market cycle.

The HFRX Relative Value Arbitrage Index includes managers who maintain positions in which the investment thesis is predicated on the realization of a valuation discrepancy in the relationship between multiple securities. Managers employ a variety of fundamental and quantitative techniques to establish investment theses, and security types range broadly across equity, fixed income, derivative, or other security types. Fixed income strategies are typically quantitatively driven to measure the existing relationship between instruments and, in some cases, identify attractive positions in which the risk adjusted spread between these instruments represents an





attractive opportunity for the investment manager. RV position may be involved in corporate transactions also, but as opposed to ED exposures, the investment thesis is predicated on the realization of a pricing discrepancy between related securities, as opposed to the outcome of the corporate transaction.

The HFRX RV: FI-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. Strategies employ an investment process designed to isolate attractive opportunities between the price of a convertible security and the price of a non-convertible security, typically of the same issuer. Convertible arbitrage positions maintain characteristic sensitivities to credit quality the issuer, implied and realized volatility of the underlying instruments, levels of interest rates and the valuation of the issuer's equity, among other more general market and idiosyncratic sensitivities.

The J.P. Morgan GBI Global ex-U.S. Hedged Index tracks fixed rate issuances from high-income countries spanning the globe, launched in 1989.

The JPM GBI Global ex-U.S. Unhedged Index generally tracks fixed rate issuances form high-income countries spanning North America, Europe, and Asia, not including the United States.

The JPM GBI-EM Global Diversified Index limits the weights of those index countries with larger debt stocks by only including a specified portion of these countries as eligible, current face amounts of debt outstanding.

The JPM ELMI+ and JPM ELMI+ Composite Indexes measure the performance of debt issued by emerging markets in the local currency.

The Merrill Lynch Preferred Stock Hybrid Securities Index is an unmanaged index consisting of a set of investment-grade, exchange-traded preferred stocks with outstanding market values of at least \$50 million that are covered by Merrill Lynch Fixed Income Research.

The MSCI AC Asia Pacific ex-Japan Index captures large and mid cap representation across four of five developed markets countries (excluding Japan) and eight emerging markets countries in the Asia Pacific region. With 682 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

The MSCI ACWI ex-U.S. Index captures large and mid cap representation across 22 of 23 developed markets (DM) countries (excluding the U.S.) and 23 emerging markets (EM) countries. With 1,839 constituents, the index covers approximately 85% of the global equity opportunity set outside the U.S.

The MSCI ACWI ex-U.S. SMID Cap Index captures mid and small cap representation across 22 of 23 developed market (DM) countries (excluding the U.S.) and 23 emerging markets countries. With 5,164 constituents, the index covers approximately 28% of the free float-adjusted market capitalization in each country.

The MSCI EAFE Index is recognized as the pre-eminent benchmark in the United States to measure international equity performance. It comprises the MSCI country indexes that represent developed markets outside of North America: Europe, Australasia, and the Far East.

The MSCI EAFE SMID Cap Index captures mid and small cap representation across developed market countries around the world, excluding the U.S. and Canada. With 2,695 constituents, the index covers approximately 28% of the free float-adjusted market capitalization in each country.

The MSCI Emerging Markets Index captures large and mid cap representation across 23 emerging markets (EM) countries. With 822 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

The MSCI Emerging Markets EMEA Index captures large and mid cap representation across eight emerging markets (EM) countries in Europe, the Middle East and Africa (EMEA). With 162 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

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

The MSCI Europe Index is a free float-adjusted, market capitalization-weighted index that is designed to measure the equity market performance of the developed markets in Europe.

The MSCI Frontier Markets Index captures large and mid cap representation across 24 frontier markets (FM) countries. The index includes 127 constituents, covering about 85% of the free float-adjusted market capitalization in each country.

The MSCI U.S. REIT 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 that captures large, mid, and small caps securities. With 139 constituents, it represents about 99% of the U.S. REIT universe and securities are classified in the REIT sector according to the Global Industry Classification Standard (GICS). It, however, excludes mortgage REITs and selected specialized REITs.

