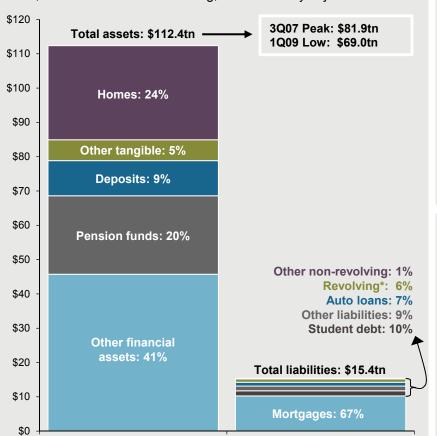
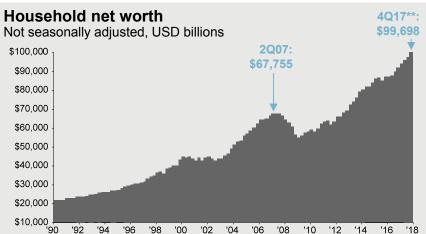
Consumer balance sheet 3Q17, trillions of dollars outstanding, not seasonally adjusted



Household debt service ratio Debt payments as % of disposable personal income, SA 14% 4Q07: 13.2% 13% 12% 4Q17**: 10.3% 11% 10% 85 90 '95 '00 '05 '10 '15



Source: FactSet, FRB, J.P. Morgan Asset Management; (Top and bottom right) BEA. Data include households and nonprofit organizations. SA – seasonally adjusted.

*Revolving includes credit cards. Values may not sum to 100% due to rounding. **4Q17 figures for debt service and net worth are J.P. Morgan Asset Management estimates. Past performance is not a reliable indicator of current and future results.

Guide to the Markets – U.S. Data are as of February 28, 2018.



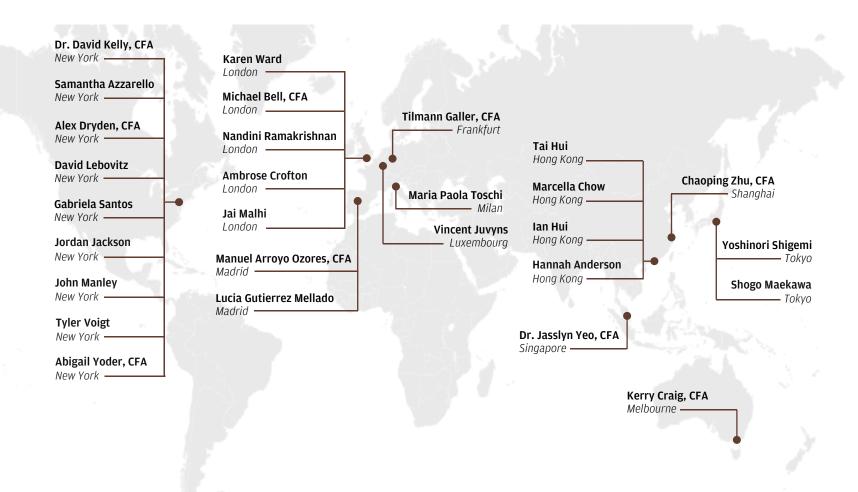
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Global Market Insights Strategy Team





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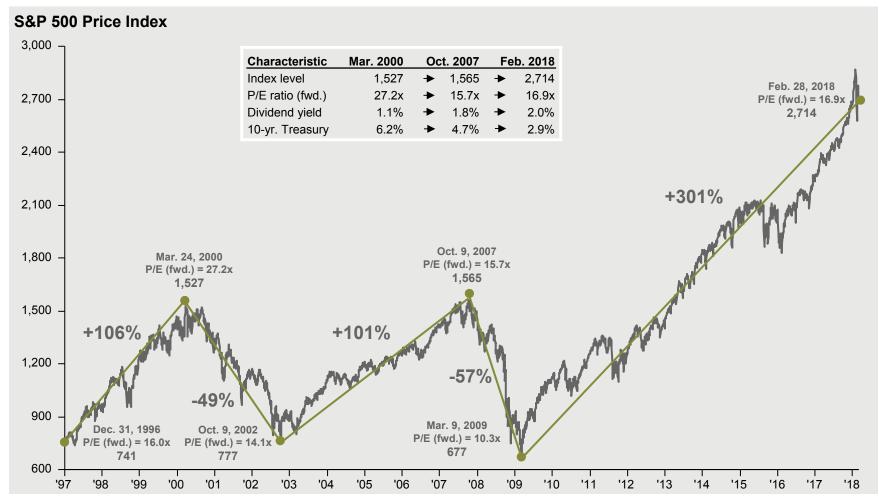
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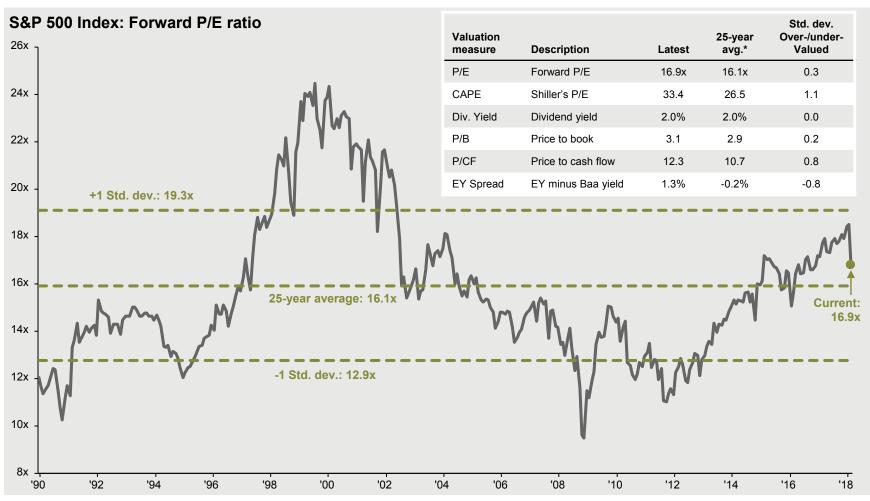
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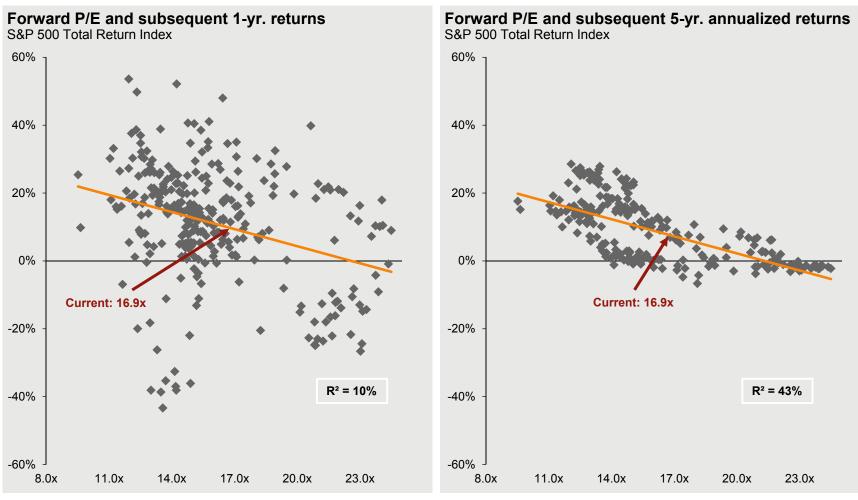
Source: Compustat, FactSet, Thomson Reuters, Federal Reserve, Standard & Poor's, J.P. Morgan Asset Management. Dividend yield is calculated as consensus estimates of dividends for the next 12 months, divided by most recent price, as provided by Compustat. Forward price to earnings ratio is a bottom-up calculation based on the most recent S&P 500 Index price, divided by consensus estimates for earnings in the next 12 months (NTM), and is provided by FactSet Market Aggregates. Returns are cumulative and based on S&P 500 Index price movement only, and do not include the reinvestment of dividends. Past performance is not indicative of future returns. *Guide to the Markets – U.S.* Data are as of February 28. 2018.





Source: FactSet, FRB, Thomson Reuters, Robert Shiller, Standard & Poor's, J.P. Morgan Asset Management. Price to earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months as provided by IBES since December 1989, and FactSet for February 28, 2018. Average P/E and standard deviations are calculated using 25 years of FactSet history. Shiller's P/E uses trailing 10-years of inflation-adjusted earnings as reported by companies. Dividend yield is calculated as the next 12-month consensus dividend divided by most recent price. Price to book ratio is the price divided by book value per share. Price to cash flow is price divided by NTM cash flow. EY minus Baa yield is the forward earnings yield (consensus analyst estimates of EPS over the next 12 months divided by price) minus the Moody's Baa seasoned corporate bond yield. Std. dev. over-/under-valued is calculated using the average and standard deviation over 25 years for each measure. *P/CF is a 20-year average due to cash flow data availability. Guide to the Markets – U.S. Data are as of February 28, 2018.

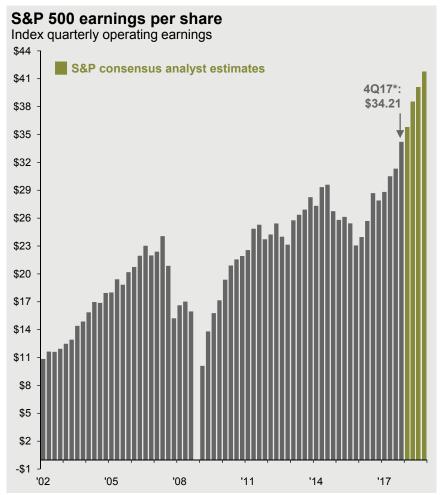


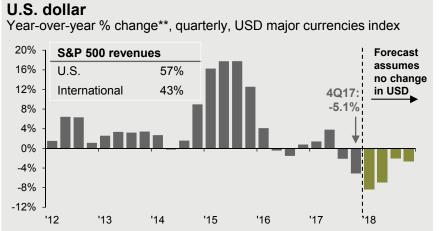


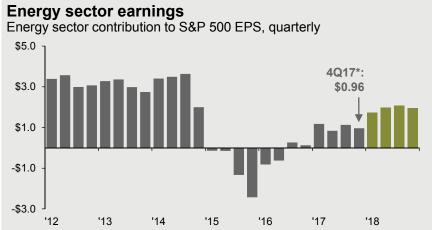
Source: FactSet, Thomson Reuters, Standard & Poor's, J.P. Morgan Asset Management.
Returns are 12-month and 60-month annualized total returns, measured monthly, beginning February 28, 1993. R² represents the percent of total variation in total returns that can be explained by forward P/E ratios.

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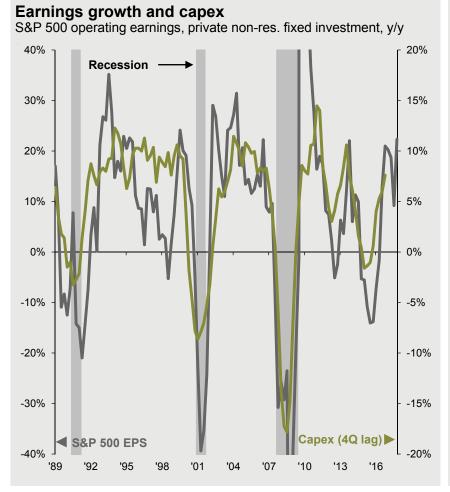


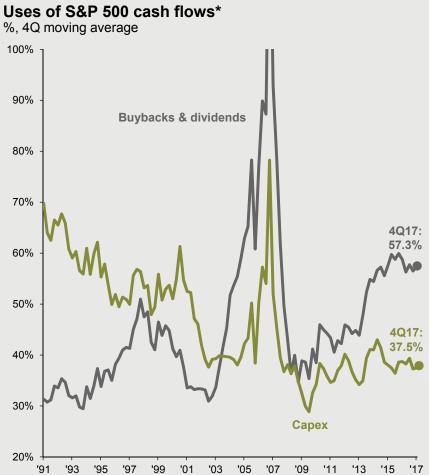


Source: Compustat, FactSet, Standard & Poor's, J.P. Morgan Asset Management; (Top right) Federal Reserve, S&P 500 individual company 10k filings, S&P Index Alert.

EPS levels are based on operating earnings per share. Earnings estimates are Standard & Poor's consensus analyst expectations. Past performance is not indicative of future returns. Currencies in the Trade Weighted U.S. Dollar Major Currencies Index are: British pound, euro, Swedish krona, Australian dollar, Canadian dollar, Japanese yen and Swiss franc.*4Q17 earnings are calculated using actual earnings for 96.1% of S&P 500 market cap and earnings estimates for the remaining companies. **Year-over-year change is calculated using the quarterly average for each period. USD forecast assumes no change in the U.S. dollar from its February 28, 2018 level. S&P 500 revenue breakdown comes from Standard & Poor's S&P 500 2016: Global Sales report as of June 2017.

J.P.Morgan
Asset Management





Source: BEA, Compustat, Standard & Poor's, FactSet, J.P. Morgan Asset Management. Buybacks & dividends and capex are shown as a percentage of cash flows from operations, and may not sum to 100%. *Guide to the Markets – U.S.* Data are as of February 28, 2018.



| Q | TD | | | Y | TD | | |
|-------|------------|--------------|-------------|-------|------------|-------------|----------|
| | Value | Blend | Growth | | Value | Blend | Growth |
| Large | -1.1% | 1.8% | 4.3% | Large | -1.1% | 1.8% | 4.3% |
| Mid | -2.7% | -0.5% | 2.3% | Mid | -2.7% | -0.5% | 2.3% |
| Small | -3.8% | -1.4% | 0.9% | Small | -3.8% | -1.4% | 0.9% |
| S | ince marke | et peak (Oct | tober 2007) | Si | ince marke | t low (Marc | ch 2009) |
| | Value | Blend | Growth | | Value | Blend | Growth |
| Large | 80.3% | 116.9% | 161.3% | Large | 349.6% | 384.7% | 432.9% |
| Mid | 112.2% | 122.6% | 132.8% | Mid | 441.8% | 437.1% | 438.3% |
| Small | 87.2% | 106.6% | 125.6% | Small | 363.0% | 398.2% | 432.4% |

Current P/E vs. 15-year avg. P/E*

| | Value | Blend | Growth | | | | |
|----------|-------|-------|--------|--|--|--|--|
| ge | 14.6 | 16.9 | 20.2 | | | | |
| Large | 13.2 | 14.5 | 16.7 | | | | |
| <u>.</u> | 14.9 | 16.9 | 20.1 | | | | |
| Mid | 14.2 | 15.8 | 18.1 | | | | |
| Small | 16.8 | 22.1 | 30.5 | | | | |
| Sm | 16.8 | 20.2 | 25.5 | | | | |

Current P/E as % of 15-year avg. P/E*

| | Value | Blend | Growth |
|-------|--------|--------|--------|
| Large | 110.5% | 116.4% | 121.0% |
| Mid | 104.9% | 107.0% | 111.3% |
| Small | 100.4% | 109.7% | 119.4% |

Source: FactSet, Russell Investment Group, Standard & Poor's, J.P. Morgan Asset Management.

All calculations are cumulative total return, including dividends reinvested for the stated period. Since Market Peak represents period 10/9/07 – 2/28/18, illustrating market returns since the S&P 500 Index high on 10/9/07. Since Market Low represents period 3/9/09 – 2/28/18, illustrating market returns since the Š&P 500 Index low on 3/9/09. Returns are cumulative returns, not annualized. For all time periods, total return is based on Russell style indexes with the exception of the large blend category, which is based on the S&P 500 Index. Past performance is not indicative of future returns. *Timeframe of average valuation decreased from 20 to 15 years because of a discontinued data series. The new data series is bottom-up calculation based on the most recent S&P 500 Index price, divided by consensus estimates for earnings in the next 12 months (NTM), and is provided by FactSet Market Aggregates.

J.P.Morgan **Asset Management**

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|--|------------|-----------------------------|-----------------------------|-------------------------------|-------------------------------|-------------------------------|------------------------------|--------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------------|------------|
| | Financials | Materials | RealEstate | Industrials | cons. Discr | Technology | Energy | Health Care | Telecom | cons. stad | Utilities | 5&P 500 Inde | |
| S&P weight Russell Growth weight Russell Value weight | 3.4% | 2.9% 3.5% 3.0% | 2.6% 2.3% 4.3% | 10.2% 12.5% 8.3% | 12.7% 18.6% 6.8% | 25.2% 39.1% 9.3% | 5.5% 0.8% 10.3% | 13.8% 12.8% 13.7% | 1.9% 0.9% 2.8% | 7.5% 6.2% 8.1% | 2.7% 0.0% 5.6% | 100.0% 100.0% 100.0% | Weight |
| QTD | 3.5 | -1.3 | -8.5 | 1.1 | 5.6 | 7.7 | -7.4 | 1.9 | -6.5 | -6.3 | -6.8 | 1.8 | |
| YTD | 3.5 | -1.3 | -8.5 | 1.1 | 5.6 | 7.7 | -7.4 | 1.9 | -6.5 | -6.3 | -6.8 | 1.8 | (%) |
| Since market peak (October 2007) | 22.9 | 74.3 | 53.2 | 116.2 | 227.0 | 222.1 | 7.6 | 183.0 | 44.3 | 153.6 | 78.0 | 116.9 | Return (%) |
| Since market low (March 2009) | 571.0 | 315.3 | 468.1 | 494.1 | 656.9 | 575.0 | 97.1 | 356.2 | 175.7 | 255.6 | 211.5 | 384.7 | |
| Beta to S&P 500 | 1.45 | 1.29 | 1.29 | 1.21 | 1.13 | 1.07 | 0.99 | 0.74 | 0.58 | 0.58 | 0.44 | 1.00 | ಐ |
| Correl. to Treas. yields | 0.71 | 0.29 | -0.54 | 0.37 | 0.27 | -0.05 | 0.29 | -0.10 | -0.17 | -0.50 | -0.62 | 0.16 | Q |
| Foreign % of sales | 30.8 | 53.0 | - | 44.9 | 35.1 | 57.2 | 58.9 | 37.4 | 17.4 | 33.7 | 46.3 | 43.2 | % |
| NTM Earnings Growth | 24.4% | 21.6% | 4.4% | 18.4% | 14.3% | 28.0% | 39.7% | 13.4% | 18.4% | 13.3% | 7.5% | 20.1% | EPS |
| 20-yr avg. | 5.2% | 8.6% | 2.6%* | 6.4% | 9.3% | 9.2% | 10.5% | 9.0% | 2.8% | 5.6% | 2.4% | 5.9% | Ш |
| Forward P/E ratio | 13.6x | 17.0x | 16.4x | 17.6x | 20.2x | 18.8x | 19.3x | 15.8x | 10.6x | 17.6x | 15.8x | 16.9x | |
| 20-yr avg. | 12.8x | 14.0x | 15.2x | 16.3x | 18.0x | 20.9x | 17.6x | 17.4x | 16.4x | 17.1x | 14.1x | 16.0x | P/E |
| Trailing P/E ratio | 16.0x | 23.5x | 35.7x | 21.7x | 21.2x | 31.3x | 17.2x | 29.1x | 7.1x | 21.3x | 17.2x | 21.8x | <u> </u> |
| 20-yr avg. | 15.5x | 19.0x | 35.8x | 19.9x | 19.2x | 25.8x | 17.7x | 24.1x | 19.9x | 20.9x | 15.9x | 19.6x | |
| Dividend yield | 1.9% | 2.0% | 3.8% | 1.9% | 1.4% | 1.3% | 3.2% | 1.7% | 5.6% | 3.0% | 3.8% | 2.0% | Div |
| 20-yr avg. | 2.3% | 2.6% | 4.4% | 2.1% | 1.4% | 0.9% | 2.3% | 1.8% | 4.1% | 2.7% | 4.0% | 2.0% | |

Source: FactSet, Russell Investment Group, Standard & Poor's, J.P. Morgan Asset Management. All calculations are cumulative total return, not annualized, including dividends for the stated period. Since market peak represents period 10/9/07 – 2/28/18. Since market low represents period 3/9/09 - 2/28/18. Correlation to Treasury yields are trailing 2-year monthly correlations between S&P 500 sector price returns and 10-year Treasury yield movements. Foreign percent of sales is from Standard & Poor's, S&P 500 2016: Global Sales report as of June 2017. Real Estate foreign sales not included due to lack of availability. NTM Earnings Growth is consensus estimates for earnings in the next 12 months compared to the consensus estimate 1yr ago. Forward P/E ratio is a bottom-up calculation based on the most recent S&P 500 Index price, divided by consensus estimates for earnings in the next 12 months (NTM), and is provided by FactSet Market Aggregates. Trailing P/E ratios are bottom-up values defined as month-end price divided by the last 12 months of available reported earnings. Historical data can change as new information becomes available. Note that P/E ratios for the S&P 500 may differ from estimates elsewhere in this book due to the use of a bottom-up calculation of constituent earnings (as described) rather than a top-down calculation. This methodology is used to allow proper comparison of sector level data to broad index level data. Dividend yield is calculated as the next 12-month consensus dividend divided by most recent price. Beta calculations are based on 10-years of monthly price returns for the S&P 500 and its sub-indices. *Real estate NTM earnings growth is a 15-yr average due to data availability. Past performance is not indicative of future returns.



