T.RowePrice®
INVEST WITH CONFIDENCE

Third Quarter 2018

GLOBAL MARKET ENVIRONMENT

For investment professionals only. Not for further distribution.

Photo image above by Paul Nedelcu / iStock / Thinkstock

Q3 2018 Global Environment

As of September 30, 2018

MAJOR MARKET THEMES

U.S. Economy Resilience vs. Rest of World	Narrow Equity Market Leadership	Global Earnings Peaking	Stronger U.S. Dollar
Global Liquidity Receding	Growth Outperforming Value	Flattening Yield Curves	Historically Long Economic Cycle

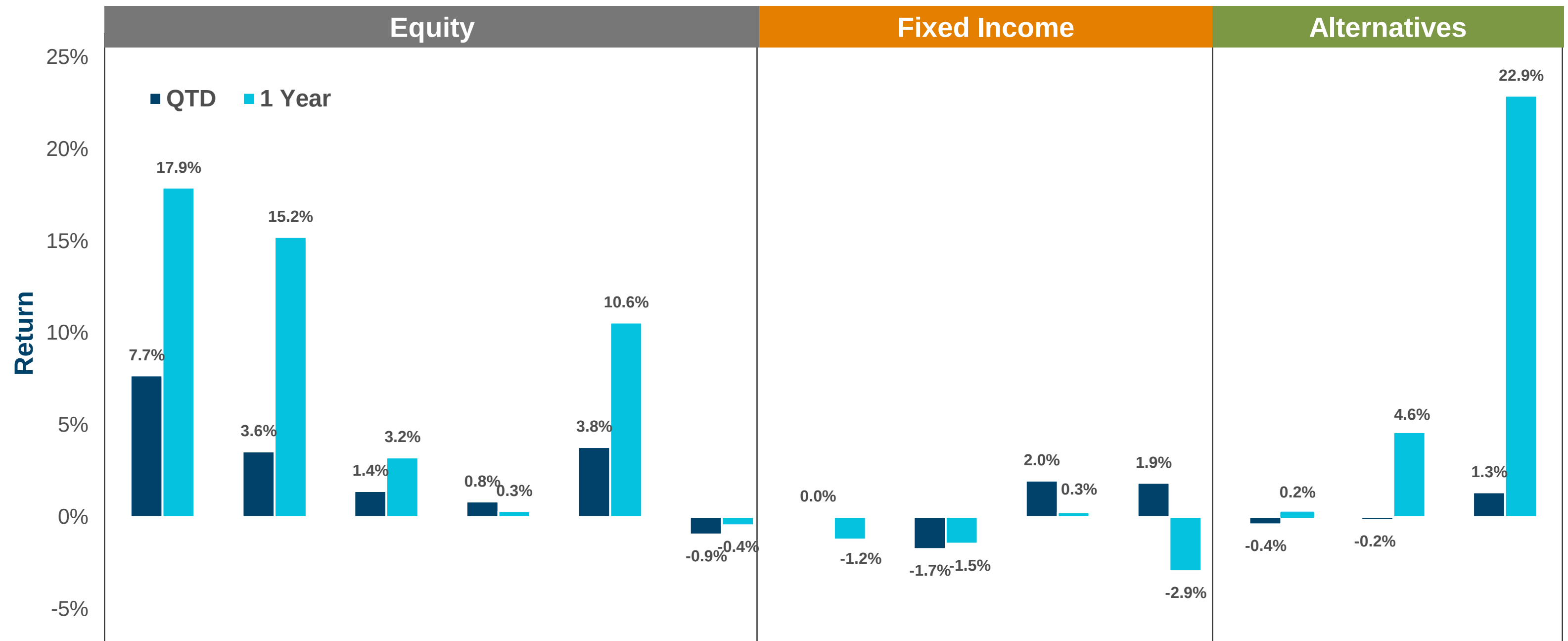
KEY MARKET RISKS

Trade Wars / Rising Geopolitical Tensions	Emerging Market Vulnerability	Tightening of Financial Conditions	Acceleration in Rates
Monetary Policy Missteps / Fed Overshoot	Sharp Increase in Volatility	Earnings Disappointment	Increase in Regulation of Technology Companies

Global Asset Class Returns

As of September 30, 2018

CAPITAL MARKETS RETURNS BY ASSET CLASS



Ann. Returns	S&P 500	Russell 2000	MSCI EAFE	MSCI Europe	MSCI Japan	MSCI Emerging Markets	Bloomberg Barclays U.S. Aggregate Bond	Bloomberg Barclays Global Agg. ex-U.S.	Bloomberg Barclays Global High Yield	JP Morgan EMBI Global	HFRX Global Hedge Fund	NAREIT/ FTSE Developed Real Estate	S&P GSCI Commodity
3 Years	11.9%	10.9%	5.4%	4.8%	6.6%	6.0%	1.7%	3.2%	5.5%	4.3%	0.8%	6.7%	-4.4%
5 Years	13.4%	12.5%	6.9%	6.8%	7.7%	5.4%	2.3%	0.9%	5.2%	4.4%	1.3%	6.9%	-9.4%
10 Years	10.2%	10.6%	3.3%	3.0%	3.8%	2.6%	3.7%	1.8%	7.9%	6.5%	-0.4%	5.7%	-12.4%

Past performance cannot guarantee future results.

Returns in U.S. dollars. MSCI return gross of dividends.

Sources: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved. MSCI makes no express or implied warranties or representations and shall have no liability whatsoever with respect to any MSCI data contained herein. The MSCI data may not be further redistributed or used as a basis for other indices or any securities or financial products. This report is not approved, reviewed or produced by MSCI.

Valuation Comparisons

VALUATION COMPARISONS

Percentile Rankings vs. Past 15 Years, As of 9/30/18

- U.S. treasury yields have rapidly become more attractive, especially relative to recent history
- U.S. equity valuations remain elevated, particularly large-cap and growth stocks
- Valuations have become more reasonable in select equity markets, but these markets are heavily weighted toward structurally challenged sectors

*Only includes November 30, 2004 to present due to data availability **Does not include P/Cash Flow due to data availability

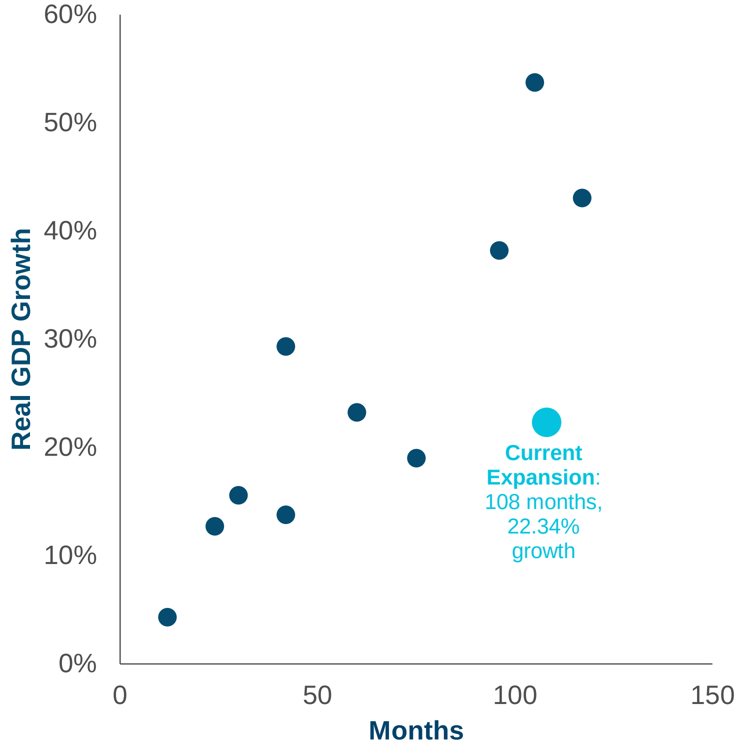
Indices used, from left to right above, beginning with U.S. IG Corp.: Bloomberg Barclays U.S. Investment Grade Corporate, Bloomberg Barclays Euro Aggregate Credit, Bloomberg Barclays U.S. Aggregate Credit – Corporate High Yield, Bloomberg Barclays Global High Yield, Bloomberg Barclays Emerging Markets USD Aggregate, MSCI USA, MSCI Europe, MSCI Japan, MSCI Emerging Markets, S&P 500, S&P 600, MSCI EAFE Large Cap, MSCI EAFE Small Cap, S&P 500 Growth, S&P 500 Value, MSCI EAFE Growth, MSCI EAFE Value

Sources: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved., Bloomberg Index Services Ltd. Copyright © 2018, Bloomberg Index Services Ltd. Used with permission., MSCI, Standard and Poor's. See Additional Disclosures on slide 37

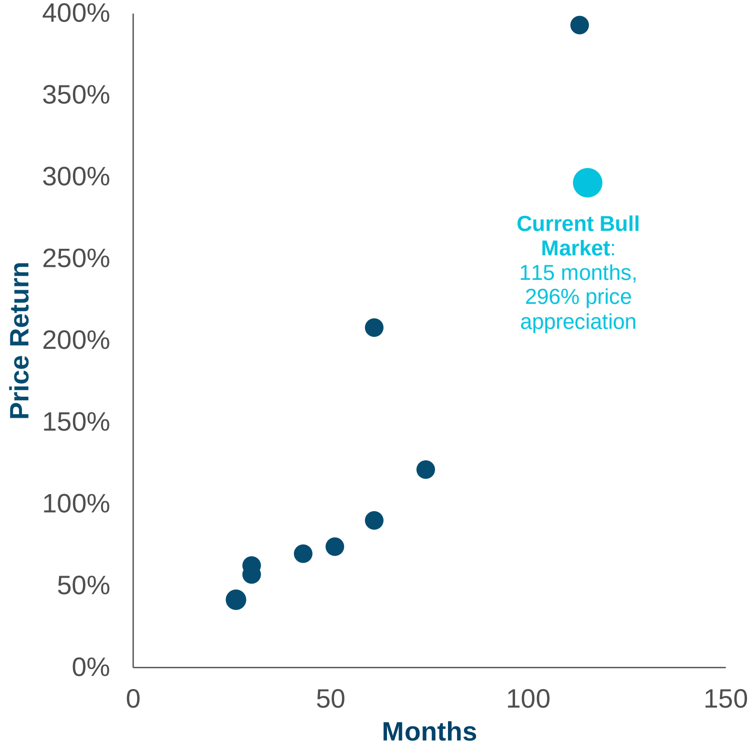
MARKET THEMES

How much longer can this cycle last?

U.S. ECONOMIC EXPANSIONS
Q4 1949 to Q2 2018



S&P 500 BULL MARKETS
January 1958 to September 2018



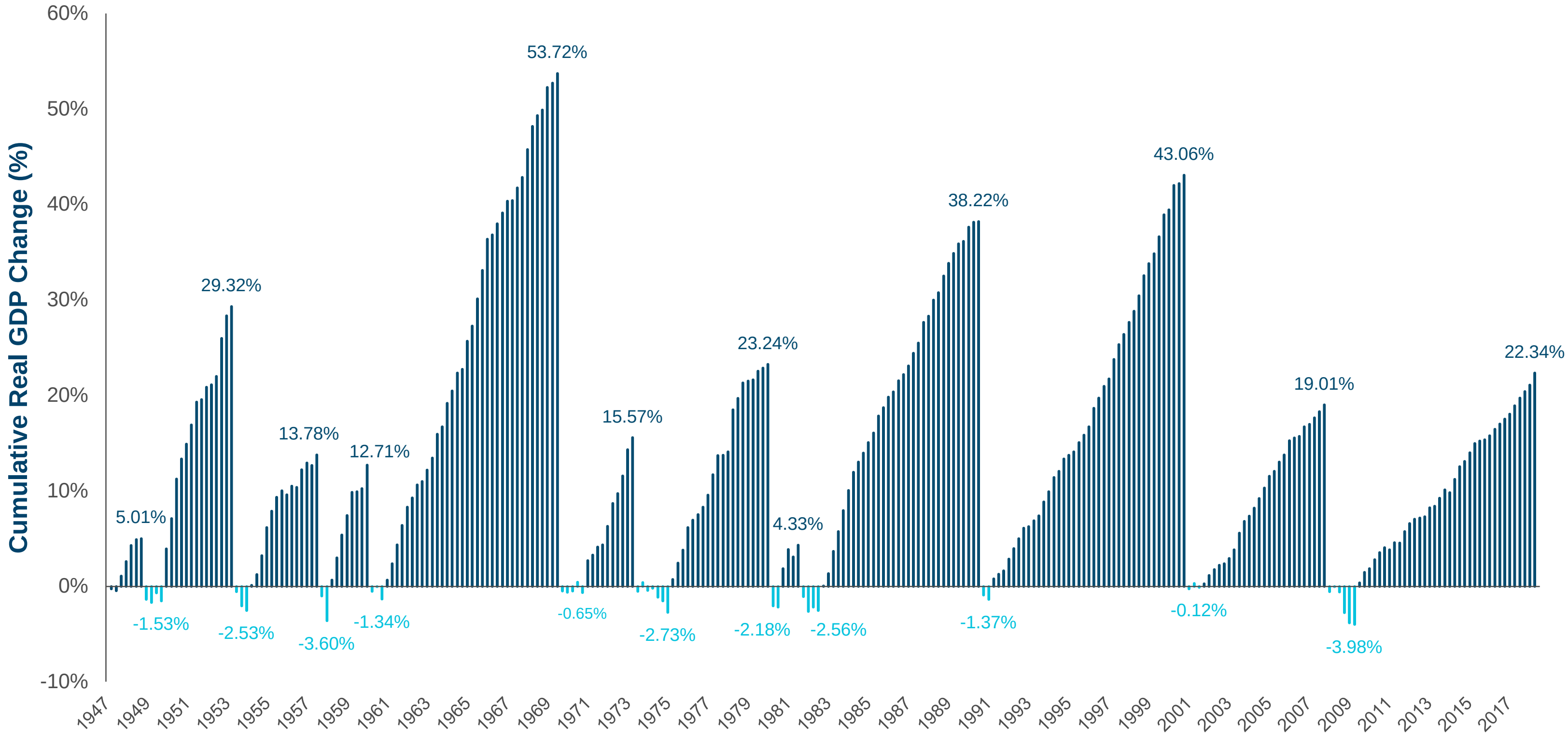
- Both the current economic cycle and bull market are already very long by historical standards.
- While there are many reasons to be concerned that this cycle will come to an end soon, it is difficult to find clear warning signs in the current economic or market data.
- Most economic models (including T. Rowe Price's proprietary model) still place the current expansion in mid-cycle territory, and show a relatively small chance of recession within the next twelve months.