The Nasdaq Composite Index measures all Nasdaq domestic and non-U.S.-based common stocks listed on the Nasdaq stock market. The index is market-value weighted. This means that each company's security affects the index in proportion to its market value. The market value, the last sale price multiplied by total shares outstanding, is calculated throughout the trading day, and is related to the total value of the index. It is not possible to invest directly in an index.

The Russell 1000 Index measures the performance of the large cap segment of the U.S. equity universe. It is a subset of the Russell 3000 Index and includes approximately 1000 of the largest securities based on a combination of their market cap and current index membership. The Russell 1000 represents approximately 92% of the U.S. market.

The Russell 1000 Value Index measures the performance of the large cap value segment of the U.S. equity universe.

The Russell 1000 Growth Index measures the performance of the large cap growth segment of the U.S. equity universe.

The Russell 2000 Index measures the performance of the small cap segment of the U.S. equity universe. The Russell 2000 Index is a subset of the Russell 3000 Index representing approximately 10% of the total market capitalization of that index.

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

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





The Russell 2500 Index is a broad index featuring 2,500 stocks that cover the small and mid cap market capitalizations. The Russell 2500 is a market capitalizationweighted index that includes the smallest 2.500 companies covered in the Russell 3000 universe of U.S.-based listed equities.

The Russell 3000 Index measures the performance of the largest 3,000 U.S. companies representing approximately 98% of the investable U.S. equity market.

The Russell 3000 Growth Index measures the performance of the broad growth segment of the U.S. equity universe. It includes those Russell 3000 companies with higher price-to-book ratios and higher forecasted growth values.

The Russell 3000 Value Index measures the performance of the broad value segment of U.S. equity value universe. It includes those Russell 3000 companies with lower price-to-book ratios and lower forecasted growth values.

The Russell Microcap Index measures the performance of the microcap segment of the U.S. equity market. Microcap stocks make up less than 3% of the U.S. equity market (by market cap) and consist of the smallest 1,000 securities in the small-cap Russell 2000 Index, plus the next 1,000 smallest eligible securities by market cap.

The Russell Midcap Index offers investors access to the mid cap segment of the U.S. equity universe. The Russell Midcap Index is constructed to provide a comprehensive and unbiased barometer for the mid cap segment and is completely reconstituted annually to ensure that larger stocks do not distort the performance and characteristics of the true mid cap opportunity set. The Russell Midcap Index includes the smallest 800 securities in the Russell 1000.

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

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

The S&P 500 Index is a capitalization-weighted index of 500 stocks designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.

The S&P Global Infrastructure Index is comprised of 75 of the largest publicly listed infrastructure companies that meet specific investability requirements. The index is designed to provide liquid exposure to the leading publicly listed companies in the global infrastructure industry, from both developed markets and emerging markets.

The S&P Utilities Index is comprised primarily of companies involved in water and electrical power and natural gas distribution industries.

The S&P/LSTA U.S. Leveraged Loan 100 index is a market value-weighted index designed to measure the performance of the U.S. leveraged loan market. The index consists of 100 loan facilities drawn from a larger benchmark - the S&P/LSTA (Loan Syndications and Trading Association) Leveraged Loan Index (LLI).

The S&P Developed Ex-U.S. Property defines and measures the investable universe of publicly traded property companies domiciled in developed countries outside of the U.S. The companies included are engaged in real estate related activities, such as property ownership, management, development, rental and investment.

The USD Index measures the performance of the U.S. dollar against a basket of foreign currencies: EUR, JPY, GBP, CAD, CHF and SEK. The U.S. Dollar Index goes up when the dollar gains "strength" compared to other currencies.

This research material has been prepared by LPL Financial LLC.

To the extent you are receiving investment advice from a separately registered independent investment advisor, please note that LPL Financial LLC is not an affiliate of and makes no representation with respect to such entity.

Not FDIC or NCUA/NCUSIF Insured | No Bank or Credit Union Guarantee | May Lose Value | Not Guaranteed by Any Government Agency | Not a Bank/Credit Union Deposit

RES 13870 0218 | For Client Use | Tracking #1-698287 (Exp. 02/19)