Factor performance and sector weights

GTM - U.S. | 1

2003 - 2017

| | | | | | | | | | | | | | | | | 2003 | - 2017 |
|-----------------------|---------------------------|------------------|--------------------|------------------|------------------|------------------|-----------------------|------------------|------------------|-----------------------|------------------|------------------|-----------------------|------------------|------------------|---------------------------|-----------------------|
| 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | YTD | Ann. | Vol. |
| Small Cap 47.3% | Multi- Factor 21.1% | Momen. | High Div. 21.1% | Momen. | Min. Vol. | Cyclical 36.9% | Small Cap 26.9% | High Div. | Cyclical 20.1% | Small Cap 38.8% | Min. Vol. | Momen. 9.3% | Small Cap 21.3% | Momen. 37.8% | Momen. 6.7% | Multi- Factor 12.3% | Small Cap 18.8% |
| Cyclical | Small Cap | Multi- Factor | Small Cap | Defens. | Defens. | Quality | Multi- Factor | Min. Vol. | Small Cap | Multi- Factor | High Div. | Quality | High Div. | Cyclical | Cyclical | Momen. | Cyclical |
| 37.2% | 18.3% | 15.7% | 18.4% | 17.7% | -26.7% | 32.0% | 18.3% | 12.9% | 16.3% | 37.4% | 14.9% | 7.0% | 16.3% | 27.3% | 4.3% | 12.2% | 17.5% |
| Multi- Factor | Momen. | Defens. | Multi- Factor | Quality | High Div. | Multi- Factor | Momen. | Defens. | Multi- Factor | Cyclical | Multi- Factor | Min. Vol. | Cyclical | Quality | Quality | Small Cap | Momen. |
| 31.6% | 16.9% | 11.1% | 16.6% | 10.6% | -27.6% | 29.8% | 18.2% | 10.1% | 15.7% | 35.0% | 14.8% | 5.6% | 14.0% | 26.0% | 3.3% | 11.2% | 15.7% |
| Momen. | Min. Vol. | Min. Vol. | Defens. | Multi- Factor | Quality | Small Cap | Cyclical | Quality | Momen. | Momen. | Momen. | Cyclical | Multi- Factor | Multi- Factor | Multi- Factor | Quality | Multi- Factor |
| 26.2% | 14.5% | 6.6% | 15.9% | 5.5% | -30.2% | 27.2% | 17.9% | 8.4% | 15.1% | 34.8% | 14.7% | 2.6% | 13.7% | 21.5% | 0.2% | 10.8% | 15.3% |
| High Div. | Defens. | Small Cap | Cyclical | Min. Vol. | Small Cap | High Div. | High Div. | Multi- Factor | | | Cyclical | High Div. | Min. Vol. | High Div. | High Div. | High Div. | High Div. |
| 24.3% | 11.9% | 4.6% | 15.0% | 4.3% | -33.8% | 18.4% | 15.9% | 7.3% | 14.0% | 33.5% | 13.6% | 0.7% | 10.7% | 19.5% | -0.6% | 10.6% | 13.6% |
| Quality | High Div. | High Div. | Min. Vol. | High Div. | Multi- Factor | Min. Vol. | Min. Vol. | Momen. | Min. Vol. | High Div. | Defens. | Multi- Factor | Quality | Min. Vol. | Min. Vol. | Min. Vol. | Quality |
| 20.2% | 11.8% | 3.7% | 15.0% | 0.0% | -39.3% | 18.4% | 14.7% | 6.1% | 11.2% | 28.9% | 13.0% | 0.4% | 8.0% | 19.2% | -0.8% | 10.6% | 12.6% |
| Min. Vol. | Quality | Cyclical | | Cyclical | Momen. | Momen. | | Cyclical | Defens. | Defens. | Quality | Defens. | Defens. | Small Cap | Small Cap | Cyclical | Defens. |
| 20.0% | 10.2% | 2.5% | 12.0% | -0.8% | -40.9% | 17.6% | 12.6% | -3.4% | 10.7% | 28.9% | 11.8% | -0.9% | 7.7% | 14.6% | - 1.4% | 10.0% | 12.0% |
| Defens. | Cyclical | Quality | Momen. | Small Cap | Cyclical | Defens. | Defens. | Small Cap | High Div. | Min. Vol. | Small Cap | Small Cap | Momen. | Defens. | Defens. | Defens. | Min. Vol. |
| 17.3% | 10.0% | 2.5% | 10.7% | - 1.6% | -44.8% | 16.5% | 12.0% | -4.2% | 10.6% | 25.3% | 4.9% | -4.4% | 5.1% | 12.3% | -3.2% | 9.8% | 11.7% |



Source: Standard & Poor's, FactSet, J.P. Morgan Asset Management; (Top) MSCI, Russell; (Bottom) MSCI. The MSCI High Dividend Yield Index aims to offer a higher than average dividend yield relative to the parent index and that pass dividend sustainability and persistence screens. The MSCI Minimum Volatility Index optimizes the MSCI USA Index using an estimated security co-variance matrix to produce low absolute volatility for a given set of constraints. The MSCI Defensive Sectors Index includes: Consumer Staples, Energy, Health Care, Telecommunication Services and Utilities. The MSCI Cyclical Sectors Index contains: Consumer Discretionary, Financials, Industrials, Information Technology and Materials. Securities in the MSCI Momentum Index are selected based on a momentum value on 12-month and 6-month price performance. Constituents of the MSCI Quality Index are selected based on three main variables: high return on equity, stable year-over-year earnings growth and low financial leverage. The Russell 2000 is used for small cap. The MSCI USA Diversified Multiple Factor Index aims to maximize exposure to four factors – Value, Momentum, Quality and Size. Guide to the Markets – U.S. Data are as of February 28, 2018.



S&P 500 intra-year declines vs. calendar year returns Despite average intra-year drops of 13.8%, annual returns positive in 29 of 38 years 40% 30 30% 26 23 19 20% 15 15 13 **YTD** 10% 0% -10% -20% -19 -20 -30% -28 -34 -34 -40% -38 -50% -49 -60%

'00

'05

'10

Source: FactSet, Standard & Poor's, J.P. Morgan Asset Management.

'85

'80

Returns are based on price index only and do not include dividends. Intra-year drops refers to the largest market drops from a peak to a trough during the year. For illustrative purposes only. Returns shown are calendar year returns from 1980 to 2017, over which time period the average annual return was 8.8%.

'90

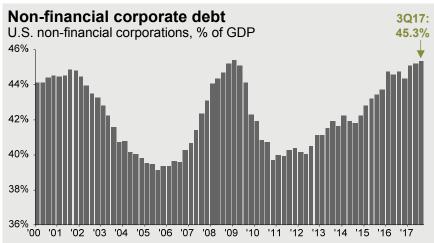
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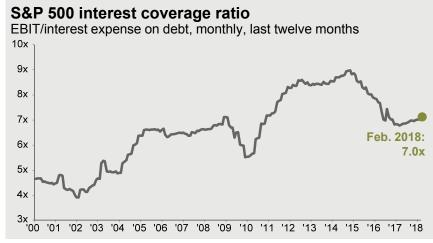
Guide to the Markets – U.S. Data are as of February 28, 2018.



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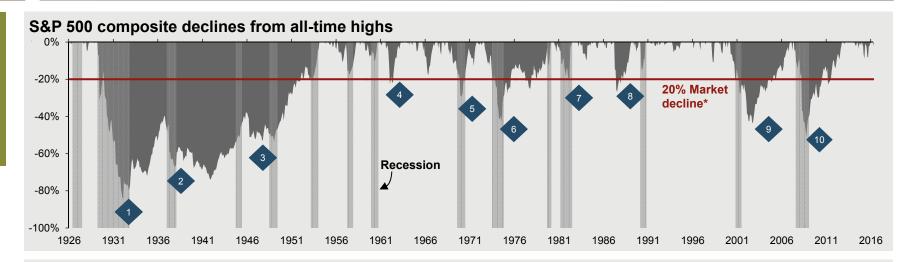
Corporate cash as a % of current assets S&P 500 companies – cash and cash equivalents, guarterly 32% 30% 28% 26% 24% 22% 20% 18% 16% 14% '06 '10 '12 '14 '16 '02 '04 '08





Source: FactSet, Standard & Poor's, BEA, Federal Reserve, J.P. Morgan Asset Management. *Guide to the Markets – U.S.* Data are as of February 28, 2018.





Characteristics of bull and bear markets

| | E | Bear market | s | | Macro env | rironment | Bull markets | | | |
|--|----------------|-----------------|--------------------|-----------|-----------------|-----------|--------------|-----------------|----------------|-------------------|
| Market Corrections | Market peak | Bear return* | Duration (months)* | Recession | Commodity spike | | | Bull begin date | Bull return | Duration (months) |
| 1 Crash of 1929 - Excessive leverage, irrational exuberance | Sep 1929 | -86% | 32 | • | | | • | Jul 1926 | 152% | 37 |
| 2 1937 Fed Tightening - Premature policy tightening | Mar 1937 | -60% | 61 | • | | • | | Mar 1935 | 129% | 23 |
| 3 Post WWII Crash - Post-war demobilization, recession fears | May 1946 | -30% | 36 | • | | | • | Apr 1942 | 158% | 49 |
| 4 Flash Crash of 1962 - Flash crash, Cuban Missile Crisis | Dec 1961 | -28% | 6 | | | | • | Oct 1960 | 39% | 13 |
| 5 Tech Crash of 1970 - Economic overheating, civil unrest | Nov 1968 | -36% | 17 | • | • | • | | Oct 1962 | 103% | 73 |
| 6 Stagflation - OPEC oil embargo | Jan 1973 | -48% | 20 | • | • | | | May 1970 | 74% | 31 |
| 7 Volcker Tightening - Whip Inflation Now | Nov 1980 | -27% | 20 | • | • | • | | Mar 1978 | 62% | 32 |
| 8 1987 Crash - Program trading, overheating markets | Aug 1987 | -34% | 3 | | | | • | Aug 1982 | 229% | 60 |
| 9 Tech Bubble - Extreme valuations, .com boom/bust | Mar 2000 | -49% | 30 | • | | | • | Oct 1990 | 417% | 113 |
| 10 Global Financial Crisis - Leverage/housing, Lehman collapse | Oct 2007 | -57% | 17 | • | • | • | | Oct 2002 | 101% | 60 |
| Current Cycle | | | | | | | | Mar 2009 | 301% | 107 |
| Averages | - | -45% | 24 | | | | | - | 160% | 54 |

Source: FactSet, NBER, Robert Shiller, Standard & Poor's, J.P. Morgan Asset Management.

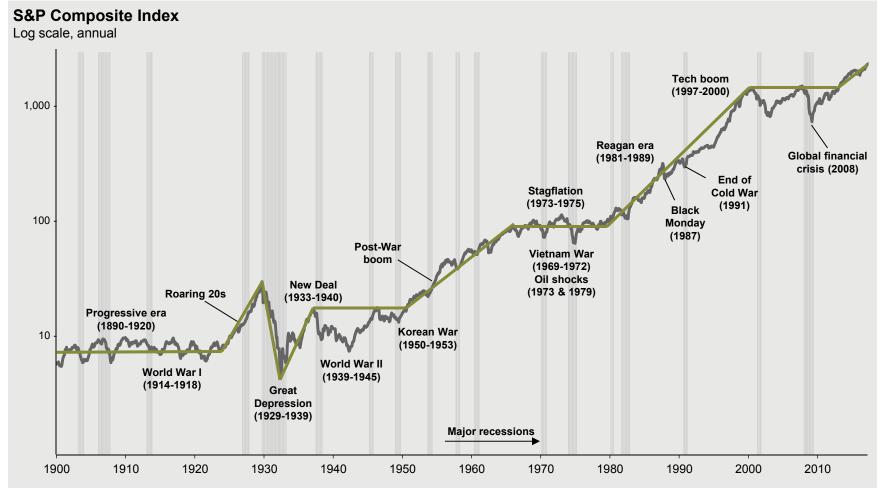
*A bear market is defined as a 20% or more decline from the previous market high. The bear return is the peak to trough return over the cycle. Periods of "Recession" are defined using NBER business cycle dates. "Commodity spikes" are defined as significant rapid upward moves in oil prices. Periods of "Extreme valuations" are those where S&P 500 last 12 months' P/E levels were approximately two standard deviations above long-run averages, or time periods where equity market valuations appeared expensive given the broader macroeconomic environment. "Aggressive Fed Tightening" is defined as Federal Reserve monetary tightening that was unexpected and/or significant in magnitude. Bear and Bull returns are price returns.



Correlations between weekly stock returns and interest rate movements Weekly S&P 500 returns, 10-year Treasury yield, rolling 2-year correlation, May 1963 - February 2018 8.0 When yields are below 5%, rising rates have historically been 0.6 **Positive** associated with relationship rising stock between yield prices movements 0.4 and stock returns Correlation coefficient Negative relationship -0.4 between yield movements and stock returns -0.6 -0.8 2% 4% 6% 10% 12% 14% 0% 16% 10-year Treasury yield

Source: FactSet, Standard & Poor's, FRB, J.P. Morgan Asset Management. Returns are based on price index only and do not include dividends. Markers represent monthly 2-year correlations only. *Guide to the Markets – U.S.* Data are as of February 28, 2018.

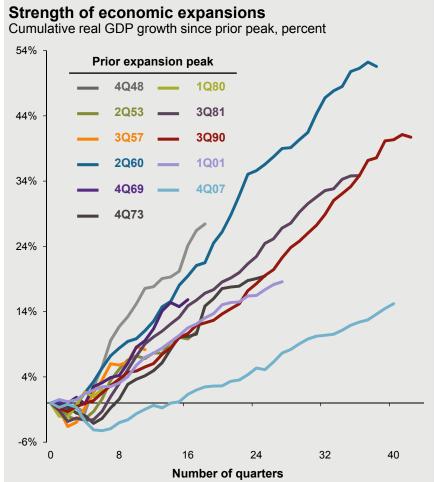




Source: FactSet, NBER, Robert Shiller, J.P. Morgan Asset Management. Data shown in log scale to best illustrate long-term index patterns. Past performance is not indicative of future returns. Chart is for illustrative purposes only. *Guide to the Markets – U.S.* Data are as of February 28, 2018.



Length of economic expansions and recessions Average length (months): Expansions: 47 months months* Recessions: 15 months

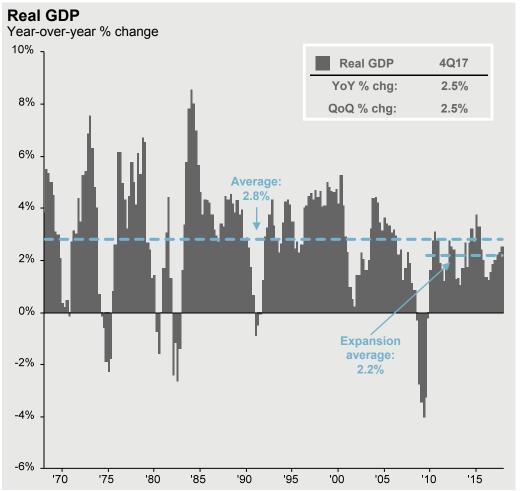


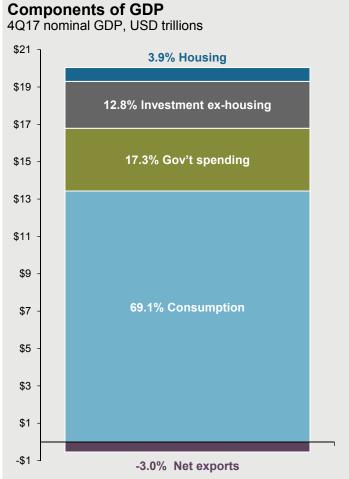
Source: BEA, NBER, J.P. Morgan Asset Management. *Chart assumes current expansion started in July 2009 and continued through February 2018, lasting 104 months so far. Data for length of economic expansions and recessions obtained from the National Bureau of Economic Research (NBER). These data can be found at www.nber.org/cycles/ and reflect information through February 2018. Past performance is not a reliable indicator of current and future results.

Guide to the Markets – U.S. Data are as of February 28, 2018.



Economic growth and the composition of GDP





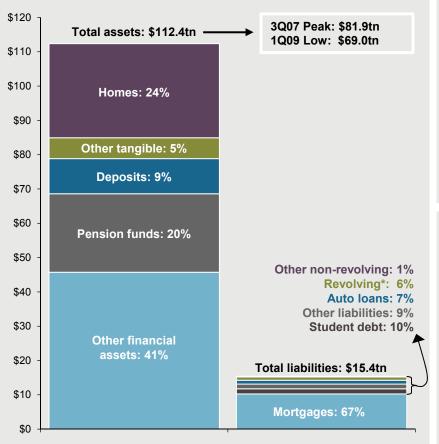
Source: BEA, FactSet, J.P. Morgan Asset Management.

Values may not sum to 100% due to rounding. Quarter-over-quarter percent changes are at an annualized rate. Average represents the annualized growth rate for the full period. Expansion average refers to the period starting in the second quarter of 2009. Past performance is not a reliable indicator of current and future results.

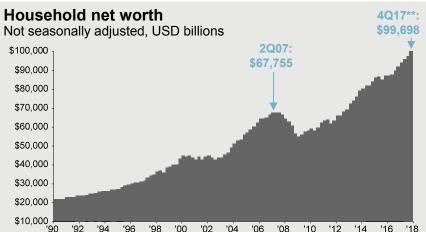
Guide to the Markets – U.S. Data are as of February 28, 2018.



Consumer balance sheet 3Q17, trillions of dollars outstanding, not seasonally adjusted



Household debt service ratio Debt payments as % of disposable personal income, SA 14% 4Q07: 13.2% 13% 12% 4Q17**: 10.3% 11% 10% 85 90 '95 '00 '05 '10 '15

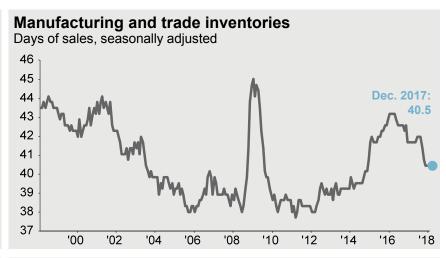


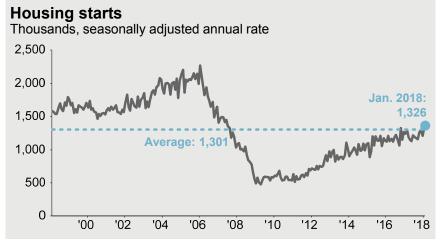
Source: FactSet, FRB, J.P. Morgan Asset Management; (Top and bottom right) BEA. Data include households and nonprofit organizations. SA – seasonally adjusted.