Past performance cannot guarantee future results.
Sources: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved., [Bureau of Economic Analysis]/Haver Analytics, S&P. See Additional Disclosures on slide 37.

MARKET THEMES

A long expansion, but at a modest pace

U.S. REAL GDP CHANGE IN ECONOMIC EXPANSIONS AND RECESSIONS
Q1-1947 to Q2-2018



- The current economic expansion is only six months short of being the longest in U.S. (recorded) history. However, it is notable that long expansions have become common in recent decades. The average length of the past four expansions (including this one) is more than eight years.
- However, the cumulative growth of real GDP has been very modest compared to other lengthy expansions in U.S. history.

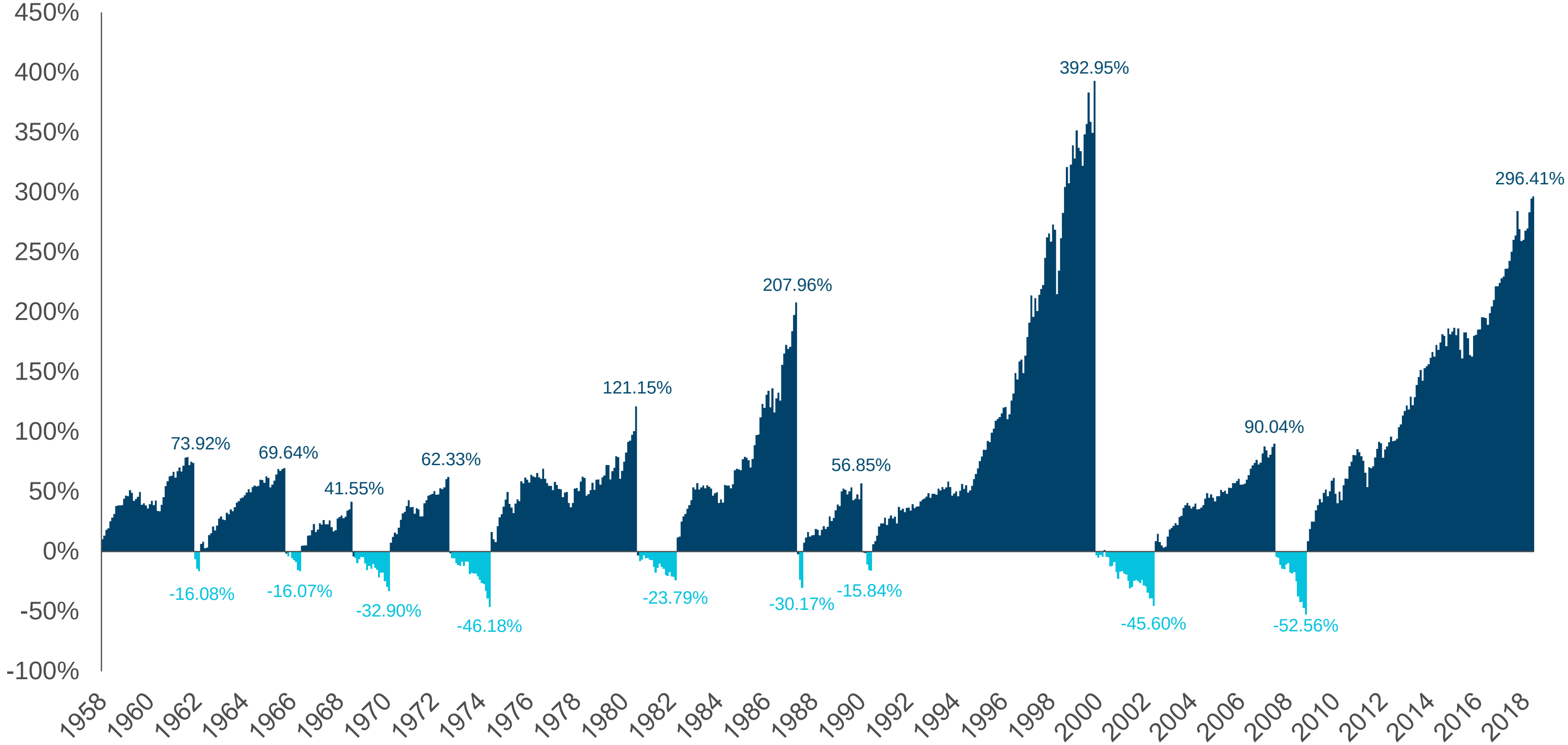
Sources: T. Rowe Price analysis using data from FactSet Research Systems Inc.

A long bull market, at a strong pace

MARKET THEMES

S&P 500 PRICE RETURN IN BULL AND BEAR MARKETS

Using month-end data, January 1958 to September 2018, bear market defined as a 15% price drop



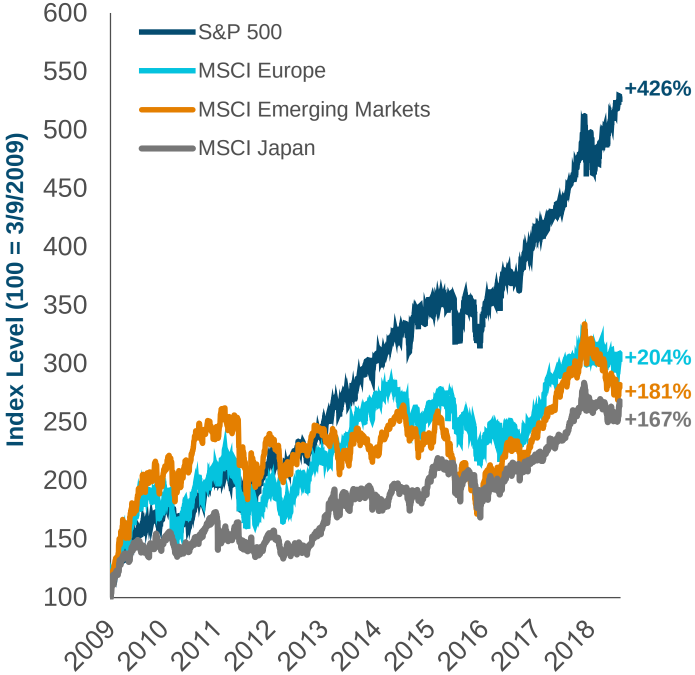
- The current bull market is also one of the longest in U.S. (recorded history).
- Despite a modest economic expansion, the magnitude of the bull market has not been modest relative to other cycles.
- There are numerous potential explanations for this incongruity, including financial engineering (i.e. higher corporate leverage, reduction in share count), the increase in globalization (corporate profits are less reliant on domestic economic growth), and the depth of the prior bear market.

Sources: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved, S&P. See Additional Disclosures on slide 37.

Cycle divergence: U.S. vs. the rest of the world

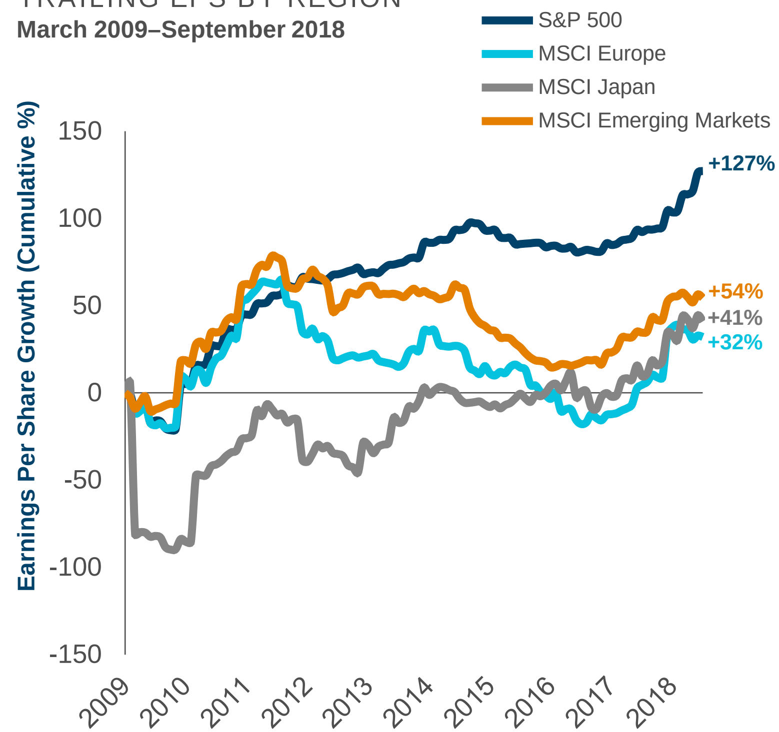
REGIONAL RETURNS

March 2009* to September 2018, in USD



TRAILING EPS BY REGION

March 2009–September 2018



- U.S. equities have dramatically outperformed the rest of the world during the post-financial crisis period.
- While the U.S. economy rebounded fairly soon after the peak of the financial crisis, other regions have faced additional challenges. Europe experienced a second recession in the wake of its sovereign debt crisis. Japanese growth has faced challenges due to unfavorable demographics and poor corporate governance. And emerging markets have been hampered by the on-going slowdown in China and deterioration of commodities prices.

**Begins on March 9, 2009 which was the low point for the S&P 500 during the financial crisis*

Past performance cannot guarantee future results.

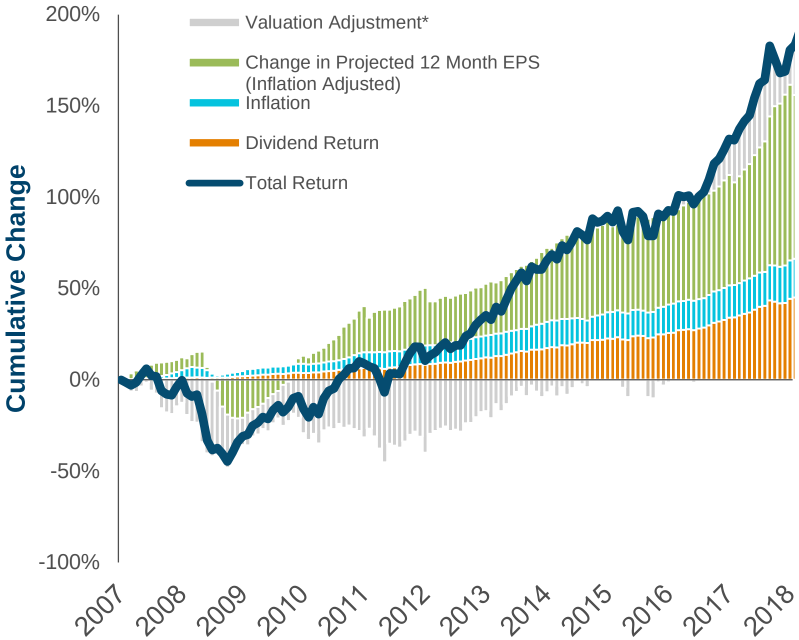
Source: T. Rowe Price analysis using data from FactSet Research Systems Inc. Returns in USD.

Cycle divergence: Growth vs. Value

MARKET THEMES

RUSSELL 1000 GROWTH - TOTAL RETURN DECOMPOSITION

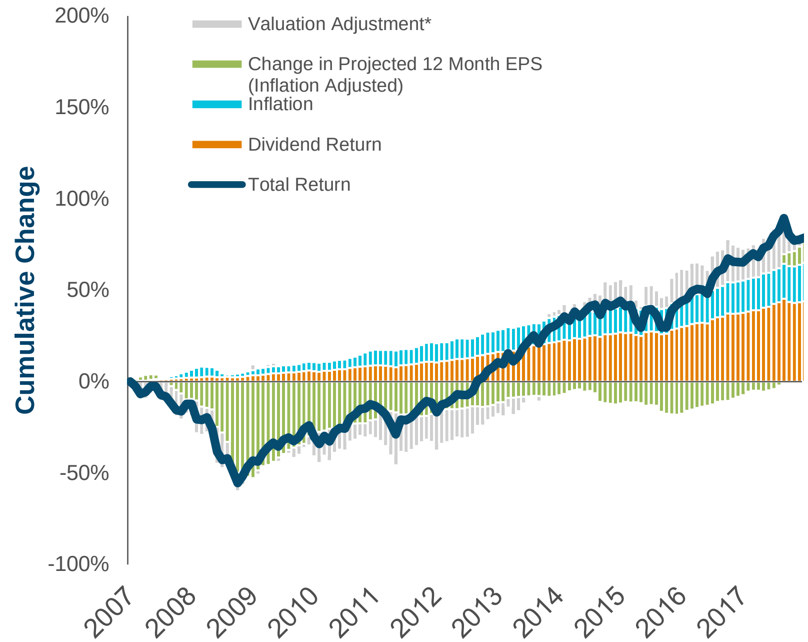
6/1/2007 - 8/31/2018



Component	Cumulative
Dividends	46.52%
Real Earnings Growth	**114.50%**
Inflation	21.19%
Valuation Adjustment*	**30.60%**
Total Return	191.61%

RUSSELL 1000 VALUE - TOTAL RETURN DECOMPOSITION

6/1/2007 - 8/31/2018



Component	Cumulative
Dividends	46.32%
Real Earnings Growth	**13.55%**
Inflation	21.19%
Valuation Adjustment*	**5.25%**
Total Return	86.31%

- The divergence between growth and value has also been notable during this cycle. The Russell 1000 Growth index has outperformed the Value index 192% vs. 86% from since May 2007.
- While growth stocks have enjoyed a higher increase in valuations during the current cycle, the dramatic advantage in earnings growth has been the key driver of the growth outperformance.

Past performance cannot guarantee future results.

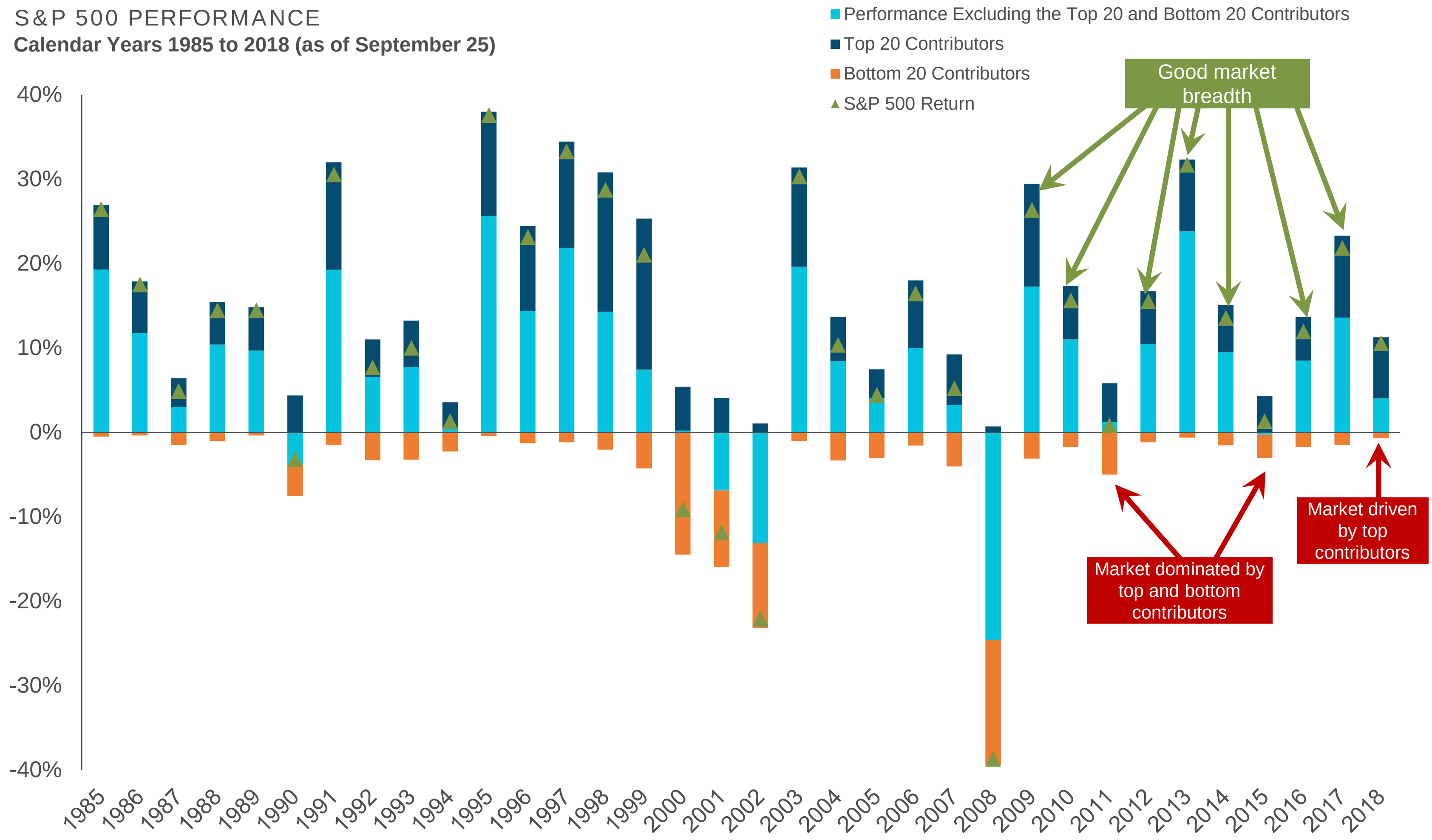
*Valuation adjustment represents the total return after dividends, real earnings growth, and inflation have been subtracted out. It may represent P/E changes, share count reduction, and other factors

Source: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved. Russell. See Additional Disclosures on slide 37.

Has this been an abnormally narrow market?

MARKET
THEMES

S&P 500 PERFORMANCE
Calendar Years 1985 to 2018 (as of September 25)



Sources: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved., [Bureau of Economic Analysis]/Haver Analytics. S&P. See Additional Disclosures on slide 37.

MARKET THEMES

What could cause the cycle to end?

Political turmoil

- U.S. - China Trade war
- Brexit
- Italy E.U. membership in question
- Rising Middle East tensions

Stress from U.S. Dollar strength

- Emerging market debt
- E.U. banks borrowing in USD

Stress from falling liquidity

- Quantitative tightening

U.S. economy “overheating”

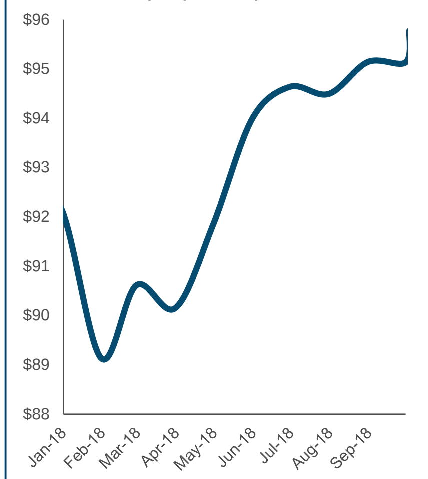
- Fading fiscal stimulus
- Tight labor markets
- Sustainability of elevated corporate margins

Monetary policy mis-steps

- Potential yield curve inversion
- Potential pressures from wage inflation

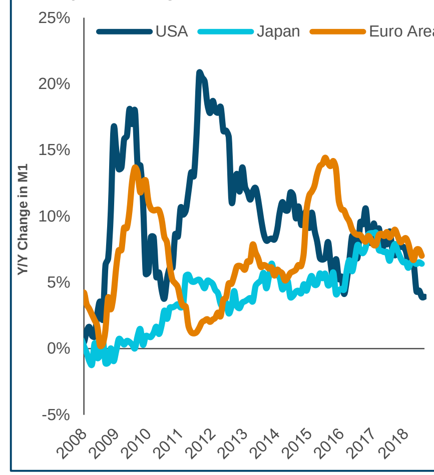
STRONG U.S. DOLLAR

U.S. Dollar Index (DXY), YTD September 24



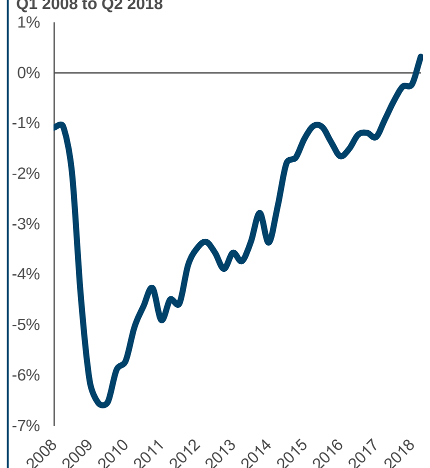
LIQUIDITY FADING

Year over Year % Change in M1
January 2008 to August 2018



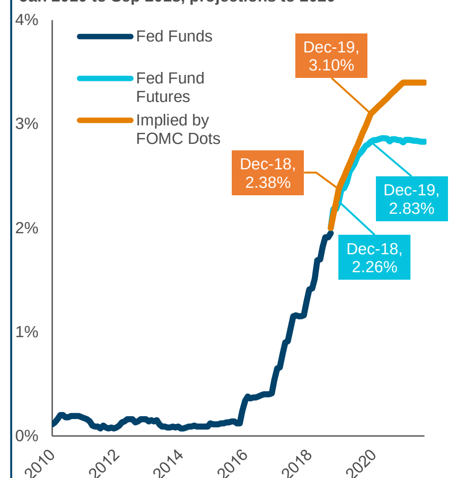
U.S. ECONOMY “OVERHEATING”

U.S. Output Gap% of Potential GDP
Q1 2008 to Q2 2018



U.S. MONETARY POLICY

Jan 2010 to Sep 2018, projections to 2020



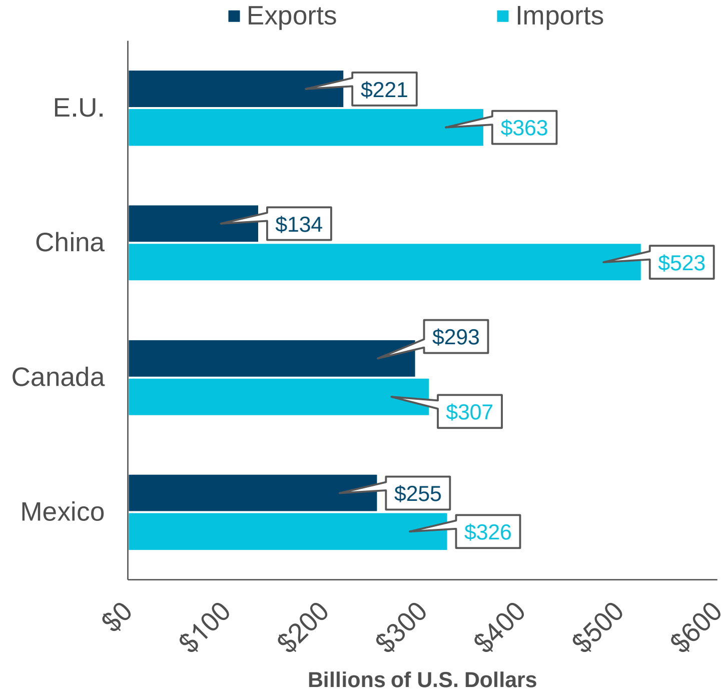
Sources: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved., [U.S. Federal Reserve Board, Statistical Office of the European Communities, Cabinet Office of Japan, U.S. Congressional Budget Office]/Haver Analytics.

MARKET THEMES

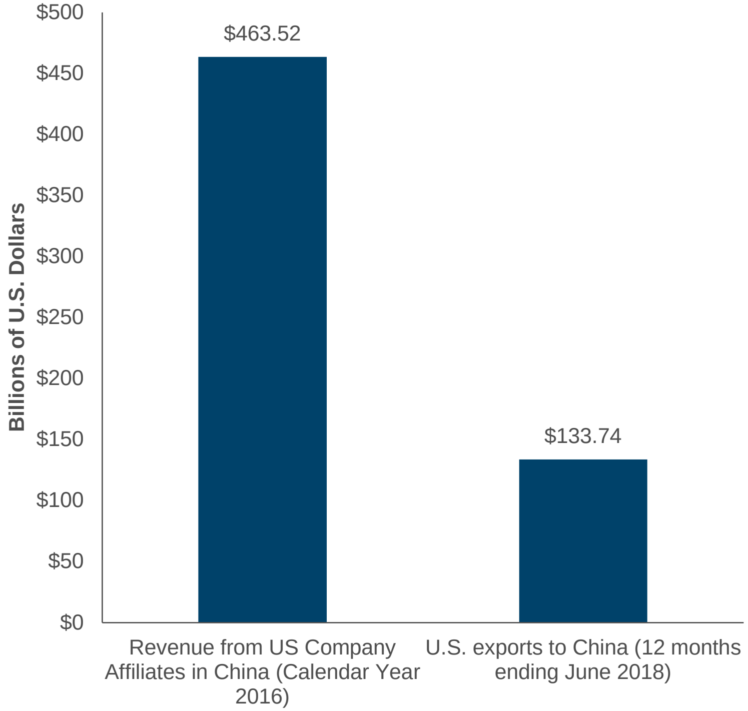
Trade Policy Concerns

U.S. TRADE BY COUNTRY/REGION

12 months ended June 2018



U.S. AFFILIATE REVENUE VS. EXPORTS



- The U.S. imports considerably more goods from China than it exports to China (i.e. “the trade deficit”). This means China is unable to match any tariffs imposed by the U.S. on a dollar for dollar (or RMB) basis.
- However, U.S. corporations do derive a significant amount of income from China that are not directly tied to exports. This means non-tariff retaliatory measures by China could do significant harm to U.S. corporations. Additionally, supply chains of U.S. multi-national corporations are likely to be significantly impacted.