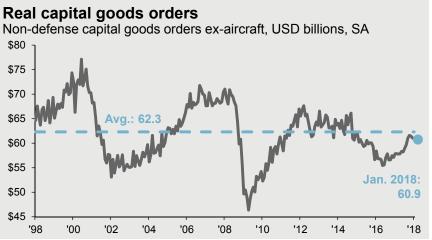
*Revolving includes credit cards. Values may not sum to 100% due to rounding. **4Q17 figures for debt service and net worth are J.P. Morgan Asset Management estimates. Past performance is not a reliable indicator of current and future results. Guide to the Markets – U.S. Data are as of February 28, 2018.



Light vehicle sales Millions, seasonally adjusted annual rate 24 22 Feb. 2018: 20 18 16 14 12 10 8 '00 '02 '04 '06 80' '10 '12 '14 '16 '18



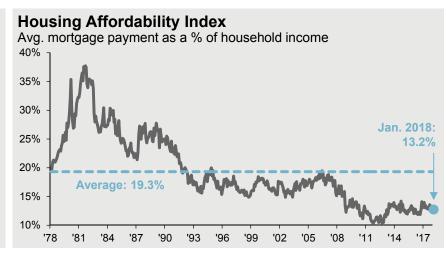




Source: J.P. Morgan Asset Management; (Top left) BEA; (Top and bottom right, bottom left) Census Bureau, FactSet. Capital goods orders deflated using the producer price index for capital goods with a base year of 2009. SA – seasonally adjusted. Past performance is not a reliable indicator of current and future results. *Guide to the Markets – U.S.* Data are as of February 28, 2018.



Average interest rate on a U.S. mortgage 30-year fixed-rate mortgage 20% 18% 16% 14% 12% 10% 8% Feb. 2018: 40-yr. avg.: 8.09% 6% 4.33% 4% 2% '80 '95 '15 '85 '90 '00 '05 '10



Home prices relative to income

6-mo. rolling, avg. new home sales price as multiple of avg. family inc.



Lending standards for approved mortgage loans Average FICO score based on origination date

760 740 720 700

660 640 '97 '99 '01 '03 '05 '07 '09 '11 '13 '15

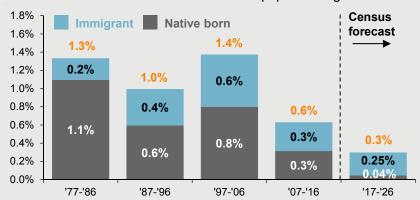
Source: J.P. Morgan Asset Management; (Top left, bottom left and top right) FactSet; (Top left) Freddie Mac; (Top right, bottom left) National Association of Realtors, Census Bureau; (Top right) BEA; (Bottom right) McDash, J.P. Morgan Securitized Product Research. Monthly mortgage payment assumes the prevailing 30-year fixed-rate mortgage rates and average new home prices excluding a 20% down payment. Past performance is not a reliable indicator of current and future results. Guide to the Markets – U.S. Data are as of February 28, 2018.

680



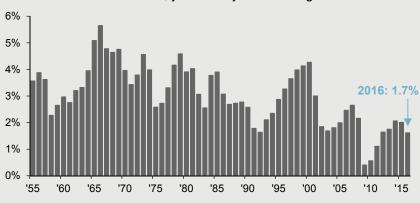
Growth in working-age population

Percent increase in civilian non-institutional population ages 16-64



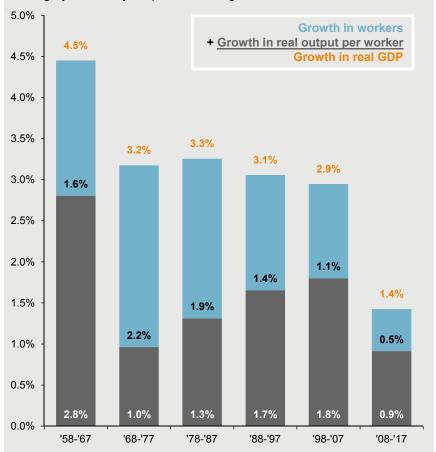
Growth in private non-residential capital stock

Non-residential fixed assets, year-over-year % change



Drivers of GDP growth

Average year-over-year percent change



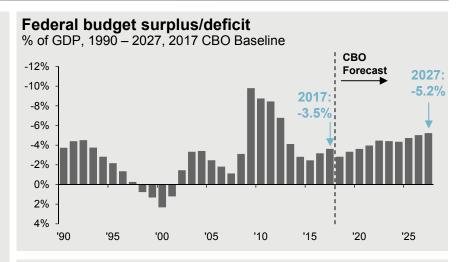
Source: J.P. Morgan Asset Management; (Top left) Census Bureau, DOD, DOJ; (Top left and right) BLS; (Right and bottom left) BEA. GDP drivers are calculated as the average annualized growth between 4Q of the first and last year. Future working age population is calculated as the total estimated number of Americans from the Census Bureau, controlled for military enrollment, growth in institutionalized population and demographic trends. Growth in working age population does not include illegal immigration; DOD Troop Readiness reports used to estimate percent of population enlisted. Past performance is not a reliable indicator of current and future results.

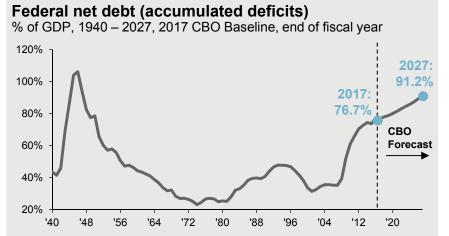
Guide to the Markets - U.S. Data are as of February 28. 2018.



The 2017 federal budget CBO Baseline forecast, USD trillions Total spending: \$4.0tn \$4.0 Other: \$510bn (13%) Borrowing: \$693bn (17%) \$3.5 Net int.: \$269bn (7%) Other: \$267bn (7%) \$3.0 Non-defense disc.: \$615bn (15%) Social insurance: \$2.5 Defense: \$1,164bn (29%) \$589bn (15%) \$2.0 Corp.: \$310bn (8%) Social Security: \$1.5 \$939bn (23%) \$1.0 Income: \$1,574bn (39%) Medicare & Medicaid: \$0.5 \$1,086bn (27%) \$0.0 Total government spending Sources of financing **CBO's Baseline assumptions** 2017 '18-'19 '20-'21 '22-'27 Real GDP growth 2.1% 2.0% 1.5% 1.9% 2 3% 3 7% 10-year Treasury 2 9% 3.5% Headline inflation (CPI) 2.2% 2.2% 2.4% 2.4% 4.9% Unemployment 4 5% 4 2% 4 8%

Federal finances





Source: CBO, J.P. Morgan Asset Management; (Top and bottom right) BEA, Treasury Department. 2017 Federal Budget is based on the Congressional Budget Office (CBO) June 2017 Baseline Budget Forecast. Other spending includes, but is not limited to, health insurance subsidies, income security and federal civilian and military retirement. Please note that these estimates do not include the impacts of the Tax Cuts and Jobs Act of 2017.

Note: Years shown are fiscal years (Oct. 1 through Sep. 30). Past performance is not a reliable indicator of current and future results. Guide to the Markets – U.S. Data are as of February 28, 2018.



Civilian unemployment rate and year-over-year wage growth for private production and non-supervisory workers Seasonally adjusted, percent 12% **Unemployment rate** Oct. 2009: 10.0% 10% 8% 50-yr. average: 6.2% Feb. 2018: 4.19 4% 50-yr. average: 4.2% Feb. 2018: 2% Wage growth

'98

'96

'00

'02

'04

'06

'08

'10

'12

'14

'16

Source: BLS, FactSet, J.P. Morgan Asset Management. Past performance is not a reliable indicator of current and future results. *Guide to the Markets – U.S.* Data are as of February 28, 2018.

'84

'86

'88

'90

'92

'82



0%

'70

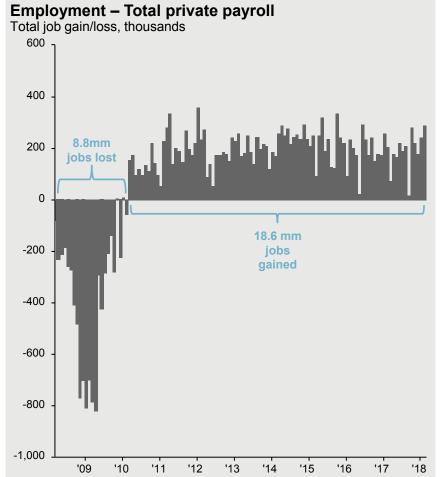
'72

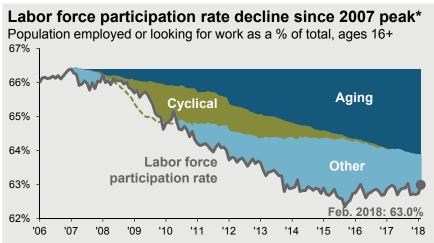
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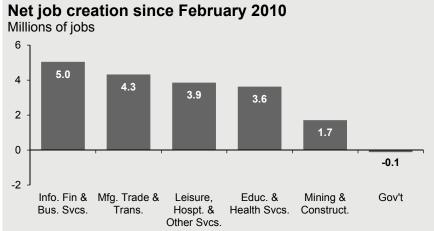
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'80



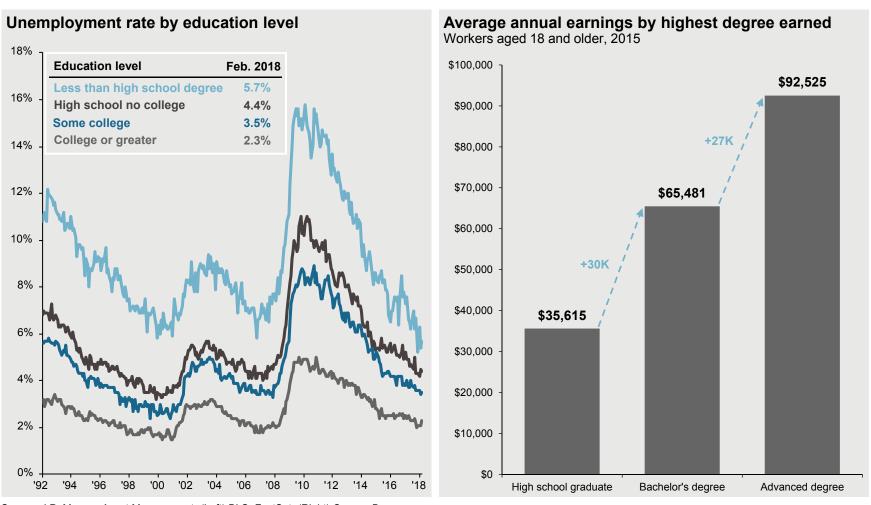




Source: BLS, FactSet, J.P. Morgan Asset Management. (Bottom right) Info. fin. & bus. svcs. = Information, financial activities and professional and business services; Mfg. trade & trans. = Manufacturing, trade, transportation and utilities; Leisure, hospt. & other svcs. = Leisure, hospitality and other services; Educ. & health svcs. = Education & health services; Mining and construct = Natural resources mining & construction; Gov't = Government. *Aging effect on the labor force participation rate is the estimated number of people who are no longer employed or looking for work because they are retired. Cyclical effect is the estimated number of people who lose their jobs and stop looking for work or do not look for work because of the economic conditions. Other represents the drop in labor force participation from the prior expansion peak that cannot be explained by age or cyclical effects. Estimates for reason of decline in labor force participation rate are made by J.P. Morgan Asset Management. Past performance is not a reliable indicator of current and future results.

*Guide to the Markets – U.S. Data are as of February 28, 2018.





Source: J.P. Morgan Asset Management; (Left) BLS, FactSet; (Right) Census Bureau.

Unemployment rates shown are for civilians aged 25 and older. Earnings by educational attainment comes from the Current Population Survey and is published under historical income tables by person by the Census Bureau. Past performance is not a reliable indicator of current and future results.

Guide to the Markets – U.S. Data are as of February 28, 2018.





Source: BLS, FactSet, J.P. Morgan Asset Management.

CPI used is CPI-U and values shown are % change vs. one year ago. Core CPI is defined as CPI excluding food and energy prices. The Personal Consumption Expenditure (PCE) deflator employs an evolving chain-weighted basket of consumer expenditures instead of the fixed-weight basket used in CPI calculations. Past performance is not a reliable indicator of current and future results.

Guide to the Markets – U.S. Data are as of February 28, 2018.



The U.S. dollar Monthly average of major currencies nominal trade-weighted index 115 110 105 100 Feb. 2018: 85.6 95 90 85 80 75 70 65 '98 '00 '02 '04 '06 '08

The U.S. trade balance Current account balance, % of GDP -7% -6% -5% -4% -3% -2% -1% 0% '94 '96 '98 '00 '02 '04 '06 '08 '10 '12 '14 '16 '18



Source: J.P. Morgan Asset Management; (Left) FactSet, Federal Reserve; (Top right) FactSet, Bureau of Economic Analysis, (Bottom right) Tullett Prebon.

Currencies in the Trade Weighted U.S. Dollar Major Currencies Index are: British pound, euro, Swedish kroner, Australian dollar, Canadian dollar, Japanese yen and Swiss franc. *Interest rate differential is the difference between the 10-year U.S. Treasury yield and a basket of the 10-year yields of each major trading partner (Europe, Canada, Japan, UK, Switzerland, Australia and Sweden). Weights on the basket are calculated using the 10 year average of total government bonds outstanding in each region. Europe is defined as the 19 countries in the Euro area. Past performance is not a reliable indicator of current and future results.

Guide to the Markets - U.S. Data are as of February 28, 2018.

J.P.Morgan
Asset Management

Change in production and consumption of liquid fuels

Production, consumption and inventories, millions of barrels per day

| Production | 2014 | 2015 | 2016 | 2017* | 2018* | Growth since 2014 |
|------------------|------|------|------|-------|-------|-------------------|
| U.S. | 14.1 | 15.1 | 14.9 | 15.6 | 17.3 | 22.8% |
| OPEC | 36.9 | 38.2 | 39.2 | 39.3 | 39.4 | 6.8% |
| Global | 93.8 | 96.7 | 97.2 | 98.0 | 100.4 | 7.1% |
| Consumption | | | | | | |
| U.S. | 19.1 | 19.5 | 19.7 | 19.9 | 20.3 | 6.4% |
| China | 11.6 | 12.4 | 12.8 | 13.3 | 13.7 | 17.4% |
| Global | 93.6 | 95.4 | 97.0 | 98.5 | 100.2 | 7.1% |
| Inventory Change | 0.2 | 1.4 | 0.3 | -0.5 | 0.2 | |

U.S. crude oil inventories and rig count** Million barrels, number of active rigs 1,250





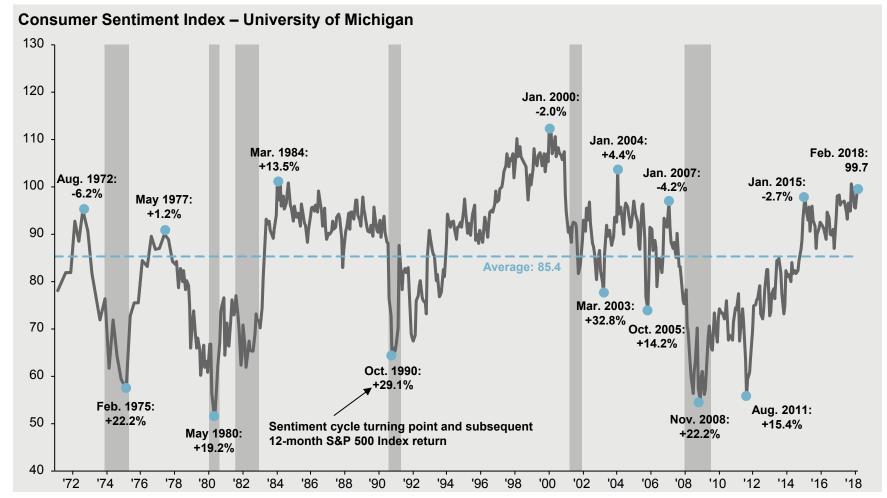
Source: J.P. Morgan Asset Management; (Top and bottom left) EIA; (Right) FactSet; (Bottom left) Baker Hughes. *Forecasts are from the February 2018 EIA Short-Term Energy Outlook and start in 2017.

Guide to the Markets – U.S. Data are as of February 28, 2018.



^{**}U.S. crude oil inventories include the Strategic Petroleum Reserve (SPR). Active rig count includes both natural gas and oil rigs.

Brent crude prices are monthly averages in USD using global spot ICE prices. Past performance is not a reliable indicator of current and future

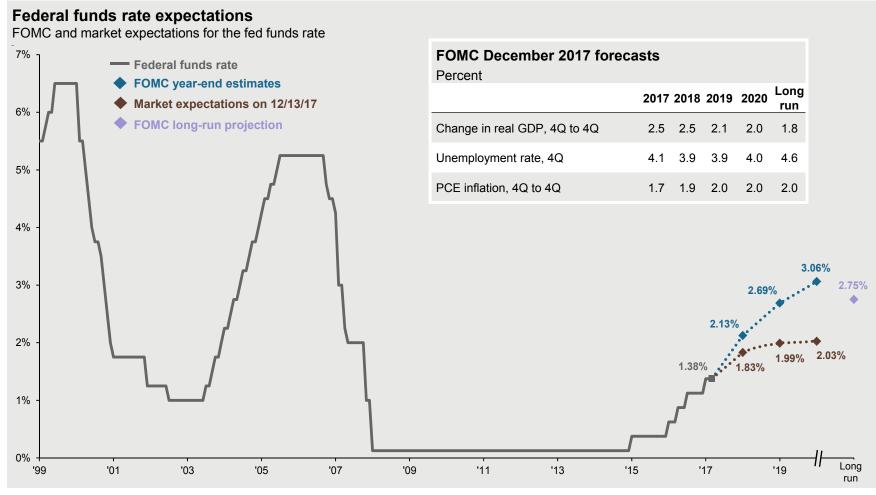


Source: Standard & Poor's, University of Michigan, FactSet, J.P. Morgan Asset Management.

Peak is defined as the highest index value before a series of lower lows, while a trough is defined as the lowest index value before a series of higher highs. Subsequent 12-month S&P 500 returns are price returns only, which excludes dividends. Past performance is not a reliable indicator of current and future results.

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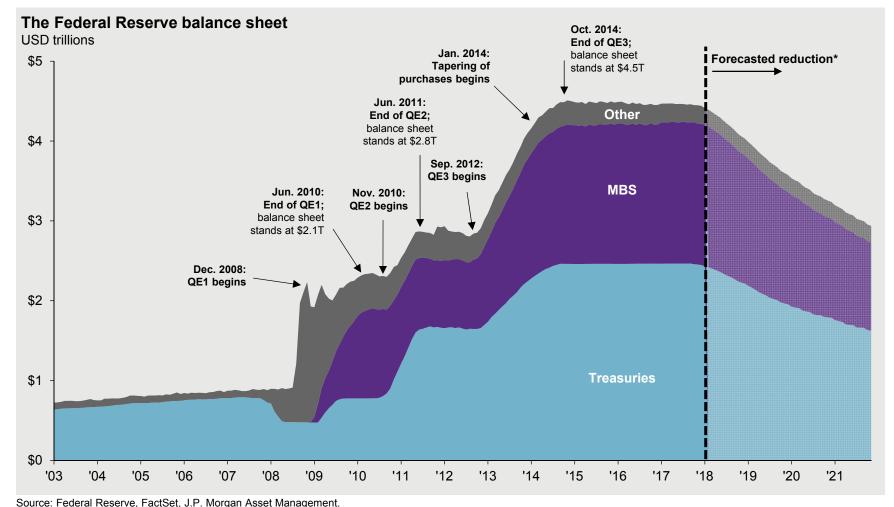


Source: FactSet, Federal Reserve, Bloomberg, J.P. Morgan Asset Management.