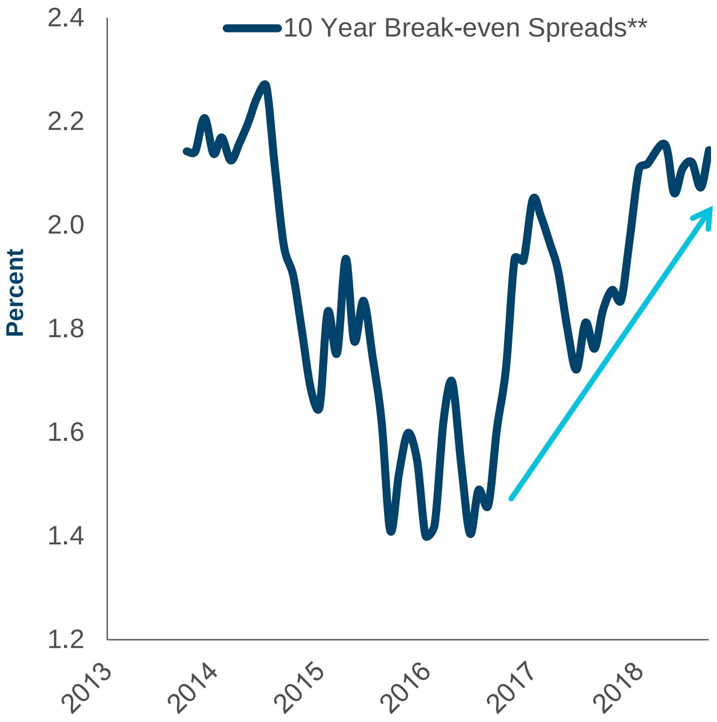
Sources: [IMF, U.S. Bureau of Economic Analysis]/Haver Analytics

MARKET THEMES

Fed expectations

INFLATION EXPECTATIONS

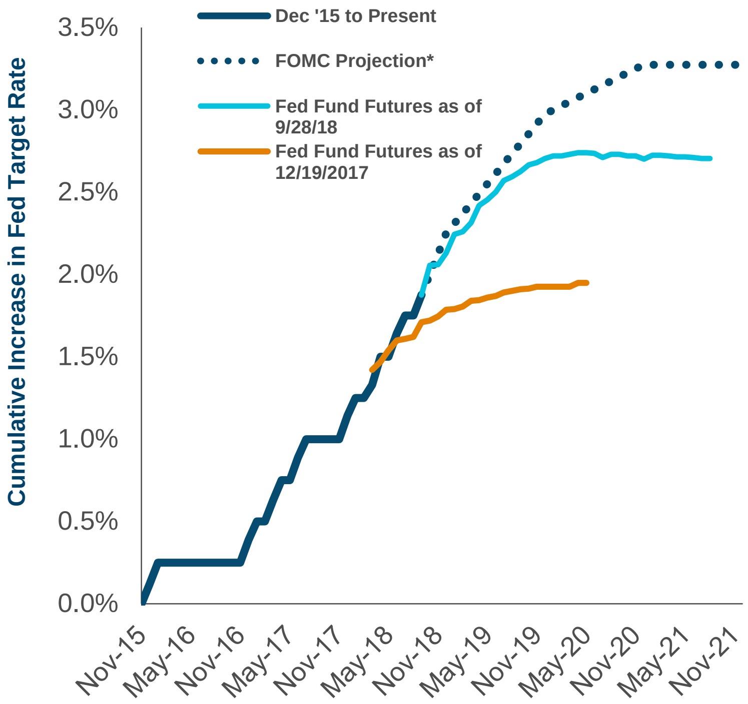
5 Years Ending September 2018



FUTURES MARKET VS.

FOMC PROJECTION OF FED FUNDS

As of September 2018



- Fed and inflation expectations have adjusted significantly higher during 2018, as inflation measures have accelerated.
- The Fed "Dot Plots" project an additional increase of 110 basis points in the Fed funds rate by the end of 2019, while the futures market is predicting an increase of around 88 basis points.

Sources: [Federal Reserve Board]/Haver Analytics, T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved.

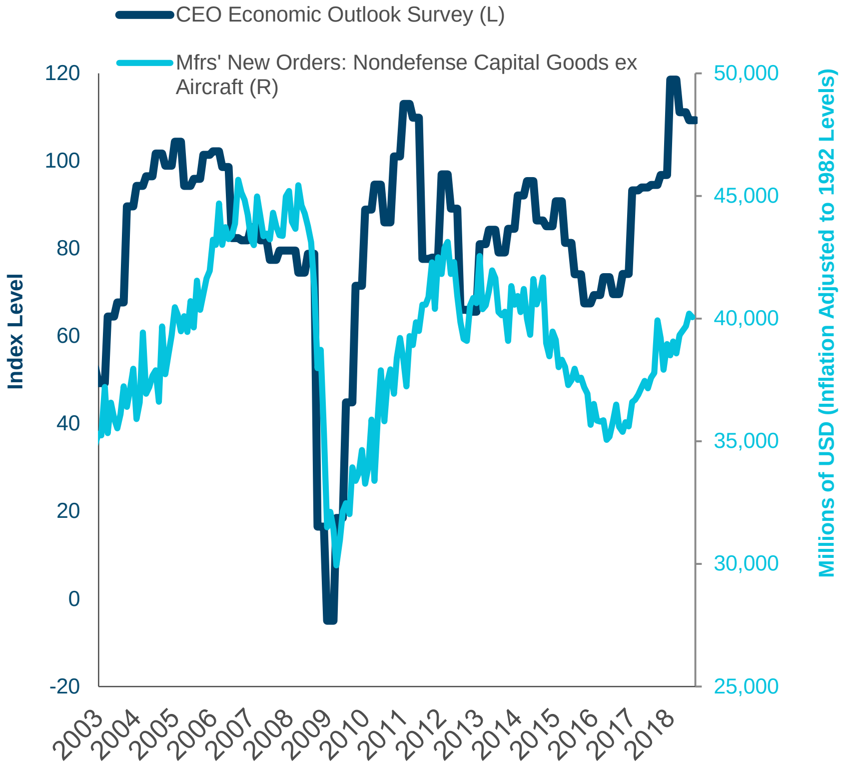
*Median of participants forecast in the September 27, 2018 Federal Open Market Committee Summary of Economic Projections
**Break-even spreads calculated using the difference between 10-year nominal Treasury yield and 10-year Treasury Inflation Protected Securities (TIPS) yield

MARKET THEMES

Tax reform: temporary stimulus or the catalyst for a new capex cycle?

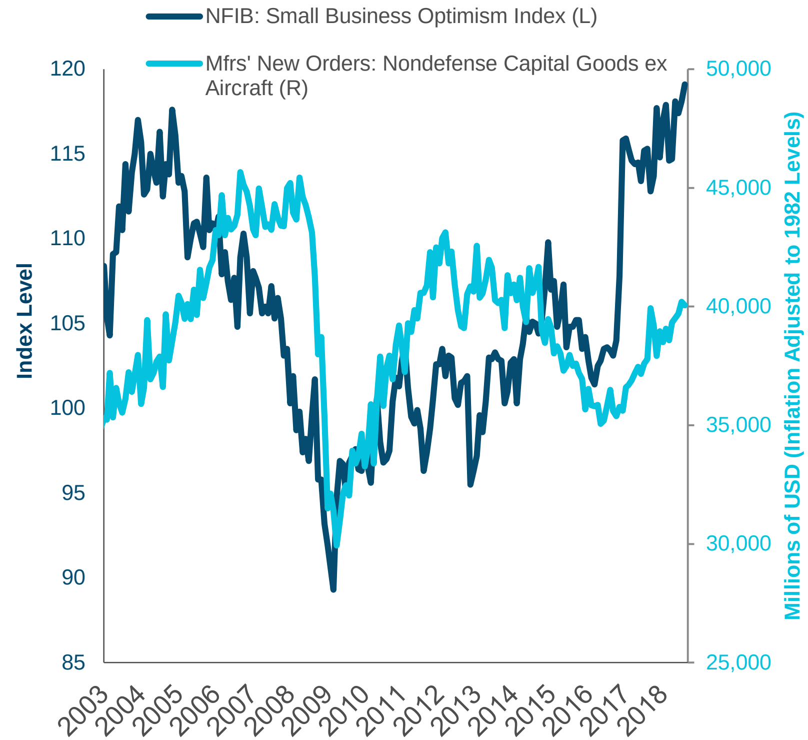
CEO CONFIDENCE VS. CAPITAL SPENDING

January 2003 to August 2018



SMALL BUSINESS OPTIMISM VS. CAPITAL SPENDING

January 2003 to August 2018



- Optimism in the U.S. among both small business owners and CEOs increased dramatically following the election of Donald Trump, presumably due to promises of business friendly policies.
- Thus far this optimism has resulted in an increase in business spending, but one that is thus far more modest and gradual than the increase in confidence would have suggested.

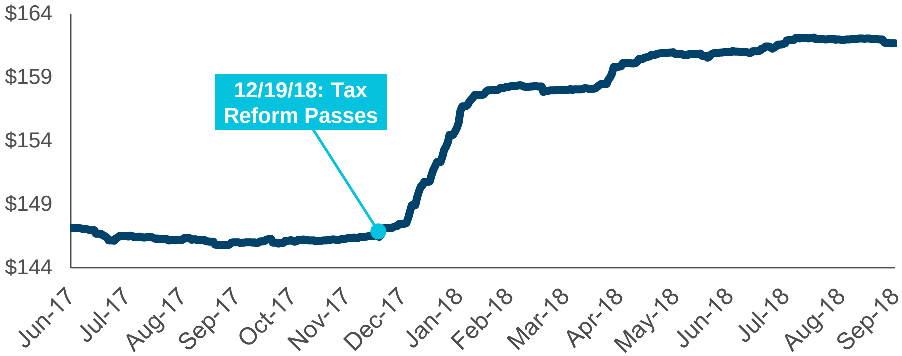
Sources: [The Conference Board, National Federation of Independent Business, Business Roundtable]/Haver Analytics

MARKET THEMES

Tax Reform Overview

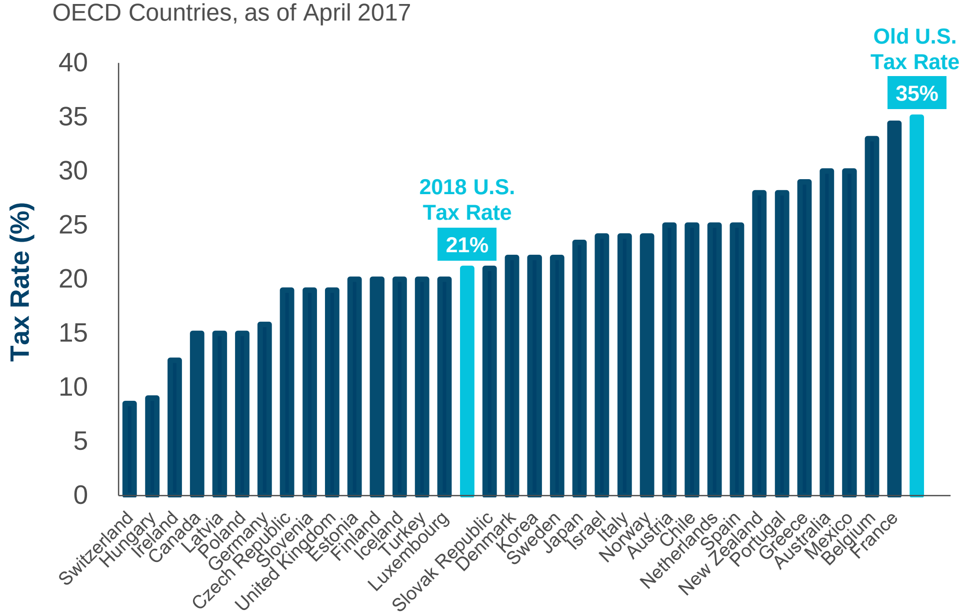
2018 S&P 500 EPS BOTTOM UP ESTIMATES

6/30/17 to 6/30/18



CORPORATE INCOME TAX RATE

OECD Countries, as of April 2017



IMPORTANT CONSIDERATIONS

- Due to a combination of deductions and income generated in other countries that is not repatriated, the effective tax rate paid by U.S companies is closer to 27%.
- Tax reform lowers the corporate tax rate significantly, but the effective tax rate reduction will be smaller, as many deductions will be eliminated.

T. ROWE PRICE VIEWS

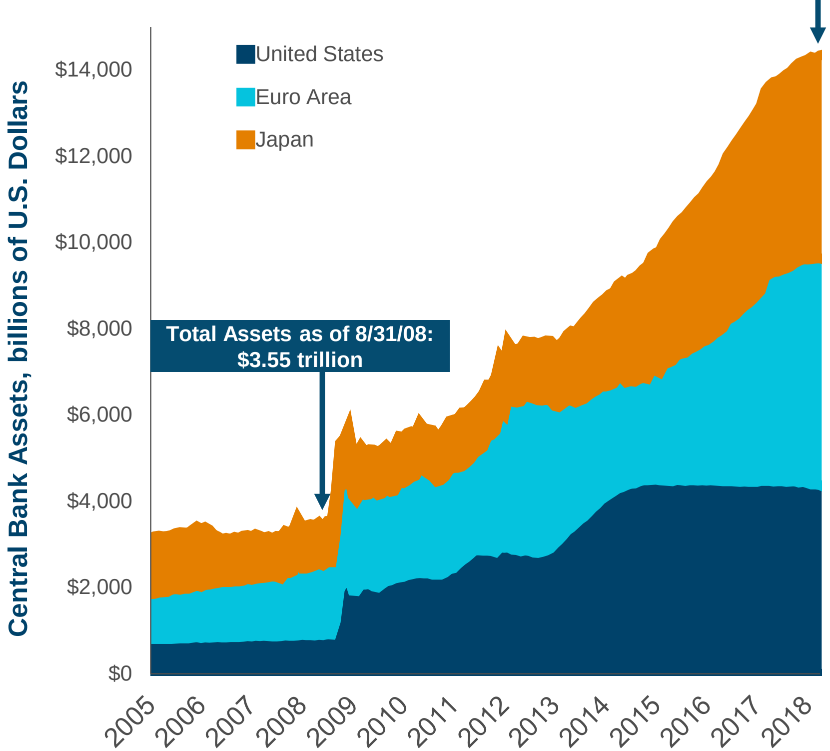
- **Economic Impact:** Many investors may be overestimating the impact tax reform will have on economic growth. Reform will likely boost GDP growth by a small amount…unless there is a very strong increase in capital spending by American business.
- **Earnings Impact:** The impact of tax reform on S&P 500 earnings will likely be in the +6% range – not as big as some previous estimates.
- **Durability of Earnings Impact:** Many companies with high tax rates may not see as much earnings benefit as it might appear, because many of the tax benefits they receive will end up being competed away. If the biggest companies in a competitive industry all receive tax cuts, the competition between these companies for customers will lead to a broad lowering of prices over time that will benefit customers more than the companies themselves. For active managers, there is an opportunity to identify companies that have strong enough competitive positions that they won't see most or all of their tax benefits competed away.
- **M&A Impact:** The new repatriation provisions are unlikely to lead to big increases in M&A or share repurchase. U.S. companies with the largest amounts of cash held abroad (just five companies account for half of all cash abroad) have already been able to access that cash by issuing very low-cost debt here in the U.S., with the foreign cash effectively acting as security. So in most cases there is no reason for these companies to act a lot differently post tax reform.
- **High Yield Debt Impact:** The impact on high yield debt markets is mixed. There will be a reduction in corporate interest deductibility that will make it less attractive for some corporations to issue high yield debt, meaning U.S. supply may decrease. Meanwhile, the positive impact on corporate earnings is likely to decrease credit risk.