Market expectations are the federal funds rates priced into the fed futures market as of the date of the December 2017 FOMC meeting.

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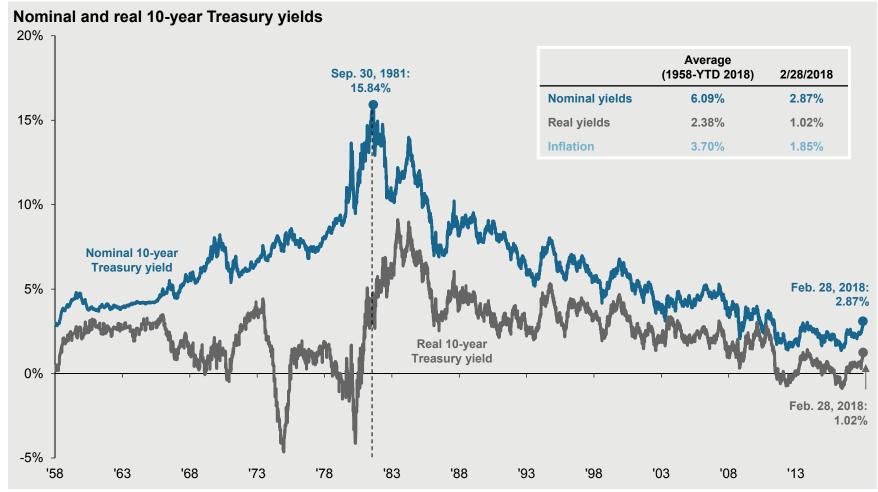




Currently, the balance sheet contains \$2.4 trillion in Treasuries and \$1.8 trillion in MBS. The end balance forecast is \$1.6 trillion in Treasuries and \$1.1 trillion in MBS.*Balance sheet reduction assumes reduction from current level, beginning October 2017 until December 2021. Reduction of Treasuries and MBS is per FOMC guidelines from the September 2017 meeting minutes: the cap on Treasury securities will begin at \$6 billion per month initially and reduction rate will increase in steps of \$6 billion at three-month intervals over 12 months until reaching \$30 billion per month; the MBS cap will begin at \$4 billion per month initially and will increase in steps of \$4 billion at three-month intervals over 12 months until reaching \$20 billion per month; Other assets are reduced in proportion. In those months where the amount of maturing assets do not exceed the stated cap then the balance sheet will be reduced by the total amount of maturing assets.

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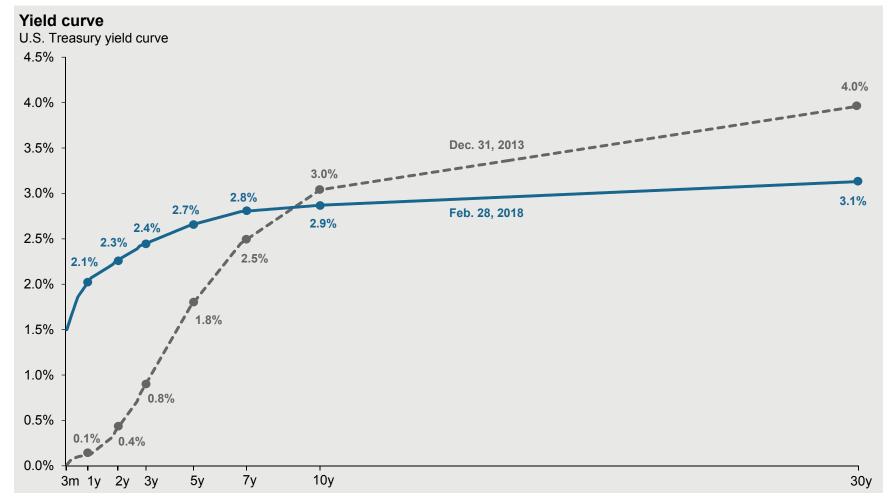


Source: BLS, Federal Reserve, FactSet, J.P. Morgan Asset Management.
Real 10-year Treasury yields are calculated as the daily Treasury yield less year-over-year core CPI inflation for that month except for February 2018, where real yields are calculated by subtracting out January 2018 year-over-year core inflation.

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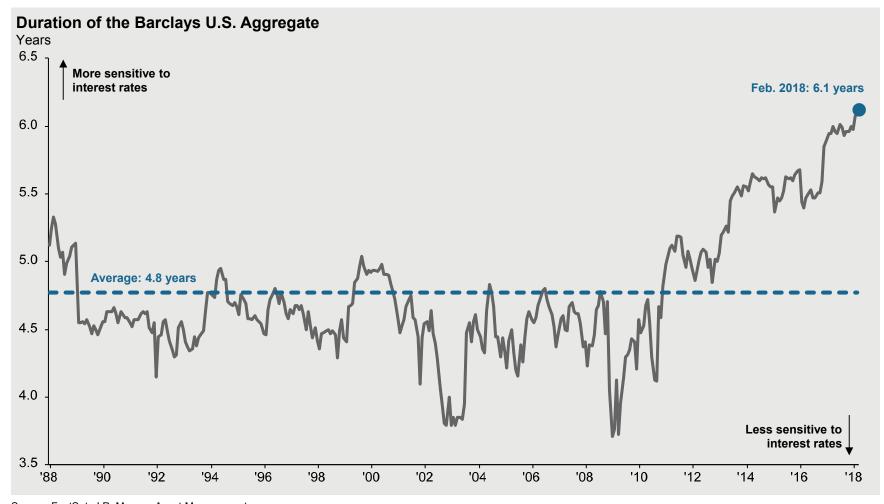


Yield curve GTM - u.s. | 34



Source: FactSet, Federal Reserve, J.P. Morgan Asset Management. *Guide to the Markets – U.S.* Data are as of February 28, 2018.





Source: FactSet, J.P. Morgan Asset Management

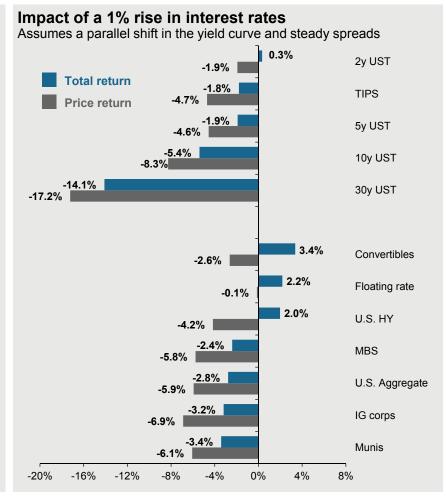
Duration measures the sensitivity of the price of a bond to a change in interest rates. The higher the duration the greater the sensitivity bond is to movements in the interest rate.

Guide to the Markets – U.S. Data are as of February 28, 2018.



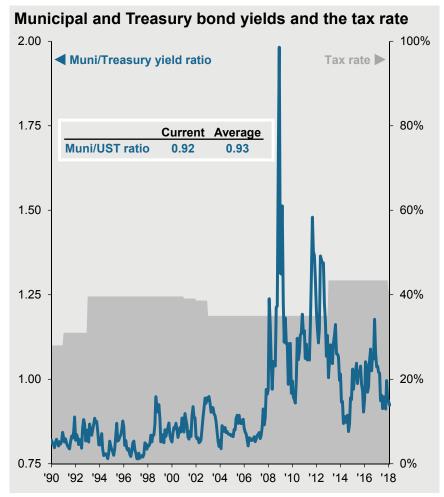
Yield Return 2018 Correlation Correlation Avg. U.S. Treasuries 2/28/2018 12/31/2017 Maturity YTD to 10-year to S&P 500 2.25% 1.89% -0.33% 2 years 2-Year 0.67 -0.36 2.65% 2.20% -1.65% 5 0.92 -0.29 5-Year **TIPS** 0.75% 0.44% -1.82% 10 0.55 0.24 2.87% 10-Year 2.40% -3.66% 10 1.00 -0.2930-Year 3.13% 2.74% -7.03% 30 0.93 -0.32 Sector Convertibles 6.00% 6.35% 2.28% -0.29 0.89 Floating Rate 2.33% 2.05% 0.51% 3.2 -0.20 0.39 **High Yield** 6.14% 5.72% -0.26% 6.2 -0.22 0.72 MBS 3.36% 2.91% -1.82% 7.6 0.80 -0.10 **Broad Market** 3.15% 2.71% -2.09% 8.4 0.85 0.05 2.65% 2.26% -1.95% -0.02 Municipals 10.0 0.51 3.71% 3.25% -2.56% 11.0 0.46 0.36 Corporates

Fixed income yields and returns

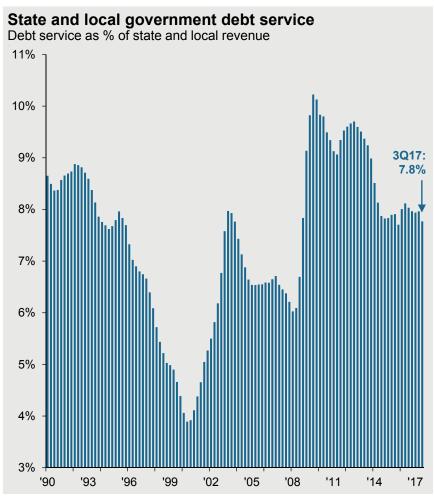


Source: Barclays, Bloomberg, U.S. Treasury, Standard and Poor's, FactSet, J.P. Morgan Asset Management. Sectors shown above are provided by Barclays and are represented by – Broad Market: U.S. Aggregate; MBS: U.S. Aggregate Securitized - MBS; Corporate: U.S. Corporates; Municipals: Muni Bond 10-year; High Yield: Corporate High Yield; TIPS: Treasury Inflation Protection Securities (TIPS). Floating Rate: FRN (BBB); Convertibles: U.S. Convertibles Composite. Yield and return information based on bellwethers for Treasury securities. Sector yields reflect yield to worst. Convertibles yield is based on US portion of Bloomberg Barclays Global Convertibles. Correlations are based on 10-years of monthly returns for all sectors. Change in bond price is calculated using both duration and convexity according to the following formula: New Price = (Price + (Price * -Duration * Change in Interest Rates))+(0.5 * Price * Convexity * (Change in Interest Rates)^2). Chart is for illustrative purposes only. Past performance is not indicative of future results. Guide to the Markets – U.S. Data are as of February 28, 2018.

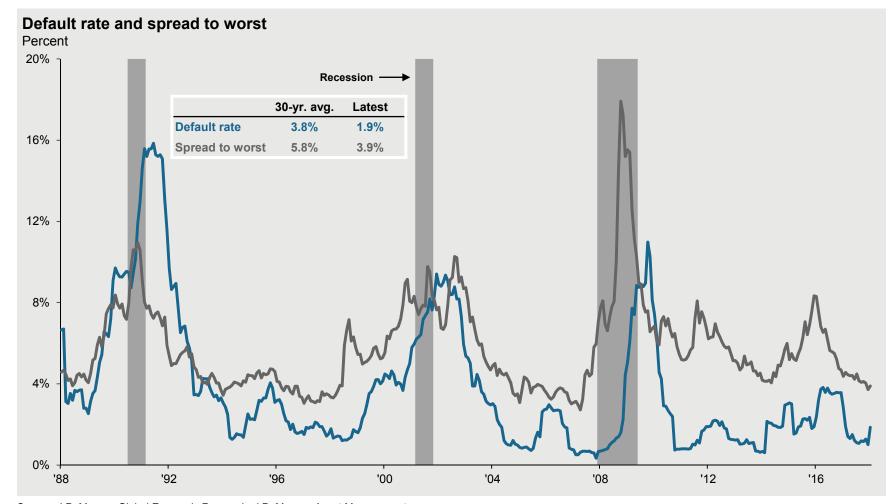




Source: J.P. Morgan Asset Management; (Left) FactSet, Barclays, FRB; (Right) BEA. *Guide to the Markets – U.S.* Data are as of February 28, 2018.





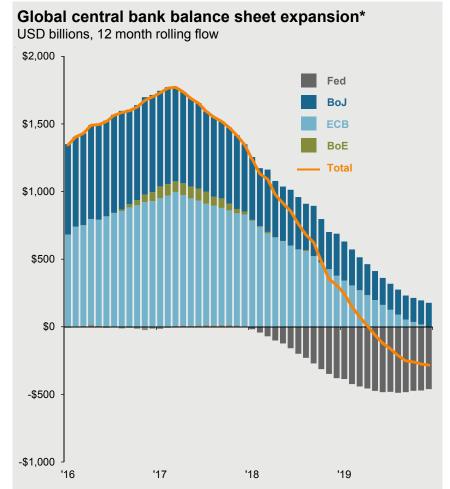


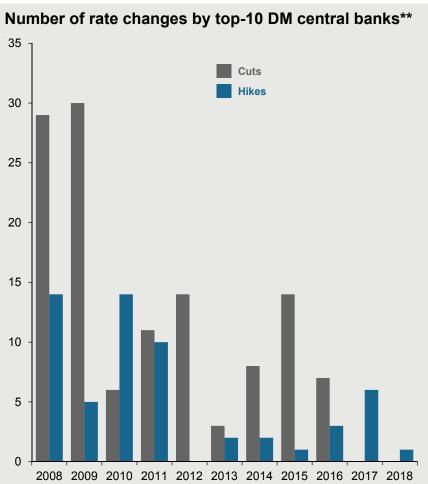
Source: J.P. Morgan Global Economic Research, J.P. Morgan Asset Management.

Default rates are defined as the par value percentage of the total market trading at or below 50% of par value and include any Chapter 11 filing, prepackaged filing or missed interest payments. Spreads indicated are benchmark yield to worst less comparable maturity Treasury yields. Yield to worst is defined as the lowest potential yield that can be received on a bond without the issuer actually defaulting and reflects the possibility of the bond being called at an unfavorable time for the holder. High yield is represented by the J.P. Morgan Domestic High Yield Index.

Guide to the Markets – U.S. Data are as of February 28, 2018.



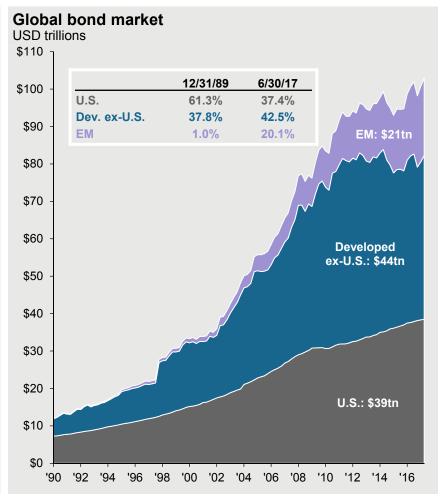




Source: J.P. Morgan Asset Management; (Left) Bank of England, Bank of Japan, European Central Bank, FactSet, Federal Reserve System, J.P. Morgan Global Economic Research; (Right) Bloomberg. *Includes the Bank of Japan (BoJ), Bank of England (BoE), European Central Bank (ECB) and Federal Reserve. Balance sheet expansion assumes no more quantitative easing (QE) from BoE; tapering of ECB QE to 30bn EUR in January 2018 and 0 in October 2018; tapering of BoJ QE to 50trn JPY ann. in 1Q18, 40trn JPY ann. in 2Q18, 30trn JPY ann. in 4Q18, and 20trn JPY ann. in 2019; and tapering of Fed QE per the September FOMC statement, incorporating a maturity schedule. **Including: U.S., Eurozone, Japan, UK, Canada, Australia, Sweden, Norway, Denmark and Switzerland. Guide to the Markets – U.S. Data are as of February 28, 2018.



| | Yi | ield | 2018 YTI |) Return | | |
|--------------|-----------|------------|----------|----------|-----------|----------------------|
| Aggregates | 2/28/2018 | 12/31/2017 | Local | USD | Duration | Correl to 10-year |
| U.S. | 3.15% | 2.71% | -2.09% | -2.09% | 6.1 years | 0.85 |
| Gbl. ex-U.S. | 1.14% | 1.03% | - | 1.75% | 7.6 | 0.36 |
| Japan | 0.19% | 0.20% | 0.04% | 5.62% | 9.1 | 0.48 |
| Germany | 0.64% | 0.46% | -0.96% | 0.60% | 6.2 | 0.22 |
| UK | 1.74% | 1.49% | -2.04% | -0.22% | 9.9 | 0.16 |
| Italy | 1.27% | 1.25% | 0.51% | 2.08% | 6.8 | 0.06 |
| Spain | 0.95% | 0.90% | 0.61% | 2.18% | 6.9 | 0.09 |
| Sector | | | | | | |
| Euro Corp. | 0.83% | 0.75% | -0.29% | 1.27% | 5.2 years | 0.17 |
| Euro HY | 3.50% | 3.32% | -0.15% | 1.42% | 4.4 | -0.34 |
| EMD (\$) | 5.70% | 5.26% | - | -2.03% | 6.7 | 0.23 |
| EMD (LCL) | 6.08% | 6.14% | 1.35% | 3.39% | 5.1 | 0.10 |
| EM Corp. | 4.93% | 4.53% | - | -0.94% | 5.7 | -0.20 |

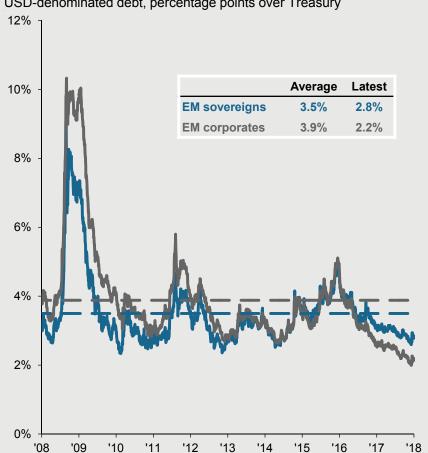


Source: J.P. Morgan Asset Management; (Left) FactSet, Barclays, Bloomberg; (Right) BIS. Fixed income sectors shown above are provided by Barclays and are represented by the global aggregate for each country except where noted. EMD sectors are represented by the J.P. Morgan EMBIG Diversified Index (USD), the J.P. Morgan GBI EM Global Diversified Index (LCL) and the J.P. Morgan CEMBI Broad Diversified Index (Corp). European Corporates are represented by the Barclays Euro Aggregate Corporate Index and the Barclays Pan-European High Yield index. Sector yields reflect yield to worst. Correlations are based on 10 years of monthly returns for all sectors. Past performance is not indicative of future results. Global bond market regional breakdown may not sum to 100% due to rounding. *Guide to the Markets – U.S.* Data are as of February 28, 2018.

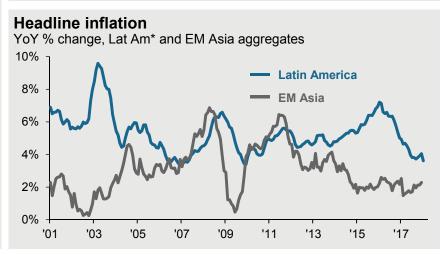


Corporate and sovereign EMD spreads

USD-denominated debt, percentage points over Treasury



Regional weights in EMD indices USD-denominated corporate and sovereign regional weightings 50% Sovereigns 37.7% 40% 35.8% Corporates 30.2% 30% 25.2% 22.4% 19.6% 17.4% 20% 11.6% 10% 0% Middle East & Latin America Asia Europe Africa



Source: J.P. Morgan Global Economic Research, J.P. Morgan Asset Management. EM sovereigns: J.P. Morgan EMBIG Diversified Index; EM corporates: J.P. Morgan CEMBI Broad Diversified Index. *Lat Am index excludes Argentina, Ecuador and Venezuela. Guide to the Markets - U.S. Data are as of February 28, 2018.



Fixed income sector returns

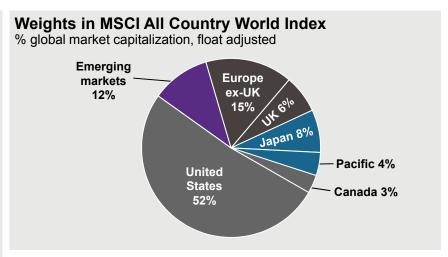
GTM - U.S. | 42

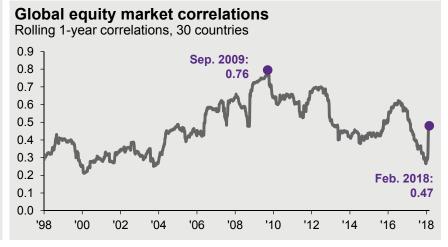
| | | | | | | | | | | | 2008 | - 2017 |
|----------------------------|-----------------------------|-----------------|-----------------|--------------------------|--------------|----------------|--------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | YTD | Ann. | Vol. |
| Treas. | High Yield | EMD LCL. | TIPS | EMD USD | High Yield | Muni | Muni | High Yield | EMD LCL. | EMD LCL. | High Yield | High Yield |
| 13.7% | 58.2% | 15.7% | 13.6% | 17.4% | 7.4% | 8.7% | 3.8% | 17.1% | 15.2% | 3.4% | 8.0% | 21.2% |
| MBS | EMD USD | High Yield | Muni | EMD LCL. | MBS | Corp. | MBS | EMD USD | EMD USD | High Yield | EMD USD | EMD LCL. |
| 8.3% | 29.8% | 15.1% | 12.3% | 16.8% | -1.4% | 7.5% | 1.5% | 10.2% | 10.3% | -0.3% | 7.3% | 13.0% |
| Barclays Agg | EMD LCL. | EMD USD | Treas. | High Yield | Corp. | EMD USD | EMD USD | EMD LCL. | High Yield | Asset Alloc. | Corp. | EMD USD |
| 5.2% | 22.0% | 12.2% | 9.8% | 15.8% | -1.5% | 7.4% | 1.2% | 9.9% | 7.5% | -1.6% | 5.6% | 11.6% |
| Muni | Corp. | Corp. | Corp. | Corp. | Asset Allec. | MBS | Treas. | Corp. | Corp. | MBS | Asset Alloc. | Corp. |
| 1.5% | 18.7% | 9.0% | 8.1% | 9.8% | -1.9% | 6.1% | 0.8% | 6.1% | 6.4% | -1.8% | 5.0% | 6.8% |
| Asset | Asset | Asset | Asset | Asset | Barclays | Barclays | Barclays | Asset | Muni | TIPS | Muni | TIPS |
| Al loc. 0.1% | — AH●c. 14.7% | AHOc. 7.9% | Albe. 8.1% | — AH € €. 7.4% | Agg -2.0% | Agg 6.0% | Agg 0.5% | Altoc. 4.7% | 5.8% | -1.8% | 4.9% | 6.6% |
| TIPS | TIPS | Barclays Agg | Barclays Agg | TIPS | Muni | Asset Alloc | Asset Alloc. | TIPS | Asset | Muni | Barclays Agg | Treas. |
| -2.4% | 11.4% | 6.5% | 7.8% | 7.0% | -2.2% | 5.5% | -0.3% | 4.7% | 5.3% | -2.0% | 4.0% | 5.4% |
| Corp. | Muni | TIPS | EMD USD | Muni | Treas. | Treas. | Corp. | Barclays Agg | Barclays Agg | EMD USD | MBS | Asset Alloc. |
| -4.9% | 9.9% | 6.3% | 7.3% | 5.7% | -2.7% | 5.1% | -0.7% | 2.6% | 3.5% | -2.0% | 3.8% | 4.9% |
| EMD LCL. | Barclays Agg | Treas. | MBS | Barclays Agg | EMD USD | TIPS | TIPS | MBS | TIPS | Barclays Agg | EMD LCL. | Muni |
| -5.2% | 5.9% | 5.9% | 6.2% | 4.2% | -5.3% | 3.6% | -1.4% | 1.7% | 3.0% | -2.1% | 3.6% | 4.5% |
| EMD USD | MBS | MBS | High Yield | MBS | TIPS | High Yield | High Yield | Treas. | MBS | Treas. | TIPS | Barclays Agg |
| -12.0% | 5.9% | 5.4% | 5.0% | 2.6% | -8.6% | 2.5% | -4.5% | 1.0% | 2.5% | -2.1% | 3.5% | 3.0% |
| High Yield | Treas. | Muni | EMD LCL. | Treas. | EMD LCL. | EMD LCL. | EMD LCL. | Muni | Treas. | Corp. | Treas. | MBS |
| -26.2% | -3.6% | 4.0% | -1.8% | 2.0% | -9.0% | -5.7% | -14.9% | -0.1% | 2.3% | -2.6% | 3.3% | 3.0% |

Source: Barclays, Bloomberg, FactSet, J.P. Morgan Global Economic Research, J.P. Morgan Asset Management. Past performance is not indicative of future returns. Fixed income sectors shown above are provided by Barclays unless otherwise noted and are represented by Broad Market: Bloomberg Barclays U.S. Aggregate Index; MBS: Bloomberg Barclays US Aggregate Securitized - MBS Index; Corporate: Bloomberg Barclays U.S. Aggregate Credit - Corporates - Investment Grade; Municipals: Bloomberg Barclays Munipal Bond 10-Year Index; High Yield: Bloomberg Barclays U.S. Aggregate Credit - Corporate - High Yield Index; Treasuries: Bloomberg Barclays Global U.S. Treasury; TIPS: Bloomberg Barclays Global Inflation-Linked - U.S. TIPs; Emerging Debt USD: J.P. Morgan EMBIG Diversified Index; Emerging Debt LCL: J.P. Morgan EM Global Index. The "Asset Allocation" portfolio assumes the following weights: 20% in MBS, 20% in Corporate, 15% in Municipals, 5% in Emerging Debt USD, 5% in Emerging Debt LCL, 10% in High Yield, 20% in Treasuries, 5% in TIPS. Asset allocation portfolio assumes annual rebalancing. *Guide to the Markets - U.S.* Data are as of February 28, 2018.



| | | • | | |
|--------------------------|-------------|------|-----------------|-----------------------------------|
| Country / Region | 2018 YTD | 2017 | 15-year ann. | 15-year realized volatility |
| Regions / Broad Indexes | | | | |
| AC World ex-U.S. | 0.6 | 27.8 | 9.2 | 18.9 |
| U.S. (S&P 500) | 1.8 | 21.8 | 9.9 | 14.5 |
| EAFE | 0.3 | 25.6 | 8.6 | 18.4 |
| Europe ex-UK | 0.3 | 27.8 | 9.4 | 21.2 |
| Emerging markets | 3.4 | 37.8 | 12.7 | 23.0 |
| MSCI: Selected Countries | i | | | |
| United Kingdom | -3.5 | 22.4 | 7.1 | 18.5 |
| France | 1.8 | 29.9 | 8.8 | 21.7 |
| Germany | -1.7 | 28.5 | 11.5 | 25.1 |
| Japan | 3.0 | 24.4 | 7.2 | 17.4 |
| China | 5.3 | 54.3 | 16.2 | 27.2 |
| India | -3.5 | 38.8 | 14.9 | 30.8 |
| Brazil | 14.6 | 24.5 | 15.8 | 34.9 |
| Russia | 13.6 | 6.1 | 8.8 | 37.3 |



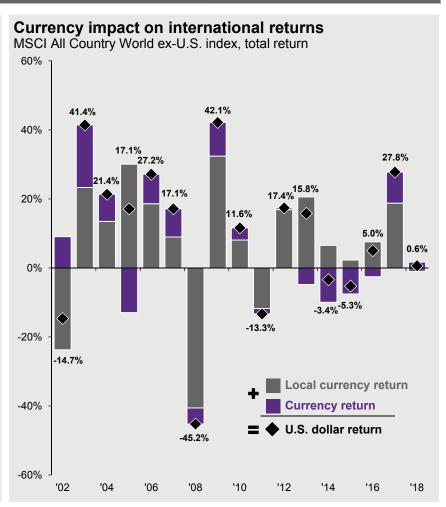


Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management.

All return values are MSCI Gross Index (official) data and are in U.S. dollars. Volatility values are also based on U.S. dollar returns and are calculated based on the annualized quarterly standard deviation. 15-year return and volatility figures are calculated for the time period 12/31/02-12/31/17. Chart is for illustrative purposes only. Please see disclosure page for index definitions. Countries included in global correlations include Argentina, South Africa, Japan, UK, Canada, France, Germany, Italy, Australia, Austria, Brazil, China, Colombia, Denmark, Finland, Hong Kong, India, Malaysia, Mexico, Netherlands, New Zealand, Peru, Philippines, Portugal, Korea, Spain, Taiwan, Thailand, Turkey, United States. Past performance is not a reliable indicator of current and future results.



U.S. dollar in historical perspective Index level, nom. major trade-weighted exchange rate, Mar. 1973=100 150 Dollar strengthening, 140 hurts international returns 130 10 years: -44% 120 **7.5 years:** 110 7 years: 9.5 years: 100 -38% 90 5.5 years: 80 Dollar weakening, helps international returns 70 60 '80 '05 '10 '75 '85 '90 '95 '00 '15



Source: FactSet, J.P. Morgan Asset Management; (Left) Federal Reserve; (Right) MSCI.
Currencies in the nominal major trade-weighted U.S. dollar index are: British pound, euro, Swedish krona, Australian dollar, Canadian dollar, Japanese yen and Swiss franc. Past performance is not a reliable indicator of current and future results.

Guide to the Markets – U.S. Data are as of February 28, 2018.

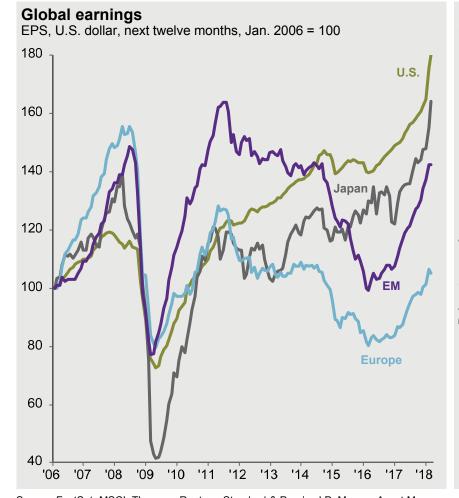


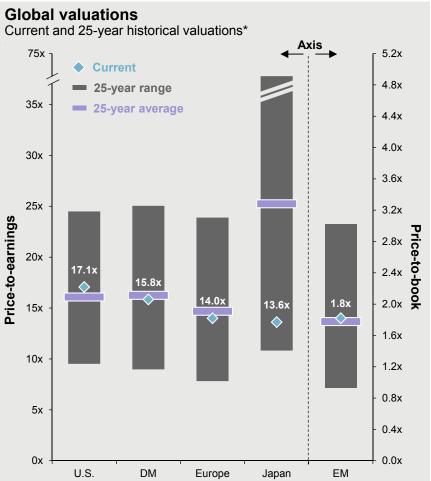
MSCI All Country World ex-U.S. and S&P 500 Index Dec. 1996 = 100, U.S. dollar, price return 400 Feb. 28, 2018 P/E (fwd.) = 16.9xDiv. Yield 20 yr. avg. P/E 20 yr. avg. 350 S&P 500 16.9x 16.0x 2.0% 2.0% ACWI ex-U.S. 13.7x 14.5x 3.2% 3.0% 300 +301% 250 Feb. 28. 2018 P/E (fwd.) = 13.7x200 -57% +101% 49% +106% 150 -62% 216% 100 50 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17

Source: MSCI, Standard & Poor's, FactSet, J.P. Morgan Asset Management. Forward price to earnings ratio is a bottom-up calculation based on the most recent index price, divided by consensus estimates for earnings in the next twelve months (NTM), and is provided by FactSet Market Aggregates. Returns are cumulative and based on price movement only, and do not include the reinvestment of dividends. Dividend yield is calculated as consensus estimates of dividends for the next twelve months, divided by most recent price, as provided by FactSet Market Aggregates. Past performance is not a reliable indicator of current and future results.

Guide to the Markets - U.S. Data are as of February 28, 2018.







Source: FactSet, MSCI, Thomson Reuters, Standard & Poor's, J.P. Morgan Asset Management. *Valuations refer to NTMA P/E for Europe, U.S., Japan and Developed Markets and P/B for emerging markets, Valuation and earnings charts use MSCI indices for all regions/countries, except for the U.S., which is the S&P 500. All indices use IBES aggregate earnings estimates, which may differ from earnings estimates used elsewhere in the book. MSCI Europe includes the Eurozone as well as countries not in the currency bloc, such as the U.K., Switzerland, Sweden and Norway (which collectively make up 45% of the overall index). Past performance is not a reliable indicator of current and future results.





Source: Markit, J.P. Morgan Asset Management.

Heatmap colors are based on PMI relative to the 50 level, which indicates acceleration or deceleration of the sector, for the time period shown. Heat map is based on three-month moving averages, with the exception of the most recent figure, which is the single month February 2018. Data for Canada, Indonesia and Mexico are back-tested and filled in from December 2007 to November 2010 for Canada and May 2011 for Indonesia and Mexico due to lack of existing PMI figures for these countries. Past performance is not a reliable indicator of current and future results. *Guide to the Markets – U.S.* Data are as of February 28, 2018.



| Year | -over-year hea | adlin | e in | flati | on k | у с | ount | ry a | nd r | egio | n | | | | | | | | | | | | | | |
|-----------|-------------------|-------|-------|-------|-------|-------|---------|-------|-------|-------|-------|------|------|-------|------|------|------|------|------|------|------|-------|--------|------|------|
| | | | | | | | 2016 | | | | | | | | | | | 20 | 17 | | | | | | 2018 |
| | | Feb | Mar | Apr | Мау | Jun | Ja L | Aug | Sep | 00 | No. | Dec | Jan | Feb | Mar | Apr | Мау | Jun | Б | Aug | Sep | Oct | Š Š | Dec | Jan |
| | Global | 1.7% | 1.6% | 1.6% | 1.5% | 1.6% | 1.5% | 1.5% | 1.7% | 1.7% | 1.8% | 1.9% | 2.3% | 2.1% | 1.9% | 2.0% | 1.8% | 1.7% | 1.6% | 1.9% | 2.0% | 2.0% | 2.2% | 2.3% | 2.1% |
| | Developed Markets | 0.5% | 0.5% | 0.5% | 0.5% | 0.6% | 0.5% | 0.6% | 0.9% | 1.1% | 1.2% | 1.5% | 2.0% | 2.1% | 1.8% | 1.9% | 1.6% | 1.4% | 1.5% | 1.7% | 1.8% | 1.6% | 1.8% | 1.8% | 1.7% |
| | Emerging Markets | 3.7% | 3.4% | 3.4% | 3.2% | 3.2% | 3.2% | 2.9% | 3.1% | 3.1% | 3.1% | 3.0% | 3.2% | 2.4% | 2.5% | 2.6% | 2.6% | 2.4% | 2.3% | 2.7% | 2.6% | 2.7% | 2.7% | 3.0% | 2.7% |
| | U.S. | 1.0% | 0.9% | 1.1% | 1.0% | 1.0% | 0.8% | 1.1% | 1.5% | 1.6% | 1.7% | 2.1% | 2.5% | 2.7% | 2.4% | 2.2% | 1.9% | 1.6% | 1.7% | 1.9% | 2.2% | 2.0% | 2.2% | 2.1% | 2.1% |
| | Canada | 1.4% | 1.3% | 1.7% | 1.5% | 1.5% | 1.3% | 1.1% | 1.3% | 1.5% | 1.2% | 1.5% | 2.1% | 2.0% | 1.6% | 1.6% | 1.3% | 1.0% | 1.2% | 1.4% | 1.6% | 1.4% | 2.1% | 1.9% | 1.7% |
| | Japan | 0.2% | 0.0% | -0.3% | -0.4% | -0.3% | -0.5% | -0.5% | -0.5% | 0.2% | 0.5% | 0.3% | 0.5% | 0.2% | 0.2% | 0.4% | 0.4% | 0.3% | 0.5% | 0.6% | 0.7% | 0.2% | 0.5% | 1.1% | 1.3% |
| _ | UK | 0.3% | 0.5% | 0.3% | 0.3% | 0.5% | 0.6% | 0.6% | 1.0% | 0.9% | 1.2% | 1.6% | 1.8% | 2.3% | 2.3% | 2.7% | 2.9% | 2.6% | 2.6% | 2.9% | 3.0% | 3.0% | 3.1% | 3.0% | 3.0% |
| Developed | Euro Area | -0.2% | 0.0% | -0.2% | -0.1% | 0.1% | 0.2% | 0.2% | 0.4% | 0.5% | 0.6% | 1.1% | 1.8% | 2.0% | 1.5% | 1.9% | 1.4% | 1.3% | 1.3% | 1.5% | 1.5% | 1.4% | 1.5% | 1.4% | 1.3% |
| evel | Germany | -0.2% | 0.1% | -0.3% | 0.0% | 0.2% | 0.4% | 0.3% | 0.5% | 0.7% | 0.7% | 1.7% | 1.9% | 2.2% | 1.5% | 2.0% | 1.4% | 1.5% | 1.5% | 1.8% | 1.8% | 1.5% | 1.8% | 1.6% | 1.4% |
| | France | -0.1% | -0.1% | -0.1% | 0.1% | 0.3% | 0.4% | 0.4% | 0.5% | 0.5% | 0.7% | 0.8% | 1.6% | 1.4% | 1.4% | 1.4% | 0.9% | 0.8% | 0.8% | 1.0% | 1.1% | 1.2% | 1.2% | 1.2% | 1.5% |
| | Italy | -0.2% | -0.3% | -0.4% | -0.4% | -0.4% | -0.2% | -0.2% | 0.0% | -0.3% | 0.1% | 0.5% | 1.0% | 1.6% | 1.5% | 2.0% | 1.7% | 1.3% | 1.2% | 1.4% | 1.4% | 1.2% | 1.1% | 1.0% | 1.2% |
| | Spain | -1.0% | -1.0% | -1.2% | -1.1% | -0.9% | -0.7% | -0.3% | 0.0% | 0.5% | 0.5% | 1.4% | 2.9% | 3.0% | 2.1% | 2.6% | 2.0% | 1.6% | 1.7% | 2.0% | 1.8% | 1.7% | 1.8% | 1.2% | 0.7% |
| | Greece | 0.1% | -0.7% | -0.4% | -0.2% | 0.2% | 0.2% | 0.4% | -0.1% | 0.6% | -0.2% | 0.3% | 1.5% | 1.4% | 1.7% | 1.6% | 1.5% | 0.9% | 0.9% | 0.6% | 1.0% | 0.5% | 1.1% | 1.0% | 0.2% |
| | China | 2.3% | 2.3% | 2.3% | 2.0% | 1.9% | 1.8% | 1.3% | 1.9% | 2.1% | 2.3% | 2.1% | 2.5% | 0.8% | 0.9% | 1.2% | 1.5% | 1.5% | 1.4% | 1.8% | 1.6% | 1.9% | 1.7% | 1.8% | 1.5% |
| | Indonesia | 4.4% | 4.4% | 3.6% | 3.3% | 3.5% | 3.2% | 2.8% | 3.1% | 3.3% | 3.6% | 3.0% | 3.5% | 3.8% | 3.6% | 4.2% | 4.3% | 4.4% | 3.9% | 3.8% | 3.7% | 3.6% | 3.3% | 3.6% | 3.3% |
| _ | Korea | 1.1% | 0.8% | 1.0% | 0.8% | 0.7% | 0.4% | 0.5% | 1.3% | 1.5% | 1.5% | 1.3% | 2.0% | 1.9% | 2.2% | 1.9% | 2.0% | 1.9% | 2.2% | 2.6% | 2.1% | 1.8% | 1.3% | 1.5% | 1.0% |
| ging | Taiwan | 2.4% | 2.0% | 1.9% | 1.2% | 0.9% | 1.2% | 0.6% | 0.3% | 1.7% | 2.0% | 1.7% | 2.2% | -0.1% | 0.2% | 0.1% | 0.6% | 1.0% | 0.8% | 1.0% | 0.5% | -0.3% | 0.3% | 1.2% | 0.9% |
| Emerging | India | 5.3% | 4.8% | 5.5% | 5.8% | 5.8% | 6.1% | 5.0% | 4.4% | 4.2% | 3.6% | 3.4% | 3.2% | 3.7% | 3.9% | 3.0% | 2.2% | 1.5% | 2.4% | 3.3% | 3.3% | 3.6% | 4.9% | 5.2% | 5.1% |
| ш | Brazil | 10.4% | 9.4% | 9.3% | 9.3% | 8.8% | 8.7% | 9.0% | 8.5% | 7.9% | 7.0% | 6.3% | 5.4% | 4.8% | 4.6% | 4.1% | 3.6% | 3.0% | 2.7% | 2.5% | 2.5% | 2.7% | 2.8% | 2.9% | 2.9% |
| | Mexico | 2.9% | 2.6% | 2.5% | 2.6% | 2.5% | 2.7% | 2.7% | 3.0% | 3.1% | 3.3% | 3.4% | 4.7% | 4.9% | 5.4% | 5.8% | 6.2% | 6.3% | 6.4% | 6.7% | 6.3% | 6.4% | 6.6% | 6.8% | 5.5% |
| | Russia | 8.1% | 7.3% | 7.3% | 7.3% | 7.5% | 7.2% | 6.8% | 6.4% | 6.1% | 5.8% | 5.4% | 5.0% | 4.6% | 4.3% | 4.1% | 4.1% | 4.3% | 3.9% | 3.3% | 3.0% | 2.7% | 2.5% | 2.5% | 2.2% |