Sources: OECD, T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved. S&P. See Additional Disclosures on slide 37.

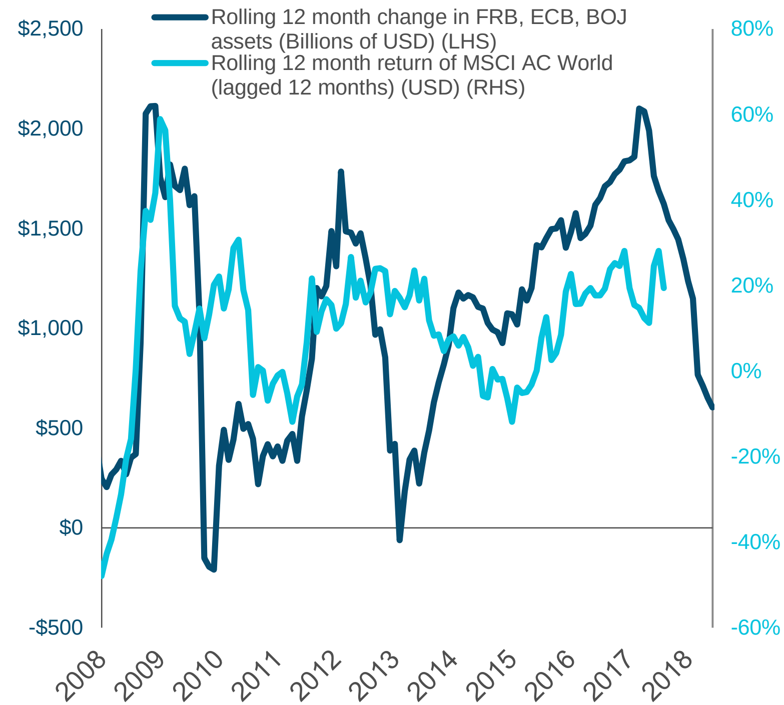
MARKET THEMES

Peaking accommodation from central banks

CENTRAL BANK ASSETS[1]
January 2005 to August 2018



CHANGE IN "BIG 3" CENTRAL BANK ASSETS VS. MSCI AC WORLD RETURN
January 2008 to August 2018



- The current economic and market cycle has featured unprecedented monetary stimulus from central banks across the globe. Since August 2008, the three major central banks have increased their balance sheet assets by almost $11 trillion (USD).
- However, this pillar of support is beginning to fade as central banks begin to move toward policy normalization. The U.S. Federal Reserve is gradually reducing its balance sheet and the European Central Bank is expected to do the same in 2019. These events are likely to represent a significant pullback in demand for financial assets, even if policies are implemented gradually.

Past performance cannot guarantee future results.

Sources: [U.S. Federal Reserve Board, European Central Bank, Bank of Japan]/Haver Analytics, T. Rowe Price analysis using data from FactSet Research Systems Inc.
[1] In U.S. Dollars, based on exchange rates as of 10/3/2018

EQUITIES

The U.S. continues to outpace the rest of the world

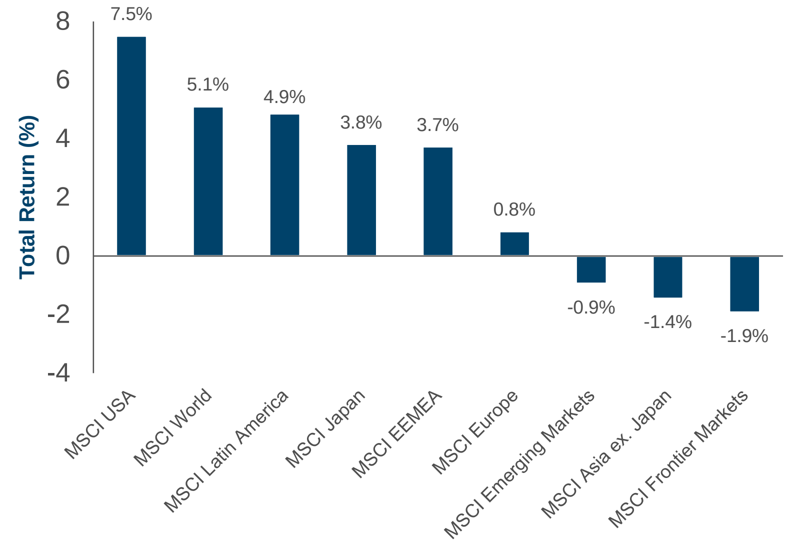
As of September 30, 2018

PERFORMANCE FOR MSCI REGIONS

In USD, Annualized Total Return – Gross*

	1 Year	3 Year	5 Year	10 Year
MSCI World	**11.8**	**14.1**	**9.9**	**9.2**
MSCI USA	**17.9**	**17.1**	**13.8**	**12.0**
MSCI Europe	**0.3**	**8.3**	**4.3**	**5.5**
France	5.3	13.2	6.8	5.9
Germany	-4.7	9.9	4.5	5.7
Italy	-8.0	2.5	2.7	-0.6
Spain	-9.2	4.5	1.1	1.1
United Kingdom	2.9	6.2	2.3	5.0
MSCI Japan	**10.6**	**12.5**	**7.1**	**6.2**
MSCI Emerging Markets	**-0.4**	**12.7**	**4.0**	**5.8**
MSCI Asia ex. Japan	**1.7**	**13.6**	**6.9**	**8.7**
China	-2.0	13.9	8.1	8.5
India	1.1	7.0	9.7	6.5
MSCI Emerging Europe Mid East & Africa	**0.8**	**9.0**	**-3.6**	**-0.5**
Russia	14.7	20.3	0.7	1.4
Egypt	-7.5	-6.7	0.8	-2.4
South Africa	-4.5	4.4	0.6	5.5
MSCI Latin America	**-8.8**	**14.0**	**-2.0**	**0.9**
Brazil	-13.7	20.8	-2.6	-0.6
Mexico	-4.2	2.9	-1.5	3.2
MSCI Frontier Markets	**-7.5**	**5.7**	**3.3**	**0.2**

PERFORMANCE DURING THE QUARTER



- The U.S market outpaced the rest of the world again during the 3rd quarter. While other developed markets trailed the U.S., they did rebound from negative returns in the 2nd quarter.
- Emerging markets continued to struggle due to a combination of rising interest rates, U.S. dollar strength, trade war concerns, and country-specific factors. However, Latin America and EEMEA performed well as markets in Mexico, Brazil, and Russia rebounded during the quarter.

Past performance cannot guarantee future results.

*Returns shown with gross dividends reinvested

Sources: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved. MSCI. See Additional Disclosures on slide 37.

MSCI EEMEA = MSCI Emerging Europe, Middle East, and Africa

EQUITIES

U.S. Equities: Growth well ahead of value in 2018

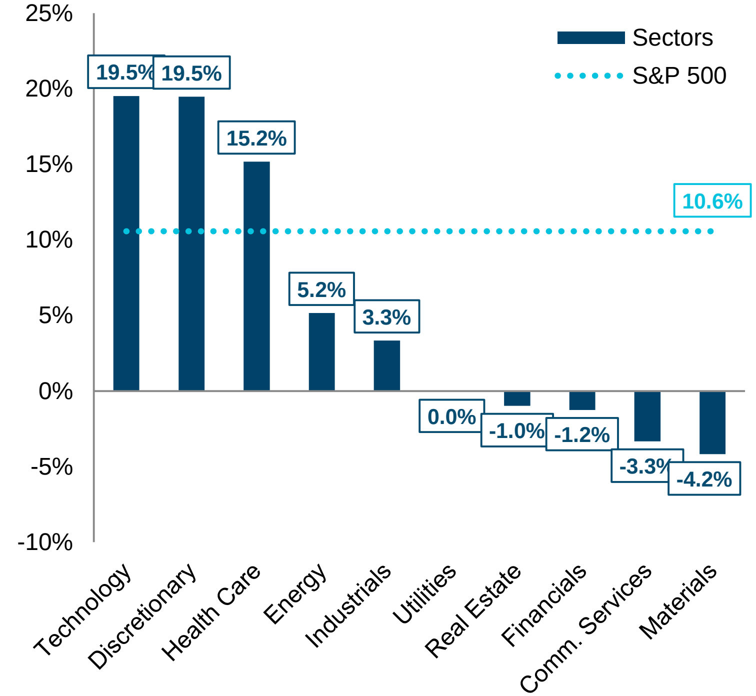
As of September 30, 2018

YTD 2018 RUSSELL STYLE RETURNS*

	Value	Core	Growth
Large	**3.9%**	**10.5%**	**17.1%**
Mid	**3.1%**	**7.5%**	**13.4%**
Small	**7.1%**	**11.5%**	**15.8%**

Growth has continued to outperform value in 2018, as has been the case through most of the current bull market.

YTD 2018 S&P 500 SECTOR RETURNS



Consumer discretionary and technology continued to perform well. Energy performance has also been strong as oil prices have rallied throughout the year.

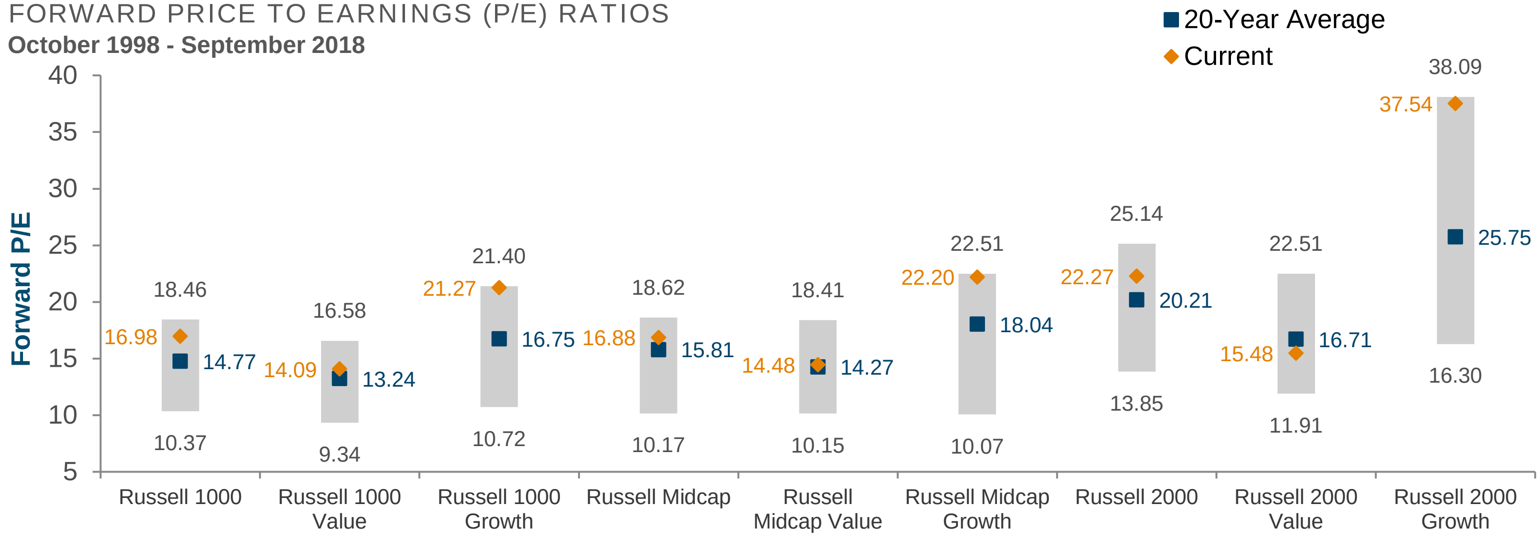
Past performance cannot guarantee future results.
*Returns above are for Russell Indices which correspond to each style-box category.
Source: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved. S&P. Russell. See Additional Disclosures on slide 37.

EQUITIES

U.S.: Valuations appear elevated, but not extreme

FORWARD PRICE TO EARNINGS (P/E) RATIOS

October 1998 - September 2018



Past 20 Years

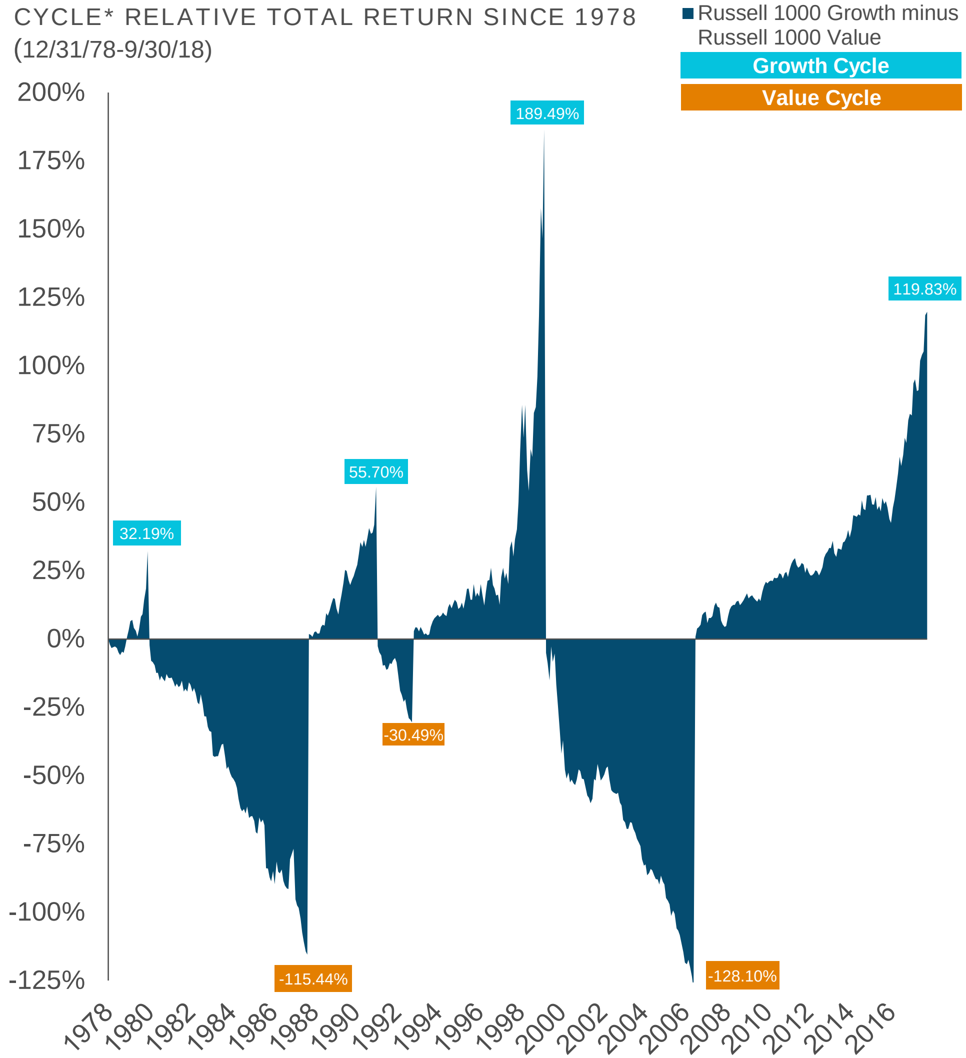
P/E Ratios (1 Year Forward) by Russell Style Indices	Current (9/30/18)	Average	High	Low	Current Valuation to 20 Year Average
Russell 1000	16.98	14.77	18.46	10.37	15%
Russell 1000 Value	14.09	13.24	16.58	9.34	6%
Russell 1000 Growth	21.27	16.75	21.40	10.72	27%
Russell Mid Cap	16.88	15.81	18.62	10.17	7%
Russell Mid Value	14.48	14.27	18.41	10.15	1%
Russell Mid Growth	22.20	18.04	22.51	10.07	23%
Russell 2000	22.27	20.21	25.14	13.85	10%
Russell 2000 Value	15.48	16.71	22.51	11.91	-7%
Russell 2000 Growth	37.54	25.75	38.09	16.30	46%

Source: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved. Russell. See Additional Disclosures on slide 37.
P/E ratios are based on Factset Market Aggregates

EQUITIES

Growth vs. Value cycles since 1978

CYCLE* RELATIVE TOTAL RETURN SINCE 1978
(12/31/78-9/30/18)



Past performance cannot guarantee future results.

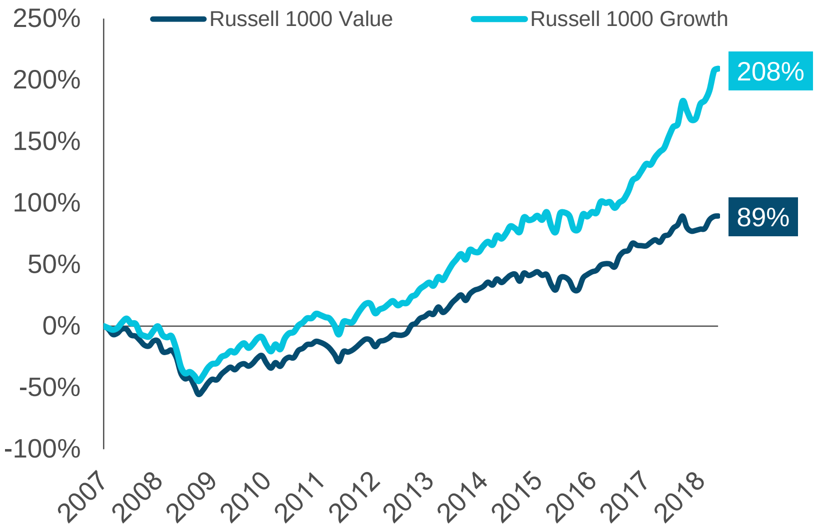
Start Date	End Date	Magnitude	Length (Months)
Jan-79	Nov-80	32.19%	16
Dec-80	Aug-88	-115.44%	93
Sep-88	Dec-91	55.70%	40
Jan-92	Sep-93	-30.49%	21
Oct-93	Feb-00	186.49%	77
Mar-00	May-07	-128.10%	87
Jun-07	Aug-18	119.83%	136
Average Value Cycle		-91.34%	67
Average Growth Cycle		98.55%	67
Average Cycle		95.46%	67
Median Value Cycle		-115.44%	87
Median Growth Cycle		87.76%	59
Median Cycle		104.07%	77

***Cycle defined as cumulative periods using month end data where there is more than a 20% swing in relative performance**
Source: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved. Russell. See Additional Disclosures on slide 37

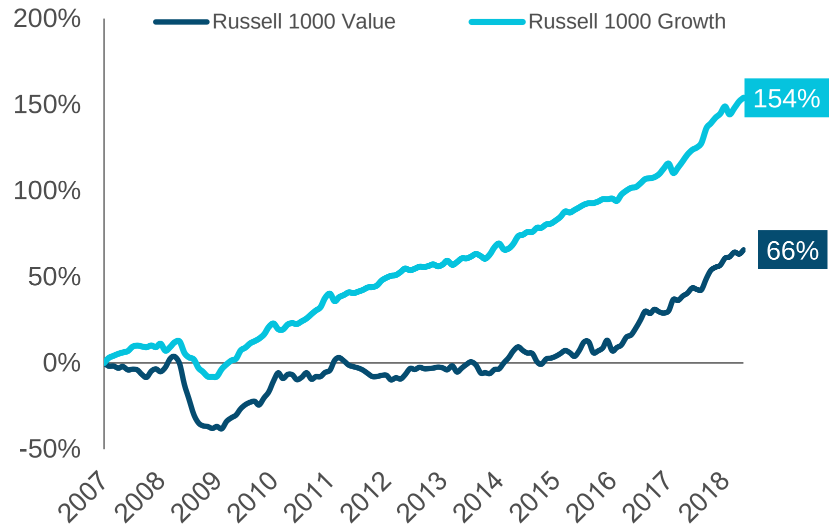
Divergence of Growth and Value in the current cycle

EQUITIES

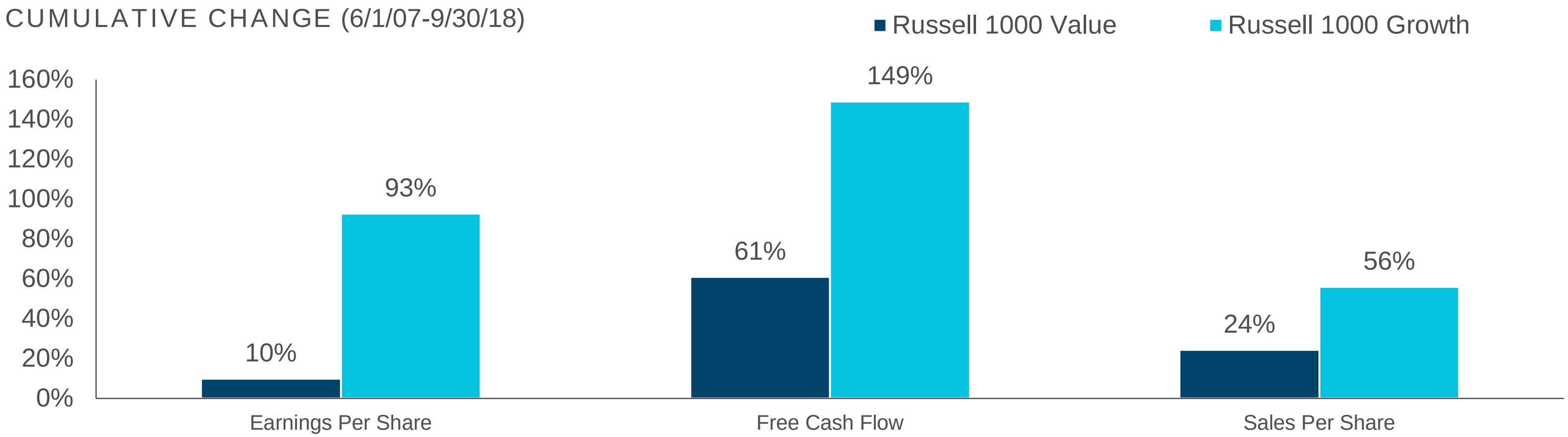
CUMULATIVE TOTAL RETURN (6/1/07-9/30/18)



FREE CASH FLOW GROWTH (6/1/07-9/30/18)



CUMULATIVE CHANGE (6/1/07-9/30/18)



Past performance cannot guarantee future results.

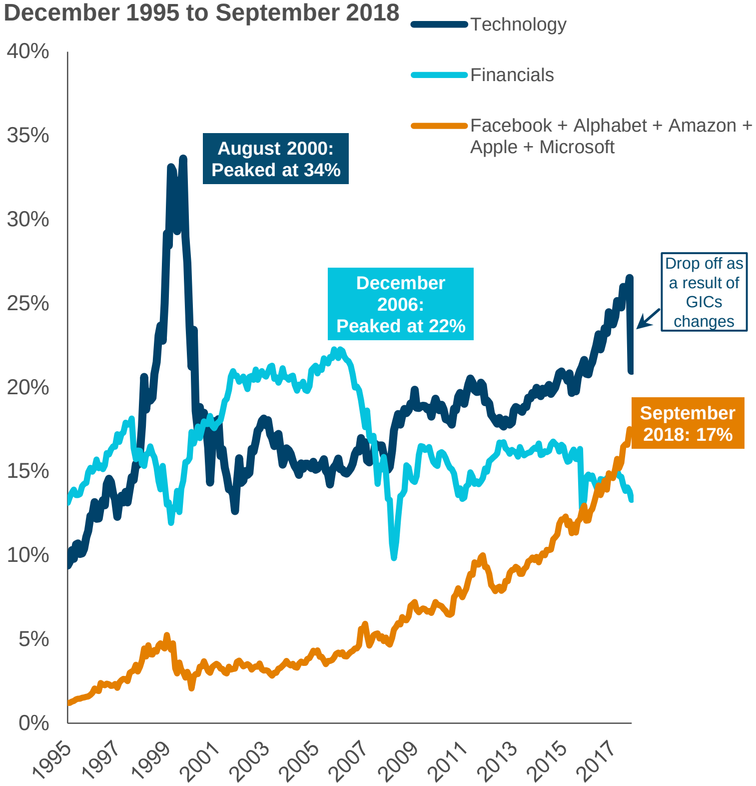
Source: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved.

Tech Titans: Is it sustainable?

EQUITIES

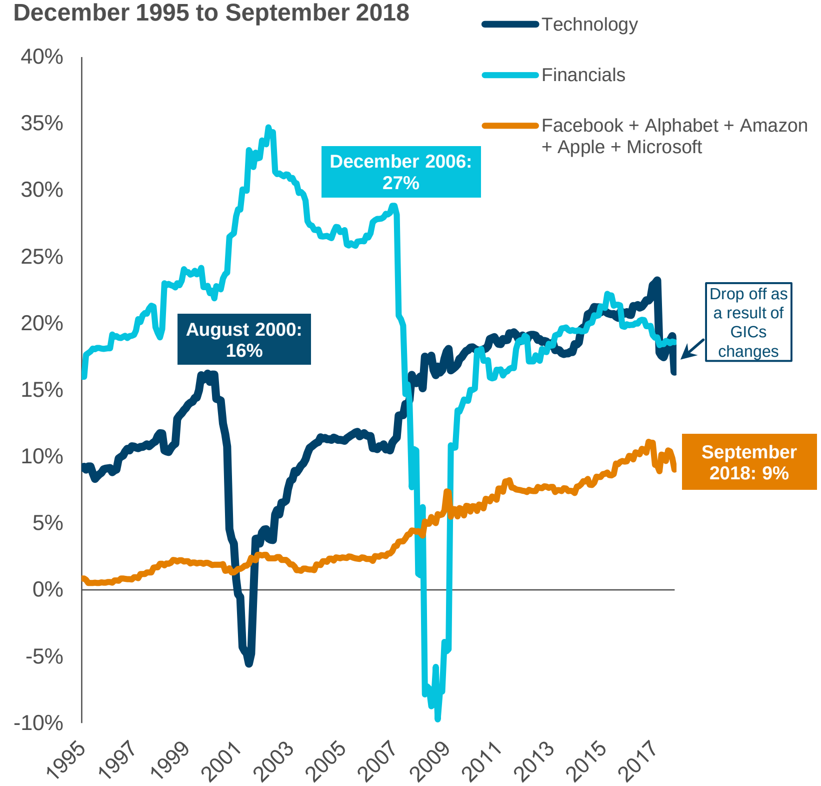
SHARE OF S&P 500 MARKET CAP

December 1995 to September 2018



SHARE OF S&P 500 EARNINGS

December 1995 to September 2018



- Mega-cap technology platform companies have massively outperformed the market during this cycle. The combined market cap of five companies: Facebook, Alphabet, Amazon, Apple, and Microsoft account for 17% of S&P 500 market cap and 8% of earnings.
- The market cap of these five “Tech Titans” is currently larger than the entire financials sector.