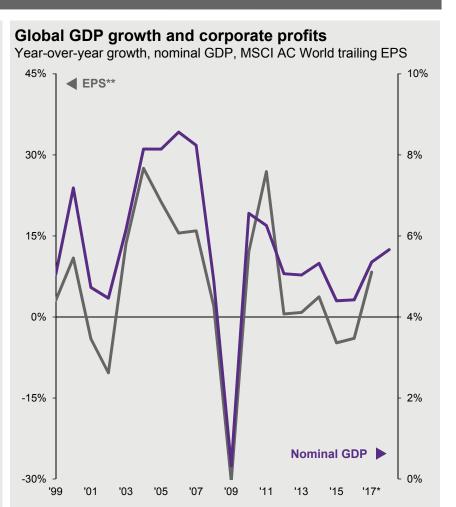
Source: Federal Reserve, Statistics Canada, UK Office for National Statistics (ONS), Eurostat, Melbourne Institute, Japan Ministry of Internal Affairs & Communication, National Bureau of Statistics China, Statistics Indonesia, Korean National Statistical Office, DGBAS, India Ministry of Statistics & Programme Implementation, Bank of Mexico, Goskomstat of Russia, IBGE, FactSet, J.P. Morgan Asset Management.

Heatmap colors are based on z-score of year-over-year inflation rate relative to five year history, for the time period shown. Past performance is not a reliable indicator of current and future results.



Global reflation gтм - u.s. | 49

Components of global growth Nominal GDP growth broken down into real GDP growth and inflation 10% Inflation Real GDP **Nominal GDP** 6.6% 6.3% 6% 5.3% 5.1% 5.0% 4.9% 4% 2% 0.39 0% -2% -4% 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017*2018*



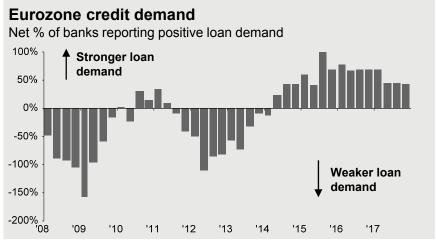
Source: IMF, J.P. Morgan Asset Management; (Right) MSCI, FactSet.

Nominal GDP used is based on purchasing power parity (PPP) valuation of country GDP. *2017 and 2018 nominal GDP figures are IMF estimates. **Earnings used are U.S. dollar trailing 12-month sum earnings per share figures. Past performance is not a reliable indicator of current and future results.



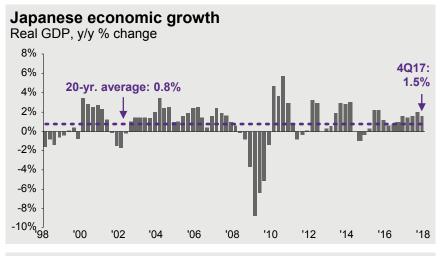
Eurozone GDP growth Contribution to Eurozone real GDP growth, % change year-over-year 4% 2% -2% Real GDP -4% **Domestic demand** Net exports -6% '07 '09 '11 '13 '15 '17

Eurozone unemployment Persons unemployed as a percent of labor force, seasonally adjusted 13% May 2013: 12.1% 12% 11% 10% 9% 8% Jan. 2018: 8.6% 7% 6% '09 '10 '11 '12 '13 '14 '15 '16 '17 '18

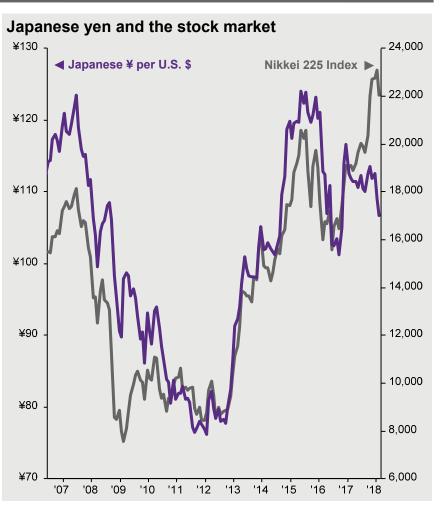


Source: FactSet, J.P. Morgan Asset Management; (Left, Top right) Eurostat; (Bottom right) ECB. Eurozone shown is the aggregate of the 19 countries that currently use the euro. Past performance is not a reliable indicator of current and future results.





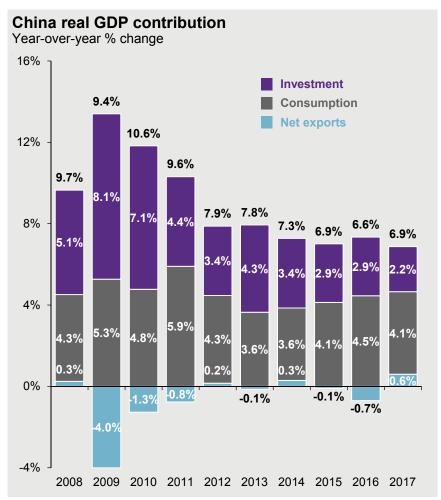


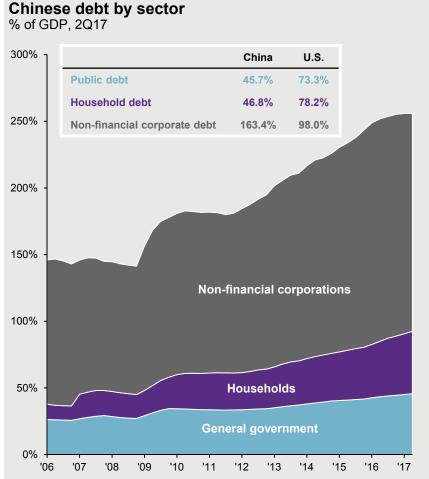


Source: FactSet, J.P. Morgan Asset Management; (Top and bottom left) Japanese Cabinet Office; (Right) Nikkei. Past performance is not a reliable indicator of current and future results.



China: Economic growth and debt

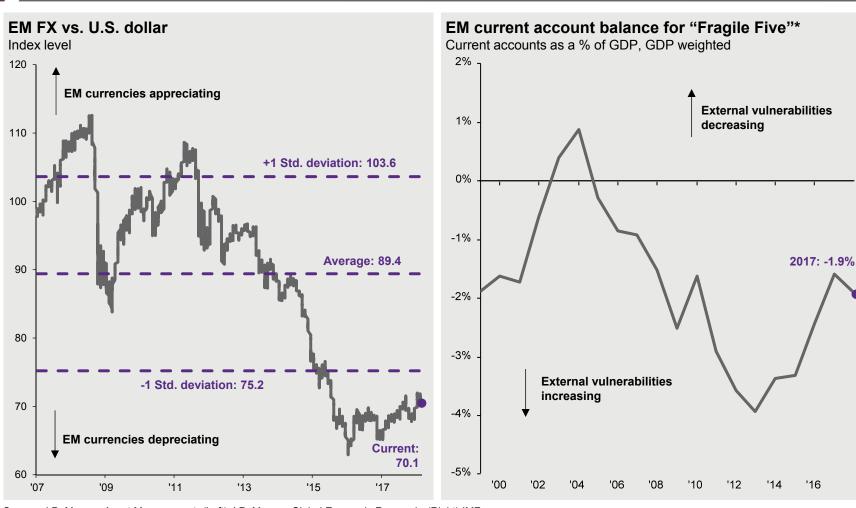




Source: FactSet, J.P. Morgan Asset Management; (Left) CEIC; (Right) BIS. Household and non-financial corporate debt is based on market value and government debt is based on nominal value. Public debt refers to general government debt. Past performance is not a reliable indicator of current and future results. *Guide to the Markets – U.S.* Data are as of February 28, 2018.

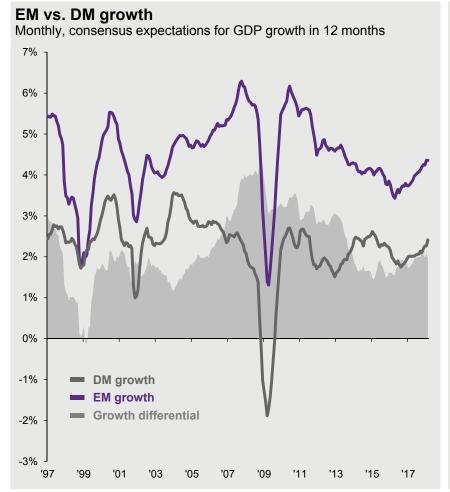


Emerging market currencies and current accounts



Source: J.P. Morgan Asset Management; (Left) J.P. Morgan Global Economic Research; (Right) IMF.
*Fragile Five includes Brazil, India, Indonesia, South Africa and Turkey. 2017 is an IMF forecast. Past performance is not a reliable indicator of current and future results.







Source: FactSet, MSCI, Consensus Economics, J.P. Morgan Asset Management.

"Growth differential" is consensus estimates for EM growth in the next 12 months minus consensus estimates for DM growth in the next 12 months, provided by Consensus Economics. Past performance is not a reliable indicator of current and future results.



Ann. Volatility

16%

20%

24%

3%

12%

4%

8%

8%

20%

25%

7%

10%

Correlations and volatility

| | U.S. Large Cap | EAFE | EME | Bonds | Corp. HY | Munis | Currcy. | EMD | Cmdty. | REITs | Hedge funds | Private equity |
|----------------|----------------------|------|------|-------|-------------|-------|---------|-------|--------|-------|----------------|-------------------|
| U.S. Large Cap | 1.00 | 0.89 | 0.82 | -0.28 | 0.74 | -0.10 | -0.48 | 0.61 | 0.56 | 0.79 | 0.84 | 0.85 |
| EAFE | | 1.00 | 0.92 | -0.13 | 0.79 | 0.02 | -0.66 | 0.72 | 0.61 | 0.68 | 0.86 | 0.83 |
| ЕМЕ | | | 1.00 | -0.06 | 0.90 | 0.10 | -0.67 | 0.86 | 0.67 | 0.61 | 0.87 | 0.79 |
| Bonds | | | | 1.00 | -0.04 | 0.81 | -0.19 | 0.26 | -0.15 | 0.03 | -0.21 | -0.27 |
| Corp. HY | | | | | 1.00 | 0.12 | -0.54 | 0.88 | 0.67 | 0.67 | 0.83 | 0.73 |
| Munis | | | | | | 1.00 | -0.20 | 0.45 | -0.11 | 0.08 | 0.00 | -0.12 |
| Currencies | | | | | | | 1.00 | -0.63 | -0.60 | -0.43 | -0.47 | -0.57 |
| EMD | | | | | | | | 1.00 | 0.58 | 0.61 | 0.71 | 0.62 |
| Commodities | | | | | | | | | 1.00 | 0.43 | 0.73 | 0.70 |
| REITs | | | | | | | | | | 1.00 | 0.59 | 0.67 |
| Hedge funds | | | | | | | | | | | 1.00 | 0.85 |
| Private equity | | | | | | | | | | | | 1.00 |

Source: Barclays Inc., Bloomberg, Cambridge Associates, Credit Suisse/Tremont, FactSet, Federal Reserve, MSCI, NCREIF, Standard & Poor's, J.P. Morgan Asset Management.

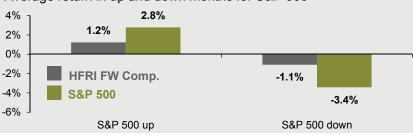
Indexes used – Large Cap: S&P 500 Index; Currencies: Federal Reserve Trade Weighted Dollar; EAFE: MSCI EAFE; EME: MSCI Emerging Markets; Bonds: Barclays Aggregate; Corp HY: Barclays Corporate High Yield; EMD: Barclays Emerging Market; Cmdty.: Bloomberg Commodity Index; Real Estate: NAREIT ODCE Index; Hedge Funds: CS/Tremont Hedge Fund Index; Private equity: Cambridge Associates Global Buyout & Growth Index. Private equity data are reported on a two quarter lag. All correlation coefficients and annualized volatility calculated based on quarterly total return data for period 12/31/07 to 12/31/17, except for Private equity, which is as of 9/30/17. This chart is for illustrative purposes only. *Guide to the Markets – U.S.* Data are as of February 28, 2018.



| 2003 | 2004 | 2005 | 2006 | | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | YTD | 2003 · | - 2017 Vol. |
|-----------------|----------------|-----------------|-----------------|-----------------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------|-------------------|-------------------|-------------------|-----------------|---------------|-----------------|-----------------|
| | | | | 2007 | 2000 | | | | | | | | | | | | |
| Large | | Equity L/S | Large | Macro | Macro | Large | Large Cap | Global | Large Cap | Large Cap | Large | Market Neutral | Large | Large | Large | Large | Large |
| Cap 28.7% | | 10.6% | Cap 15.8% | 11.1% | 4.8% | Cap 26.5% | 15.1% | Bond 5.6% | 16.0% | 32.4% | Cap 13.7% | 4.3% | Cap 12.0% | Cap 21.8% | Cap 5.7% | Cap 9.9% | Cap 14.5% |
| | | | | | | | | | | | 13.7 /6 | | | | | | |
| Event Driven | Large Cap | HFRIFW Comp. | Event Driven | Equity L/S | Global Bond | Relative Value | | Large Cap | Relative Value | Equity L/S | Macro | Large Cap | | Equity L/S | Equity L/S | Event Driven | Equity L/S |
| | 10.9% | 9.3% | 15.3% | 10.5% | 4.8% | 25.8% | 11.9% | 2.1% | 10.6% | 14.3% | 5.6% | 1.4% | 10.6% | 13.3% | 3.0% | 7.2% | 9.3% |
| 23.370 | | | | | Market | | | | | | | | | | 3.0 /0 | | |
| Macro | Global Bond | Event Driven | HFRIFW Comp. | HFRIFW Comp. | Market Neutral | Event Driven | Relative Value | Relative Value | | | Relative Value | Relative Value | Relative Value | HFRIFW Comp. | Macro | HFRIFW Comp. | Event Driven |
| 21.4% | 9.3% | | 12.9% | 10.0% | -5.9% | | 11.4% | 0.1% | | | 4.0% | -0.3% | 7.7% | 8.6% | 2.9% | 6.1% | 8.1% |
| | HERLEW | | Relative | Global | Relative | Equity | Equity | Market | Equity | HERLEW | Market | Equity | | Event | HERIEW | Equity | HERLEW |
| Equity L/S | Comp. | Macro | Value | Bond | Value | L/S | L/S | Neutral | L/S | Comp. | Neutral | L/S | Equity L/S | | Comp. | L/S | Comp. |
| 20.5% | 9.0% | 6.8% | 12.4% | 9.5% | - 18.0% | 24.6% | 10.5% | - 2.1% | 7.4% | 9.1% | 3.1% | - 1.0 % | 5.5% | | 2.5% | 6.1% | 7.0% |
| HFRIFW | Equity | Market | Equity | Relative | HFRIFW | HFRIFW | HFRIFW | Event | HFRIFW | Relative | HERLEW | HFRIFW | HERLEW | Global | Market | Relative | Global |
| Comp. | L/S | Neutral | L/S | Value | Comp. | Comp. | Comp. | | Comp. | Value | Comp. | Comp. | Comp. | Bond | Neutral | Value | Bond |
| 19.5% | 7.7% | 6.2% | 11.7% | 8.9% | - 19.0% | 20.0% | 10.2% | | 6.4% | 7.1% | 3.0% | - 1.1% | 5.4% | 7.4% | 1.3% | 6.0% | 5.9% |
| Global | Relative | Relative | | Event | | Global | | | Global | Market | Equity | | Market | Relative | | | Relative |
| Bond | Value | Value | Macro | | | Bond | Macro | Macro | Bond | Neutral | Ĺ/S | Macro | Neutral | Value | | Macro | Value |
| 12.5% | 5.6% | 6.0% | 8.2% | | | 6.9% | 8.1% | -4.2% | 4.3% | 6.5% | 1.8% | - 1.3 % | 2.2% | 5.2% | | 4.6% | 5.8% |
| Relative | Marin | Large | Market | Large | Equity | Marrie | Global | HFRIFW | Market | Marana | | Global | Global | Market | Global | Global | Marana |
| Value | Macro | Cap | Neutral | Сар | L/S | Macro | Bond | Comp. | Neutral | Macro | | Bond | Bond | Neutral | Bond | Bond | Macro |
| 9.7% | 4.6% | 4.9% | 7.3% | 5.5% | -26.7% | 4.3% | 5.5% | -5.3% | 3.0% | -0.4% | | -3.2% | 2.1% | 4.9% | 1.2% | 4.2% | 4.9% |
| Market | Market | Global | Global | Market | Large | Market | Market | Equity | Moore | Global | Global | | Moore | Mooro | Relative | Market | Market |
| Neutral | Neutral | Bond | Bond | Neutral | Cap | Neutral | Neutral | L/S | Macro | Bond | Bond | | Macro | Macro | Value | Neutral | Neutral |
| 2.4% | 4.1% | -4.5% | 6.6% | 5.3% | -37.0% | 1.4% | 2.9% | -8.4% | - 0 . 1% | -2.6% | 0.6% | | 1.0% | 2.2% | 1.2% | 3.0% | 3.1% |

Hedge fund returns in different market environments

Average return in up and down months for S&P 500



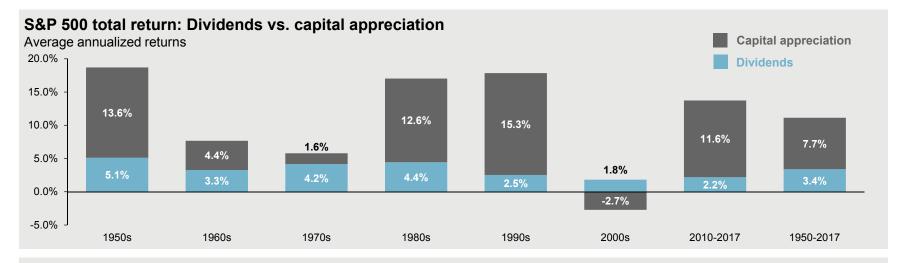
Hedge fund returns in different market environments Average return in up and down months for Barclays Agg.