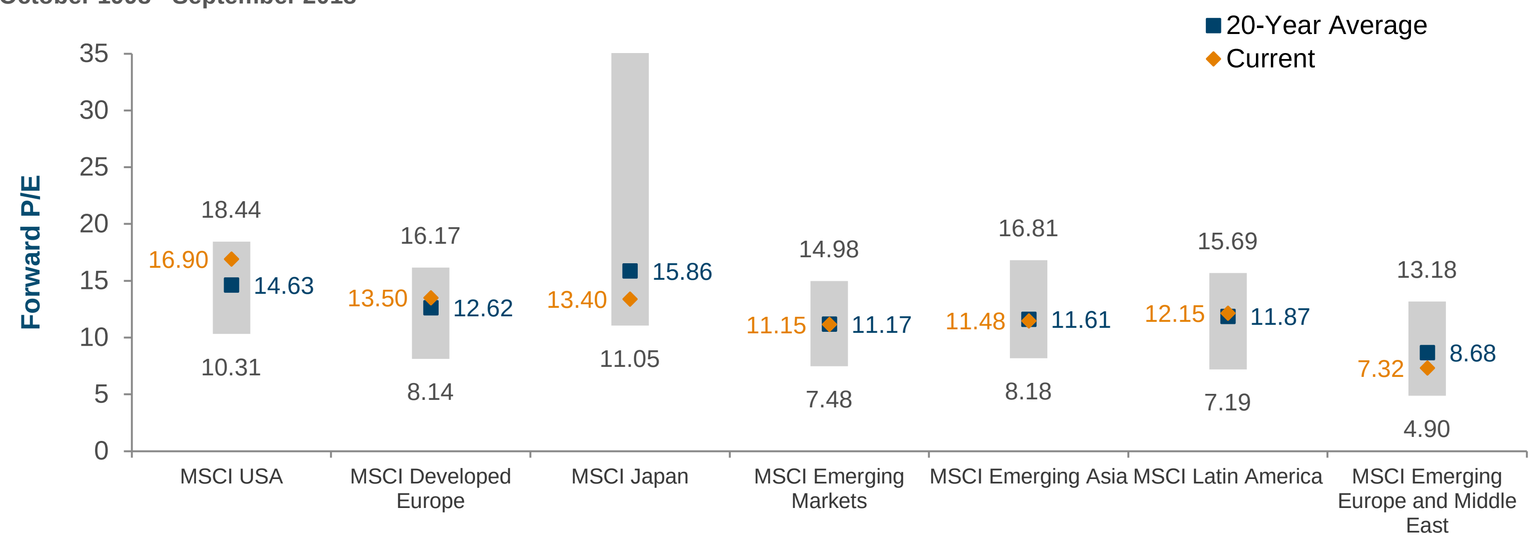
Sources: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved. S&P. MSCI. See Additional Disclosures on slide 37.

EQUITIES

Global: Reasonable valuation in most regions

FORWARD PRICE TO EARNINGS (P/E) RATIOS

October 1998 - September 2018



Past 20 Years

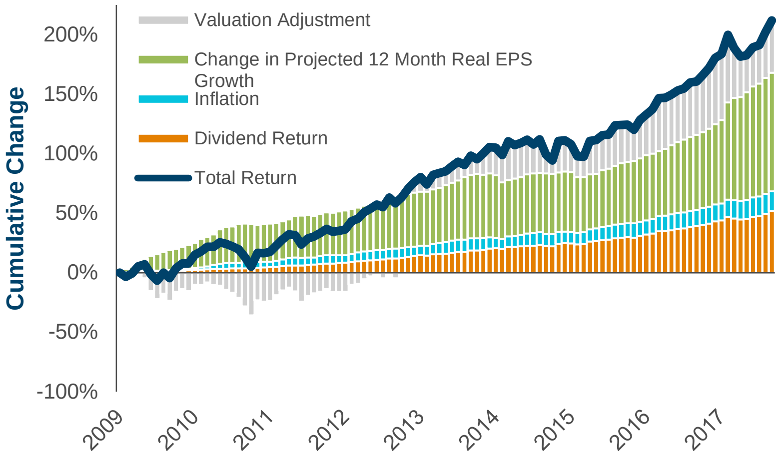
P/E Ratios (1 Year Forward) by MSCI Regional Indices	Current (9/30/18)	Average	High	Low	Current Valuation to 20 Year Average
USA	16.90	14.63	18.44	10.31	16%
Developed Europe	13.50	12.62	16.17	8.14	7%
Japan	13.40	15.86	38.27	11.05	-16%
Emerging Markets	11.15	11.17	14.98	7.48	0%
Emerging Asia	11.48	11.61	16.81	8.18	-1%
Latin America	12.15	11.87	15.69	7.19	2%
EM Europe & Middle East	7.32	8.68	13.18	4.90	-16%

Source: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved. MSCI. See Additional Disclosures on slide 37.

Global: Where have returns come from during the current bull market cycle?

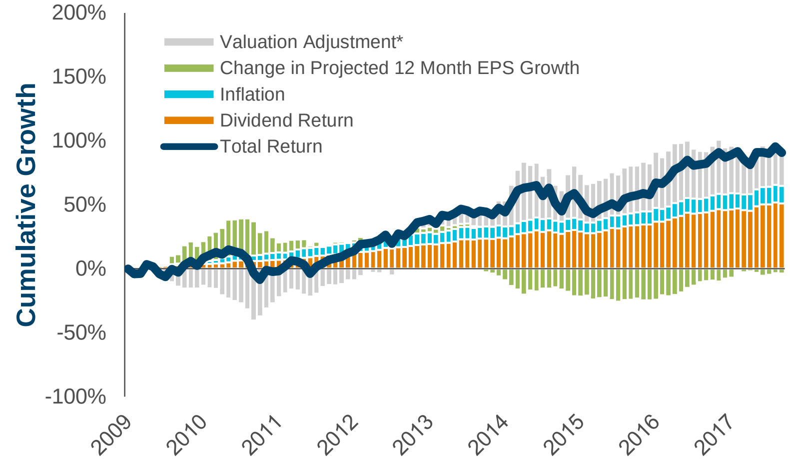
S&P 500 TOTAL RETURN DECOMPOSITION

12/31/2009 - 8/31/2018



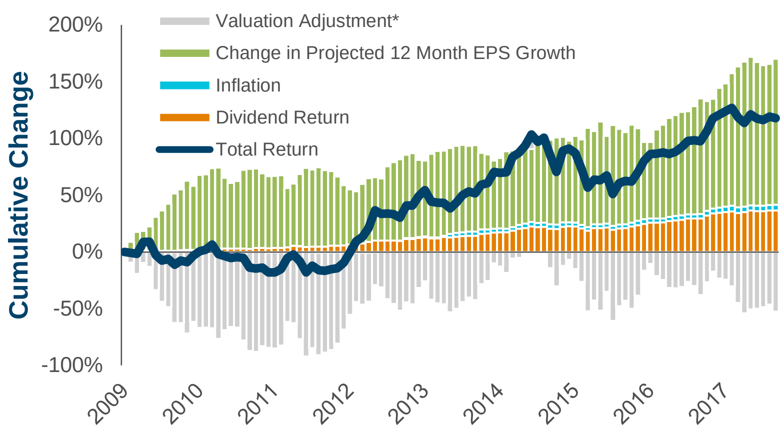
MSCI EU TOTAL RETURN DECOMPOSITION

12/31/2009 - 8/31/2018



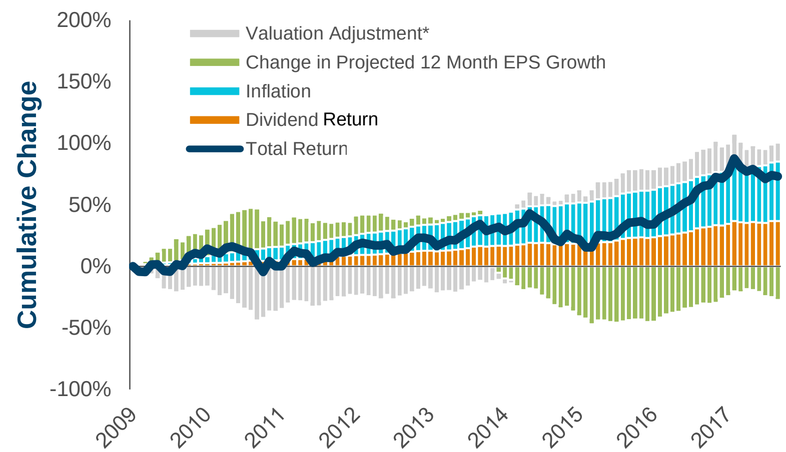
MSCI JAPAN TOTAL RETURN DECOMPOSITION

12/31/2009 - 8/31/2018



MSCI EM TOTAL RETURN DECOMPOSITION

12/31/2009 - 8/31/2018



Past performance cannot guarantee future results.

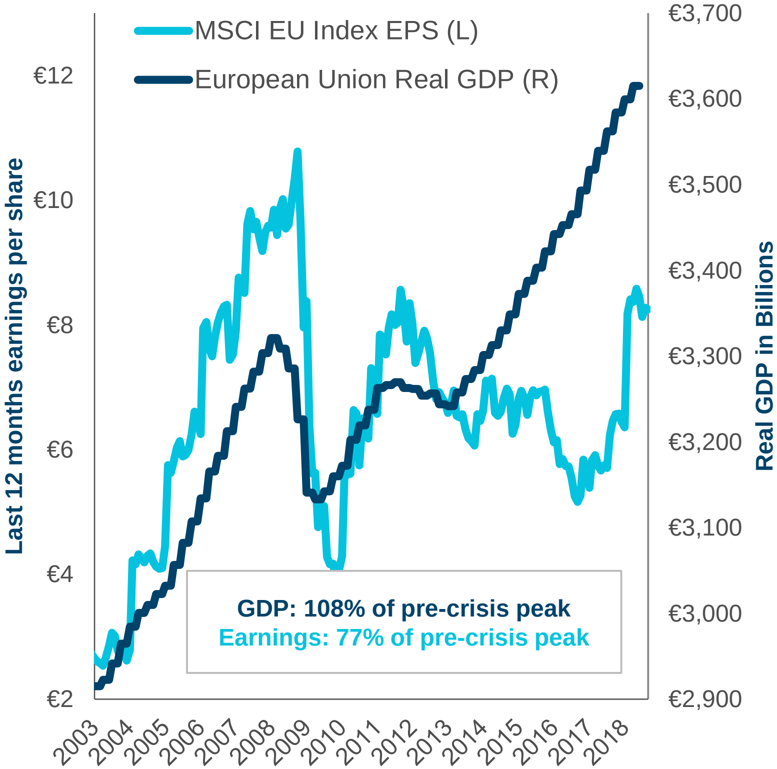
*Valuation adjustment represents the cumulative change in index prices excluding changes in earnings or inflation. It may represent P/E changes, share count reduction, and other factors.

Sources: FactSet Research Systems Inc. All rights reserved. Inflation measure used is CPI. All numbers are based on local currency. S&P. MSCI. See Additional Disclosures on slide 37.

Europe: Earnings are finally rebounding, as weakness in energy, materials, and financials fades

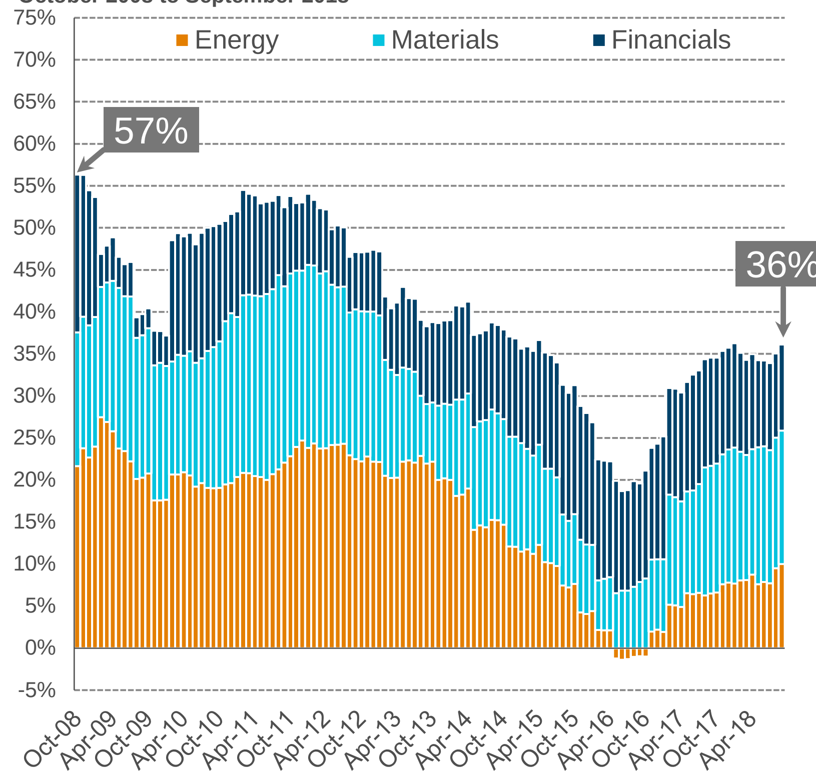
EUROPEAN UNION: GROSS DOMESTIC PRODUCT (GDP) VS. EARNINGS

January 2003 to September 2018, figures shown in euros



MSCI EU INDEX: PERCENT OF EARNINGS FROM ENERGY MATERIALS, AND FINANCIALS

October 2008 to September 2018



- Changes in European Union GDP and the earnings per share of the MSCI EU Index were highly correlated in the prior economic cycle. That correlation has broken down in recent years, but earnings are beginning to catch up.
- Three sectors (energy, materials, and financials) have been responsible for much of the earnings weakness. The down trend in these areas may have bottomed in mid-2016. However, a full rebound to previous levels appears unlikely in the near term.