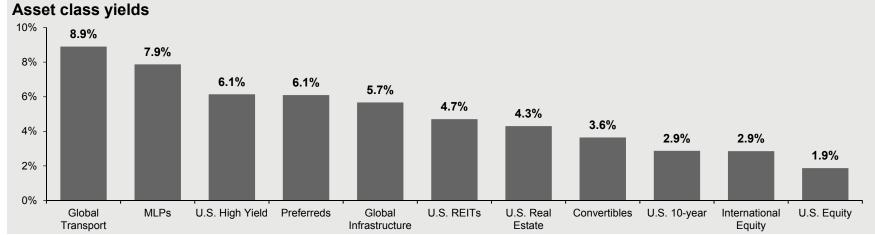
Source: Barclays, FactSet, HFRI, Standard & Poor's, J.P. Morgan Asset Management.

Large Cap equities is represented by the S&P 500. Returns in different market environments are based on monthly returns over the past 15 years through December 31, 2017, due to data availability.

Guide to the Markets – U.S. Data are as of February 28, 2018.

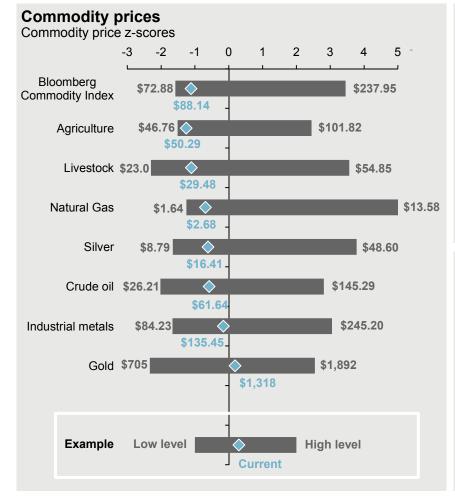


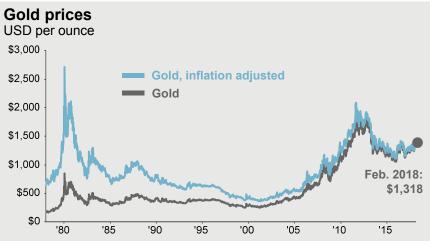




Source: FactSet, J.P. Morgan Asset Management; (Top) Ibbotson, Standard & Poor's; (Bottom) Alerian, BAML, Barclays, Clarkson, Drewry Maritime Consultants, Federal Reserve, FTSE, MSCI, NCREIF, Standard & Poor's. Dividend vs. capital appreciation returns are through 12/31/17. Yields are as of 12/31/17, except transport, infrastructure (9/30/17) and U.S. real estate (12/31/2017). Global Transport: Levered yields for transport assets are calculated as the difference between charter rates (rental income), operating expenses, debt amortization and interest expenses, as a percentage of equity value. Yields for each of the sub-vessel types above are calculated and respective weightings are applied to each of the sub-sectors to arrive at the current levered yields for Global Transportation; MLPs: Alerian MLP; Preferreds: BAML Hybrid Preferred Securities; U.S. High Yield: Bloomberg US Aggregate Corporate High Yield; Global Infrastructure: MSCI Global Infrastructure Asset Index-Low risk; U.S. Real Estate: NCREIF-ODCE Index; U.S. REITs: FTSE NAREIT USA REITs; Convertibles: Barclays U.S. Convertibles Composite; International Equity: MSCI AC World ex USA; U.S. 10-year: Tullett Prebon; U.S. Equity: MSCI USA. *Guide to the Markets – U.S.* Data are as of February 28, 2018









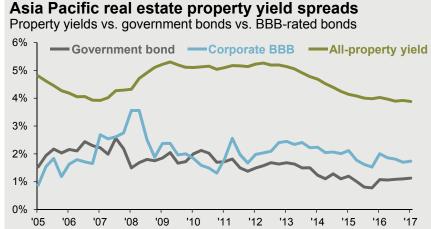
Source: FactSet, J.P. Morgan Asset Management; (Left) Bloomberg, CME; (Top right) BLS, CME; (Bottom right) Bloomberg, BLS. Commodity prices are represented by the appropriate Bloomberg Commodity sub-index. Crude oil shown is Brent crude. Other commodity prices are represented by futures contracts. Z-scores are calculated using daily prices over the past 10 years.

Guide to the Markets – U.S. Data are as of February 28, 2018.



U.S. real estate net operating income growth Year-over-year NPI-ODCE Index NOI growth 25% 20% 15% 10% 4Q17: 5.9% 0% -5% -10% '99 '01 '17

Europe real estate property yield spreads Property yields vs. government bonds vs. BBB-rated bonds 10% Government bond Corporate BBB All-property yield 8% 6% 4% 2% 0% '05 '06 '07 '08 '09 '10 12 '13 '16



Source: J.P. Morgan Asset Management; (Left) U.S. real estate: NPI-ODCE NOI Growth; (Top right) Europe real estate: CBRE EU-15 prime index; (Bottom right) Asia Pacific real estate: Barclays. All property yields (market value weighted blend of Sydney CBD and Melbourne CBD average equivalent prime yield (NLA) and Tokyo CBD 5-Kus market yield (GFA), in JPY), government bonds and BBB-rated bonds for Asia Pacific are yield to worst.



Asset class returns

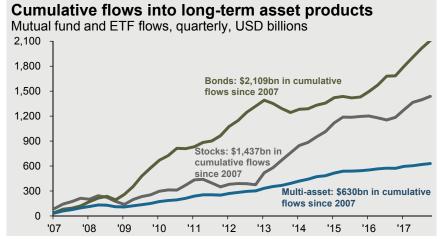
GTM - U.S. | 60

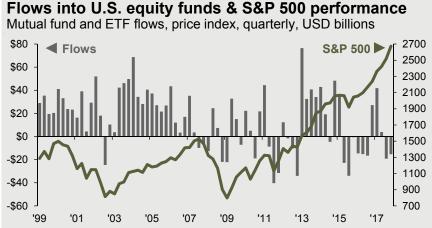
| | | | | | | | | | | | | | | | | 2003 - | - 2017 |
|-----------------|------------------|---------------|-----------------|----------------|-------------------|-----------------|----------------|-----------------|-----------------|--------------------------|------------------|-------------------|-----------------|-----------------|------------------|----------------|------------------|
| 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | YTD | Ann. | Vol. |
| EM Equity | REITs | EM Equity | REITs | EM Equity | Fixed Income | EM Equity | REITs | REITs | REITs | Small Cap | REITs | REITs | Small Cap | EM Equity | EM Equity | EM Equity | EM Equity |
| 56.3% | 31.6% | 34.5% | 35.1% | 39.8% | 5.2% | 79.0% | 27.9% | 8.3% | 19.7% | 38.8% | 28.0% | 2.8% | 21.3% | 37.8% | 3.4% | 12.7% | 23.0% |
| Small | EM | Comdty. | EM | Comdty. | Cash | High | Small | Fixed | High | Large | Large | Large | High | DM | Large | Small | REITs |
| Cap | Equity | • | Equity | | | Yield | Cap | Income | Yield | Cap | Cap | Cap | Y ie ld | Equity | Cap | Cap | |
| 47.3% | 26.0% | 21.4% | 32.6% | 16.2% | 1.8% | 59.4% | 26.9% | 7.8% | 19.6% | 32.4% | 13.7% | 1.4% | 14.3% | 25.6% | 1.8% | 11.2% | 22.3% |
| DM Equity | DM Equity | DM Equity | DM Equity | DM Equity | Asset Almc. | DM Equity | EM Equity | High Yield | EM Equity | DM Equity | Fixed Income | Fixed Income | Large Cap | Large Cap | DM Equity | REITs | Small Cap |
| 39.2% | 20.7% | 14.0% | 26.9% | 11.6% | 25.4% | 32.5% | 19.2% | 3.1% | 18.6% | 23.3% | 6.0% | 0.5% | 12.0% | 21.8% | 0.3% | 11.1% | 18.8% |
| REITs | Small Cap | REITs | Small Cap | Asset Alloc. | High Yield | REITs | Comdty. | Large Cap | DM Equity | Asset Al <u>l</u> oc. | Asset Alloc. | Cash | Comdty. | Small Cap | Comdty. | Large Cap | Comdty. |
| 37.1% | 18.3% | 12.2% | 18.4% | 7.1% | -26.9% | 28.0% | 16.8% | 2.1% | 17.9% | 14/.9% | 5.2% | 0.0% | 11.8% | 14.6% | 0.2% | 9.9% | 18.8% |
| High | High | Asset | Large | Fixed | Small | Small | Large | Cash | Small | High | Small | DM | EM | Asset | Cash | High | DM |
| Yield 32.4% | Y ie ld 13.2% | Allac. | Cap 15.8% | Income 7.0% | Cap -33.8% | Cap 27.2% | Сар 15.1% | 0.1% | Cap 16.3% | Yield 7.3% | Cap \ 4.9% | Equity - 0.4% | Equity 11.6% | Allec. 14.6% | 0.2% | Yield 9.6% | Equity 18.4% |
| | | | | | - 33.0 / | 1 | | | | 1.3% | 4.5 /0 | | 11.0 /6 | | | | |
| Large Cap | Asset Alloc. | Large Cap | Asset Alloc. | Large Cap | Comdty. | Large Cap | High Yield | Asset Alloc. | Large / | REITs | Cash | Asset Alloc. | REITs | High Yield | High Yield | DM Equity | Large Cap |
| 28.7% | 12.8% | 4.9% | 15.3% | 5.5% | -35.6% | 26.5% | 14.8% | 0.7% | 16.0% | 2.9% | 0.0% | -2.0% | 8.6% | 10.4% | -0.2% | 8.6% | 14.5% |
| Asset | Large | Small | High | Cash | Large | Asset | Asset | Small | Asset | Cash | High | High | Asset | REITs | Asset | Asset | High |
| Alloc. 26.3% | Cap 10.9% | Cap 4.6% | Yield 13.7% | 4.8% | Cap -37.0% | Alloc. 25.0% | Alloc. | Cap -4.2% | Alloc. 12.2% | 0.0% | Yield 0.0% | Yield - 2.7% | Aug c. 8.3% | 8.7% | Alloc. - 0.5% | Alloc. 8.3% | Y ie Id 11.3% |
| 20.5 /6 | 10.9 /8 | | 13.7 /6 | | - 37.0 /8 | 23.0 /6 | DM | DM | Fixed | Fixed | EM | Small | Fixed | Fixed | Small | Fixe d | Asset |
| Comdty. | Comdty. | High Yield | Cash | High Yield | REITs | Comdty. | Equity | Equity | Income | Income | Equity | Cap | Income | Income | Cap | Income | Alloc. |
| 23.9% | 9.1% | 3.6% | 4.8% | 3.2% | -37.7% | 18.9% | 8.2% | - 11.7% | 4.2% | -2.0% | - 1.8 % | -4.4% | 2.6% | 3.5% | - 1.4% | 4.1% | 11.0% |
| Fixed | Fixed | Cash | Fixed | Small | DM | Fixed | Fixed | Comdty. | Cash | EM | DM | EM | DM | Comdty. | Fixed | Cash | Fixed |
| Income 4.1% | Income 4.3% | 3.0% | Income 4.3% | Cap - 1.6% | Equity - 43.1% | Income 5.9% | Income 6.5% | - 13.3% | 0.1% | Equity - 2.3% | Equity - 4.5% | Equity - 14.6% | Equity 1.5% | 1.7% | Income - 2.1% | 1.2% | Income 3.3% |
| - 4.170 | 4.5 /6 | Fixed | 4.5 /6 | - 1.0 /8 | -43.1% EM | 3.9 /6 | 0.5 // | - 13.3 % EM | 0.176 | - 2.5 % | -4.5 % | - 14.0 /6 | 1.5 /6 | 1.7 /6 | - 2.176 | 1.2 /0 | 3.3 / |
| Cash | Cash | Income | Comdty. | REITs | Equity | Cash | Cash | Equity | Comdty. | Comdty. | Comdty. | Comdty. | Cash | Cash | REITs | Comdty. | Cash |
| 1.0% | 1.2% | 2.4% | 2.1% | - 15.7% | -53.2% | 0.1% | 0.1% | - 18.2% | - 1.1% | -9.5% | - 17.0% | -24.7% | 0.3% | 0.8% | - 10.0% | -0.3% | 0.8% |

Source: Barclays, Bloomberg, FactSet, MSCI, NAREIT, Russell, Standard & Poor's, J.P. Morgan Asset Management. Large cap: S&P 500, Small cap: Russell 2000, EM Equity: MSCI EME, DM Equity: MSCI EAFE, Comdty: Bloomberg Commodity Index, High Yield: Barclays Global HY Index, Fixed Income: Barclays US Aggregate, REITs: NAREIT Equity REIT Index. The "Asset Allocation" portfolio assumes the following weights: 25% in the S&P 500, 10% in the Russell 2000, 15% in the MSCI EAFE, 5% in the MSCI EME, 25% in the Barclays US Aggregate, 5% in the Barclays 1-3m Treasury, 5% in the Barclays Global High Yield Index, 5% in the Bloomberg Commodity Index and 5% in the NAREIT Equity REIT Index. Balanced portfolio assumes annual rebalancing. Annualized (Ann.) return and volatility (Vol.) represents period of 12/31/02 – 12/31/17. Please see disclosure page at end for index definitions. All data represents total return for stated period. Past performance is not indicative of future returns.



| | | Registered product flows | | | | | | | | | | | | | | | | | |
|---------------|-------|--------------------------|------|------|------|------|------|------|------|-------|-------|------|------|------|------|------|------|------|------|
| USD billions | AUM | YTD | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 | 2004 | 2003 | 2002 | 2001 |
| U.S. equity | 8,441 | 1 | 12 | (18) | (20) | 108 | 186 | (32) | (34) | 32 | 20 | 1 | 25 | 77 | 113 | 172 | 142 | 56 | 88 |
| World equity | 3,713 | 46 | 242 | 7 | 204 | 149 | 200 | 58 | 17 | 86 | 60 | (35) | 190 | 172 | 137 | 89 | 39 | 11 | (10) |
| Taxable bond | 3,565 | 45 | 392 | 225 | 54 | 79 | (21) | 302 | 165 | 216 | 312 | 63 | 107 | 50 | 46 | 28 | 47 | 108 | 61 |
| Tax-free bond | 700 | 8 | 33 | 31 | 21 | 33 | (55) | 53 | (8) | 14 | 71 | 12 | 13 | 17 | 7 | (7) | (3) | 13 | 9 |
| Multi-asset | 2,566 | 6 | 59 | 29 | 59 | 92 | 91 | 52 | 39 | 62 | 40 | 14 | 98 | 79 | 80 | 82 | 51 | 22 | 19 |
| Liquidity | 2,665 | (50) | 95 | 190 | 39 | 31 | 31 | 0 | (51) | (348) | (260) | 673 | 540 | 170 | 48 | (58) | (93) | 3 | 263 |

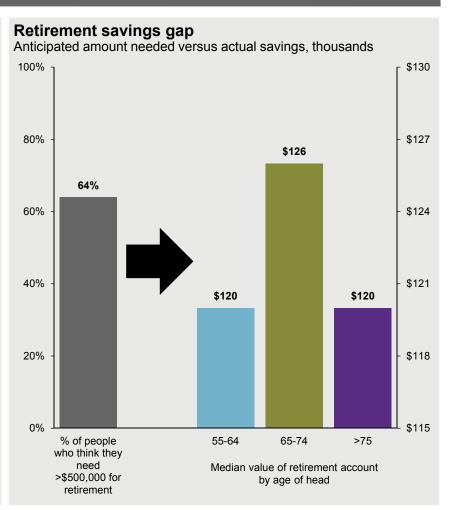




Source: Strategic Insight Simfund, J.P. Morgan Asset Management; All data include flows through January 2018 and capture all registered product flows (open-end mutual funds and ETFs). Simfund data are subject to periodic revisions. World equity flows are inclusive of emerging market, global equity and regional equity flows. Multi-asset flows include asset allocation, balanced fund, flexible portfolio and mixed income flows. *Guide to the Markets – U.S.* Data are as of February 28, 2018.



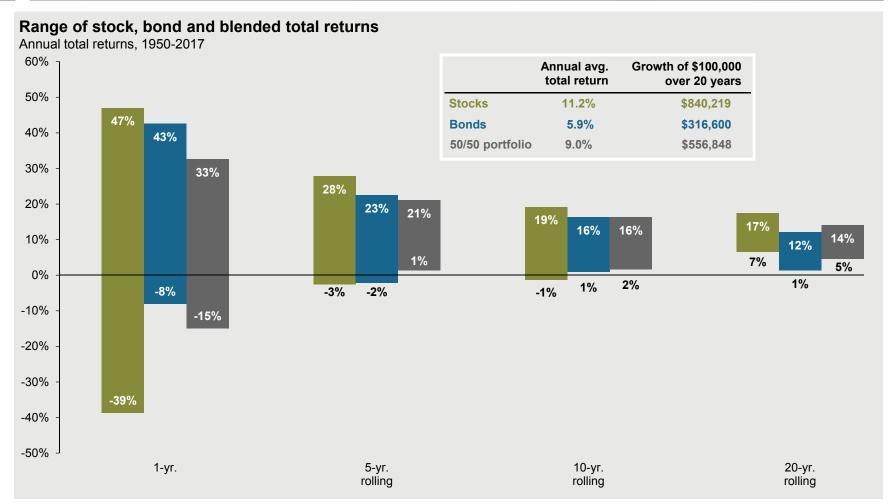
Probability of reaching ages 80 and 90 Persons aged 65, by gender, and combined couple 100% Men 90% Women Couple - at least one lives to specified age 80% 73% 63% 60% 49% 40% 34% 22% 20% 0% 80 years 90 years



Source: J.P. Morgan Asset Management; (Left) SSA 2014 Life Tables; (Right) 2017 Retirement Confidence Survey, Employee Benefit Research Institute and Greenwald & Associates; 2016 Survey of Consumer Finances, Federal Reserve.

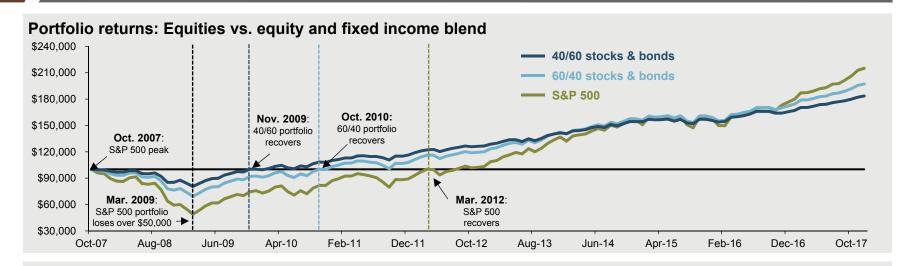
EBRI survey was conducted from January 6, 2017 – January 13, 2017 through online interviews with 1,671 individuals (1,082 workers and 589 retirees) ages 25 and older in the United States.

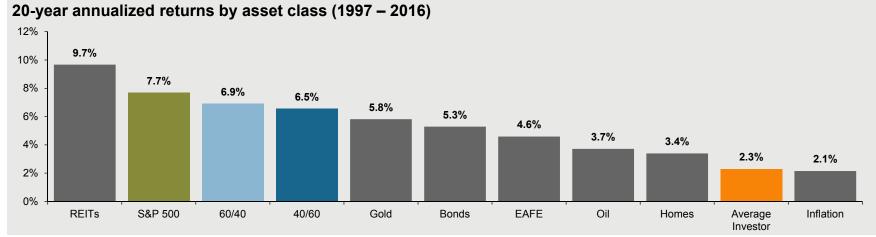




Source: Barclays, FactSet, Federal Reserve, Robert Shiller, Strategas/Ibbotson, J.P. Morgan Asset Management. Returns shown are based on calendar year returns from 1950 to 2017. Stocks represent the S&P 500 Shiller Composite and Bonds represent Strategas/Ibbotson for periods from 1950 to 2010 and Barclays Aggregate thereafter. Growth of \$100,000 is based on annual average total returns from 1950 to 2017.

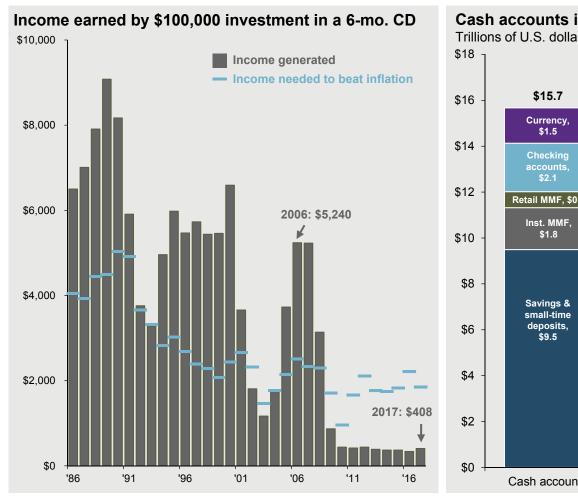


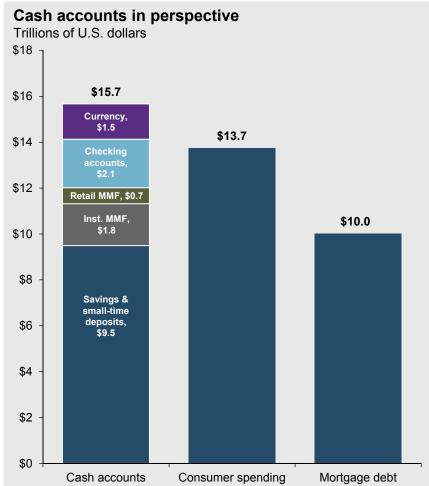




Source: J.P. Morgan Asset Management; (Top) Barclays, FactSet, Standard & Poor's; (Bottom) Dalbar Inc. Indexes used are as follows: REITS: NAREIT Equity REIT Index, EAFE: MSCI EAFE, Oil: WTI Index, Bonds: Barclays U.S. Aggregate Index, Homes: median sale price of existing single-family homes, Gold: USD/troy oz., Inflation: CPI. 60/40: A balanced portfolio with 60% invested in S&P 500 Index and 40% invested in high quality U.S. fixed income, represented by the Barclays U.S. Aggregate Index. The portfolio is rebalanced annually. Average asset allocation investor return is based on an analysis by Dalbar Inc., which utilizes the net of aggregate mutual fund sales, redemptions and exchanges each month as a measure of investor behavior. Returns are annualized (and total return where applicable) and represent the 20-year period ending 12/31/16 to match Dalbar's most recent analysis. *Guide to the Markets – U.S.* Data are as of February 28, 2018.





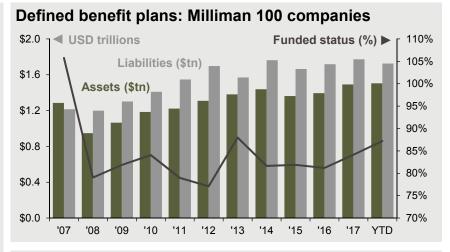


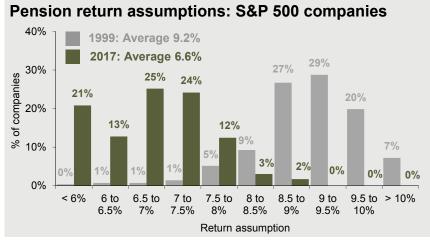
Source: FactSet, J.P. Morgan Asset Management; (Left) Bankrate.com; (Right) Federal Reserve System, BEA. Money supply and consumer spending are as of 1/31/2018 and mortgage debt is as of 9/30/2017. M2 includes M1 (currency in circulation and checking accounts) plus savings deposits, small-denomination time deposits and retail money market mutual funds. Institutional money market funds are considered memorandum item, not included in M2. Annual income is for illustrative purposes and is calculated based on the 6-month CD yield on average during each year and \$100,000 invested. Past performance is not indicative of comparable future results.

Guide to the Markets – U.S. Data are as of February 28, 2018.



Asset allocation: Corporate DB plans vs. endowments 36.0% Equities 37.4% 8.0% Fixed Income 44.4% 19.0% Hedge Funds 3.9% 11.0% Private Equity 3.8% **Endowments** 6.0% Real Estate Corporate DB plans 3.3% 16.0% Other Alternatives 4.0% 4.0% Cash 3.2% 0% 10% 20% 30% 40% 50%

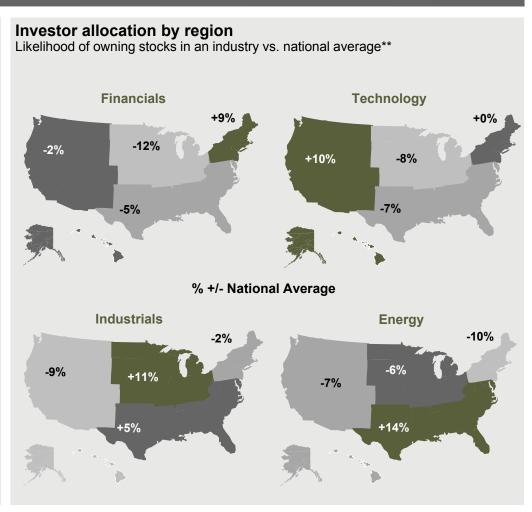




Source: J.P. Morgan Asset Management; (Left) NACUBO (National Association of College and University Business Officers), Towers Watson; (Top right) Milliman Pension Funding Index; (Bottom right) Compustat/FactSet, S&P 500 corporate 10-Ks. Endowment asset allocation as of 2017. Corporate DB plans asset allocation as of 2016. Endowments represents dollar-weighted average data of 805 colleges and universities. Corporate DB plans represents aggregate asset allocation of Fortune 1000 pension plans. Pension return assumptions based on all available and reported data from S&P 500 Index companies. Pension assets, liabilities and funded status based on Milliman 100 companies reporting pension data as of January 31, 2017. Return assumption bands are inclusive of upper range. All information is shown for illustrative purposes only. *Guide to the Markets – U.S.* Data are as of February 28, 2018.



Investment universe & U.S. investors Percentage of total net assets, 2017 U.S. Global 100% 90% 30% 80% 70% 64% 76% 60% 50% 40% 70% 30% 20% 36% 24% 10% 0% Global GDP Global stock & bond U.S. investor markets* allocation

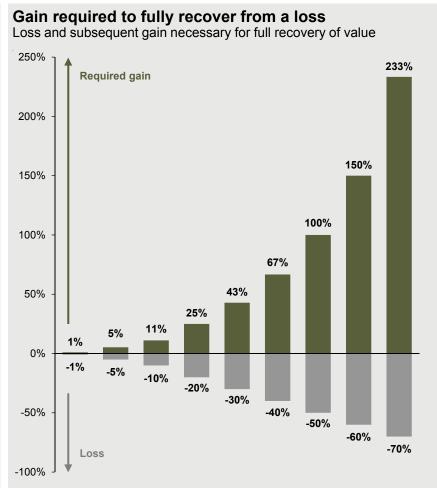


Source: Openfolio, IMF, Strategic Insight Simfund, J.P. Morgan Asset Management.

*Global stock and bond markets data are as of 2013. U.S. investor allocation is the total value of investments in global or domestic equity mutual funds and ETFs as of 2017. **Investor allocation by region is based on data collected by Openfolio. Average sector allocations at the national level are determined by looking at the sector allocations of over 20,000 brokerage accounts, and taking a simple average. Portfolio allocations are then evaluated on a regional basis, and the regional averages are compared to the national average to highlight any investor biases. Further details can be found on openfolio.com.



The power of compounding Cumulative return by holding period 350% Cash **Bonds** 301% 300% Stocks 250% 200% 165% 150% 100% 51% 42% 50% 28% 11% 7% 0% 1 year 5 years 20 years



Source: J.P. Morgan Asset Management, BLS, FactSet, Standard & Poor's Cumulative returns are calculated using historical data. Stock returns are based on the S&P 500, bonds returns are based on the Barclays U.S. Aggregate Index and cash returns are based on 3-month U.S. Treasury Bills. 1-year returns are 20 year average annualized return from 12/31/1997-12/31/2017 for each asset class. 5- and 20-year returns are cumulative over that time period based on the annualized return. Past performance is not indicative of future returns.



J.P. Morgan Asset Management - Index definitions

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All indexes are unmanaged and an individual cannot invest directly in an index. Index returns do not include fees or expenses.

Equities:

The **Dow Jones Industrial Average** is a price-weighted average of 30 actively traded blue-chip U.S. stocks.

The MSCI ACWI (All Country World Index) is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets.

The MSCI EAFE Index (Europe, Australasia, Far East) is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the US & Canada.

The MSCI Emerging Markets Index is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets.

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

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

The Russell 1000 Index® measures the performance of the 1,000 largest companies in the Russell 3000.

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

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

The **Russell 2000 Index**® measures the performance of the 2,000 smallest companies in the Russell 3000 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 3000 Index**® measures the performance of the 3,000 largest U.S. companies based on total market capitalization.

The Russell Midcap Index® measures the performance of the 800 smallest companies in the Russell 1000 Index

The **Russell Midcap Growth Index** ® measures the performance of those Russell Midcap companies with higher price-to-book ratios and higher forecasted growth values. The stocks are also members of the Russell 1000 Growth index.

The **Russell Midcap Value Index** ® measures the performance of those Russell Midcap companies with lower price-to-book ratios and lower forecasted growth values. The stocks are also members of the Russell 1000 Value index.

The **S&P 500 Index** is widely regarded as the best single gauge of the U.S. equities market. The index includes a representative sample of 500 leading companies in leading industries of the U.S. economy. The **S&P 500 Index** focuses on the large-cap segment of the market; however, since it includes a significant portion of the total value of the market, it also represents the market.

Fixed income:

The Barclays 1-3 Month U.S. Treasury Bill Index includes all publicly issued zero-coupon US Treasury Bills that have a remaining maturity of less than 3 months and more than 1 month, are rated investment grade, and have \$250 million or more of outstanding face value. In addition, the securities must be denominated in U.S. dollars and must be fixed rate and non convertible.

The Barclays Global High Yield Index is a multi-currency flagship measure of the global high yield debt market. The index represents the union of the US High Yield, the Pan-European High Yield, and Emerging Markets (EM) Hard Currency High Yield Indices. The high yield and emerging markets sub-components are mutually exclusive. Until January 1, 2011, the index also included CMBS high yield securities.

The **Barclays Municipal Index**: consists of a broad selection of investment- grade general obligation and revenue bonds of maturities ranging from one year to 30 years. It is an unmanaged index representative of the tax-exempt bond market.

The Barclays US Dollar Floating Rate Note (FRN) Index provides a measure of the U.S. dollar denominated floating rate note market.

The **Barclays US Corporate Investment Grade Index** is an unmanaged index consisting of publicly issued US Corporate and specified foreign debentures and secured notes that are rated investment grade (Baa3/BBB or higher) by at least two ratings agencies, have at least one year to final maturity and have at least \$250 million par amount outstanding. To qualify, bonds must be SEC-registered.

The **Barclays US High Yield Index** covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (sovereign rating of Baa1/BBB+/BBB+ and below using the middle of Moody's, S&P, and Fitch) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included.

The **Barclays US Mortgage Backed Securities Index** is an unmanaged index that measures the performance of investment grade fixed-rate mortgage backed pass-through securities of GNMA, FNMA and FHLMC.

The Barclavs US TIPS Index consists of Inflation-Protection securities issued by the U.S. Treasury.

The **J.P. Morgan Emerging Market Bond Global Index (EMBI)** includes U.S. dollar denominated Brady bonds, Eurobonds, traded loans and local market debt instruments issued by sovereign and quasi-sovereign entities.

The **J.P. Morgan Domestic High Yield Index** is designed to mirror the investable universe of the U.S. dollar domestic high yield corporate debt market.

The J.P. Morgan Corporate Emerging Markets Bond Index Broad Diversified (CEMBI Broad Diversified) is an expansion of the J.P. Morgan Corporate Emerging Markets Bond Index (CEMBI). The CEMBI is a market capitalization weighted index consisting of U.S. dollar denominated emerging market corporate bonds.

The J.P. Morgan Emerging Markets Bond Index Global Diversified (EMBI Global Diversified) tracks total returns for U.S. dollar-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities: Brady bonds, loans, Eurobonds. The index limits the exposure of some of the larger countries.

The **J.P. Morgan GBI EM Global Diversified** tracks the performance of local currency debt issued by emerging market governments, whose debt is accessible by most of the international investor base.

The **U.S.** Treasury Index is a component of the U.S. Government index.



J.P. Morgan Asset Management - Index definitions & disclosures

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Other asset classes:

The **Alerian MLP Index** is a composite of the 50 most prominent energy Master Limited Partnerships (MLPs) that provides investors with an unbiased, comprehensive benchmark for the asset class.

The **Bloomberg Commodity Index** and related sub-indices are composed of futures contracts on physical commodities and represents twenty two separate commodities traded on U.S. exchanges, with the exception of aluminum. nickel. and zinc

The **Cambridge Associates U.S. Global Buyout and Growth Index**® is based on data compiled from 1,768 global (U.S. & ex – U.S.) buyout and growth equity funds, including fully liquidated partnerships, formed between 1986 and 2013.

The CS/Tremont Hedge Fund Index is compiled by Credit Suisse Tremont Index, LLC. It is an asset-weighted hedge fund index and includes only funds, as opposed to separate accounts. The Index uses the Credit Suisse/Tremont database, which tracks over 4500 funds, and consists only of funds with a minimum of US\$50 million under management, a 12-month track record, and audited financial statements. It is calculated and rebalanced on a monthly basis, and shown net of all performance fees and expenses. It is the exclusive property of Credit Suisse Tremont Index, LLC.

The HFRI Monthly Indices (HFRI) are equally weighted performance indexes, utilized by numerous hedge fund managers as a benchmark for their own hedge funds. The HFRI are broken down into 4 main strategies, each with multiple sub strategies. All single-manager HFRI Index constituents are included in the HFRI Fund Weighted Composite, which accounts for over 2200 funds listed on the internal HFR Database.

The NAREIT EQUITY REIT Index is designed to provide the most comprehensive assessment of overall industry performance, and includes all tax-qualified real estate investment trusts (REITs) that are listed on the NYSE, the American Stock Exchange or the NASDAQ National Market List.

The **NFI-ODCE**, short for NCREIF Fund Index - Open End Diversified Core Equity, is an index of investment returns reporting on both a historical and current basis the results of 33 open-end commingled funds pursuing a core investment strategy, some of which have performance histories dating back to the 1970s. The NFI-ODCE Index is capitalization-weighted and is reported gross of fees. Measurement is time-weighted.

Definitions:

Investing in alternative assets involves higher risks than traditional investments and is suitable only for sophisticated investors. Alternative investments involve greater risks than traditional investments and should not be deemed a complete investment program. They are not tax efficient and an investor should consult with his/her tax advisor prior to investing. Alternative investments have higher fees than traditional investments and they may also be highly leveraged and engage in speculative investment techniques, which can magnify the potential for investment loss or gain. The value of the investment may fall as well as rise and investors may get back less than they invested.

Bonds are subject to interest rate risks. Bond prices generally fall when interest rates rise.

Investments in **commodities** may have greater volatility than investments in traditional securities, particularly if the instruments involve leverage. The value of commodity-linked derivative instruments may be affected by changes in overall market movements, commodity index volatility, changes in interest rates, or factors affecting a particular industry or commodity, such as drought, floods, weather, livestock disease, embargoes, tariffs and international economic, political and regulatory developments. Use of leveraged commodity-linked derivatives creates an opportunity for increased return but, at the same time, creates the possibility for greater loss.

Derivatives may be riskier than other types of investments because they may be more sensitive to changes in economic or market conditions than other types of investments and could result in losses that significantly exceed the original investment. The use of derivatives may not be successful, resulting in investment losses, and the cost of such strategies may reduce investment returns.

Distressed Restructuring 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.

Investments in **emerging markets** can be more volatile. The normal risks of investing in foreign countries are heightened when investing in emerging markets. In addition, the small size of securities markets and the low trading volume may lead to a lack of liquidity, which leads to increased volatility. Also, emerging markets may not provide adequate legal protection for private or foreign investment or private property.

The price of **equity** securities may rise, or fall because of changes in the broad market or changes in a company's financial condition, sometimes rapidly or unpredictably. These price movements may result from factors affecting individual companies, sectors or industries, or the securities market as a whole, such as changes in economic or political conditions. Equity securities are subject to "stock market risk" meaning that stock prices in general may decline over short or extended periods of time.

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. Equity Market Neutral Strategies typically maintain characteristic net equity market exposure no greater than 10% long or short.

Global macro strategies 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.

International investing involves a greater degree of risk and increased volatility. Changes in currency exchange rates and differences in accounting and taxation policies outside the U.S. can raise or lower returns. Some overseas markets may not be as politically and economically stable as the United States and other nations.

There is no guarantee that the use of **long and short positions** will succeed in limiting an investor's exposure to domestic stock market movements, capitalization, sector swings or other risk factors. Using long and short selling strategies may have higher portfolio turnover rates. Short selling involves certain risks, including additional costs associated with covering short positions and a possibility of unlimited loss on certain short sale positions.

Merger arbitrage 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.

Mid-capitalization investing typically carries more risk than investing in well-established "blue-chip" companies. Historically, mid-cap companies' stock has experienced a greater degree of market volatility than the average stock.

Price to forward earnings is a measure of the price-to-earnings ratio (P/E) using forecasted earnings. **Price to book value** compares a stock's market value to its book value. **Price to cash flow** is a measure of the market's expectations of a firm's future financial health. **Price to dividends** is the ratio of the price of a share on a stock exchange to the dividends per share paid in the previous year, used as a measure of a company's potential as an investment.

Real estate investments may be subject to a higher degree of market risk because of concentration in a specific industry, sector or geographical sector. Real estate investments may be subject to risks including, but not limited to, declines in the value of real estate, risks related to general and economic conditions, changes in the value of the underlying property owned by the trust and defaults by borrower.

Relative Value Strategies maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities.

Small-capitalization investing typically carries more risk than investing in well-established "blue-chip" companies since smaller companies generally have a higher risk of failure. Historically, smaller companies' stock has experienced a greater degree of market volatility than the average stock.



J.P. Morgan Asset Management - Risks & disclosures

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The Market Insights program provides comprehensive data and commentary on global markets without reference to products. Designed as a tool to help clients understand the markets and support investment decision-making, the program explores the implications of current economic data and changing market conditions.

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Unless otherwise stated, all data are as of February 28, 2018 or most recently available.

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