Chart is shown for illustrative purposes only and does not represent the performance of any specific security.

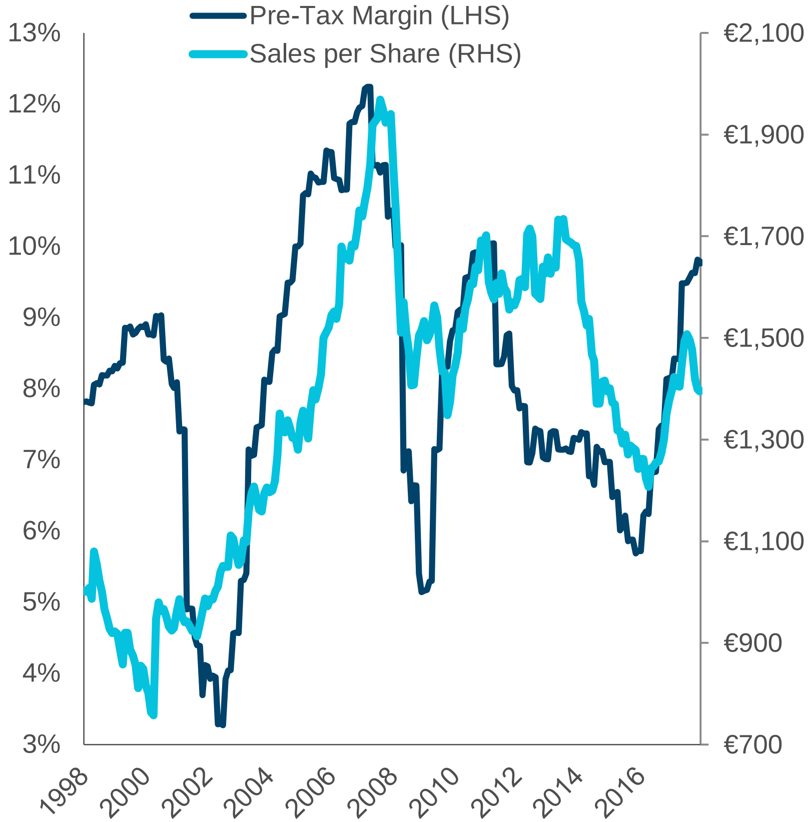
Sources: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved. [Statistical Office of the European Communities]/Haver Analytics. MSCI. See Additional Disclosures on slide 37.

EQUITIES

Europe: Operating leverage offers potential upside

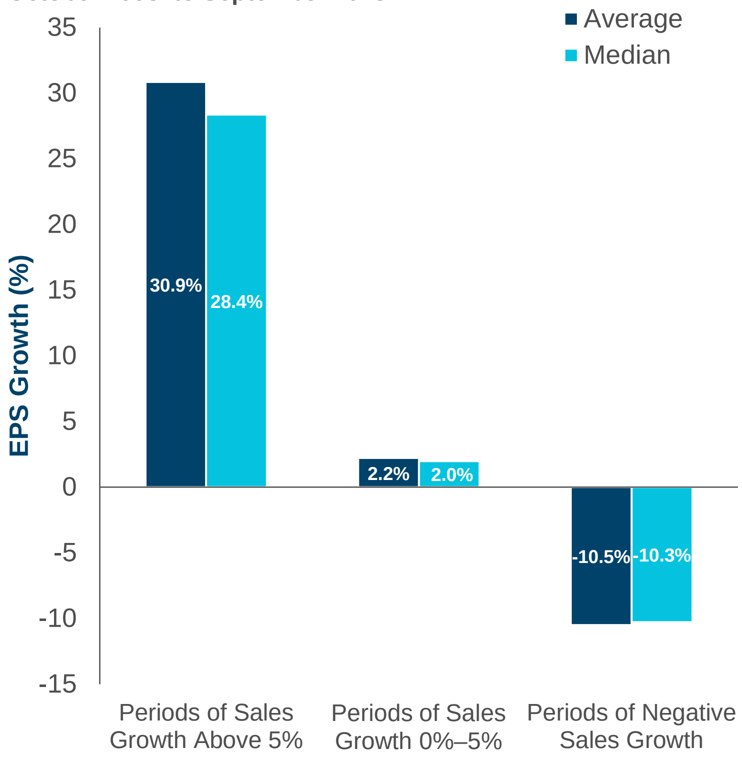
MSCI EUROPE SALES VS. MARGINS

October 1998 to September 2018, figures in euros



MSCI EUROPE OPERATING LEVERAGE

EPS Growth at Various Levels of Sales Growth
Rolling 12 month periods, Monthly
October 1998 to September 2018



- Margins have historically been very dependent on revenue growth levels, as higher revenue means greater dilution of fixed costs.
- Earnings growth has historically been very robust when revenue growth is greater than 5%.

EPS = Earnings Per Share

Sources: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved. MSCI. See Additional Disclosures on slide 37.

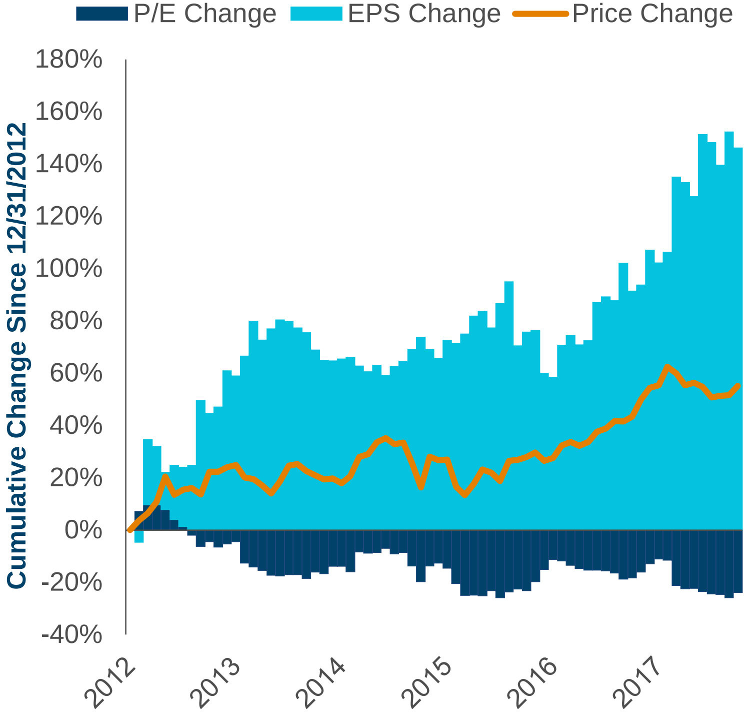
Chart is shown for illustrative purposes only and does not represent the performance of any specific security. Time period is based on data availability

Japan: Earnings have driven performance, but currency weakness has driven earnings

EQUITIES

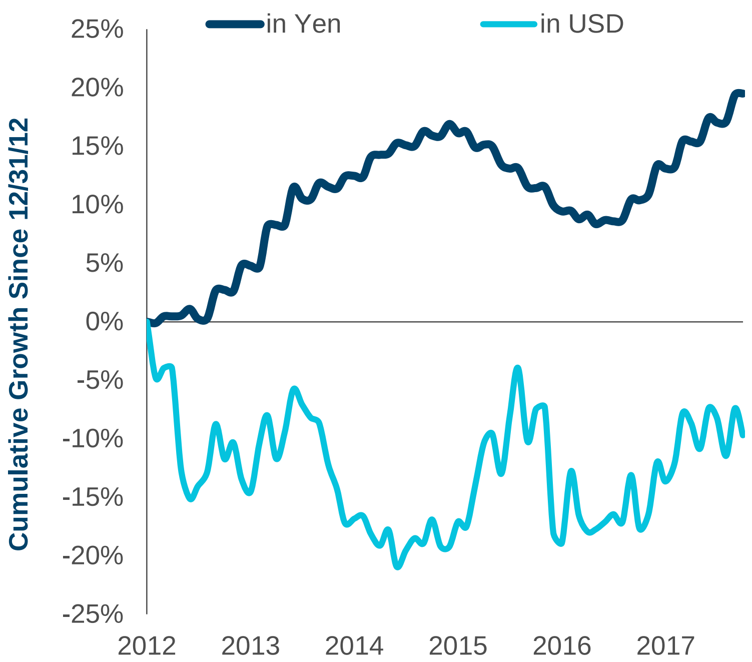
MSCI JAPAN

December 2012 to September 2018



MSCI JAPAN REVENUE GROWTH

December 2012 to June 2018



- In Japan, unlike most other equity markets, earnings improvement has been the driver of performance, rather than an increase in price to earnings multiples.
- However, yen weakness has been a very important driver of revenues, and consequently of earnings growth. Because a sustained period of deterioration of the value of the yen is unlikely, investor optimism is limited.
- It is also important to note that corporate governance has been improving significantly in Japan, as evidenced by improving returns on equity and increasingly shareholder-friendly capital allocation decisions.

Past performance cannot guarantee future results.

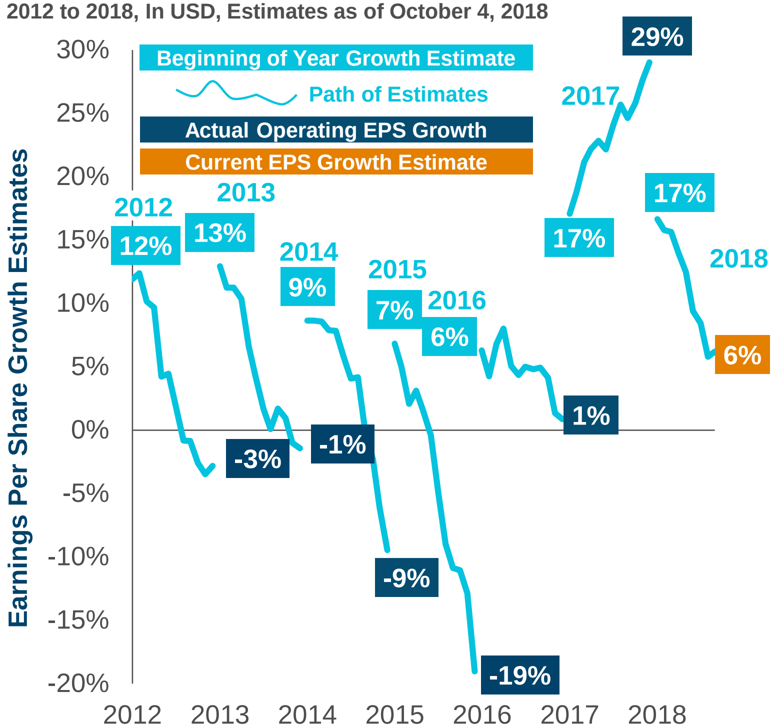
Source: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved. MSCI. See Additional Disclosures on slide 37.

EQUITIES

Emerging Markets: Earnings rebounded in 2017, but fortunes remain widely dispersed

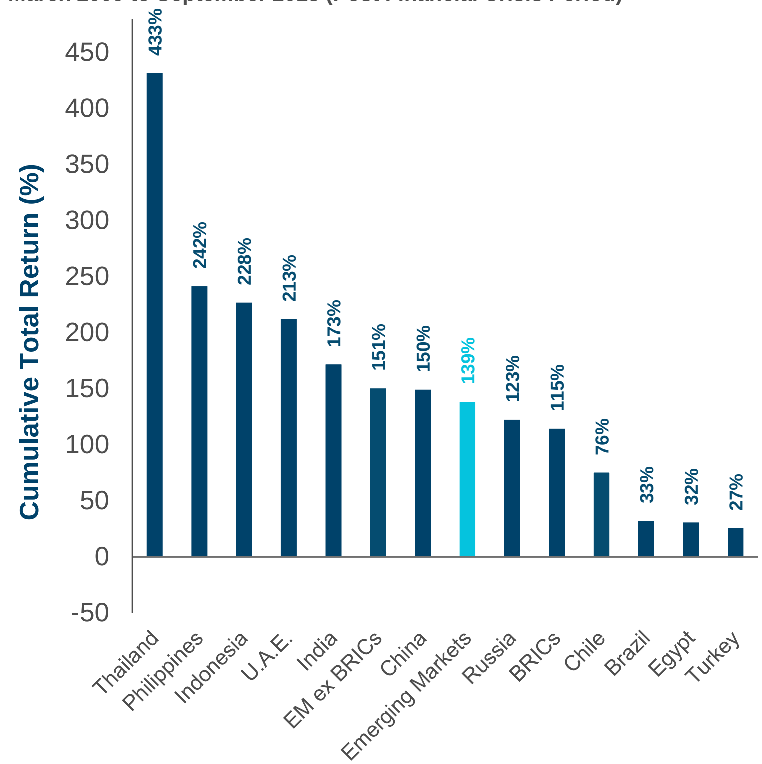
MSCI EMERGING MARKETS EPS GROWTH ESTIMATE PATHS

2012 to 2018, In USD, Estimates as of October 4, 2018



EMERGING MARKETS RETURN DISPERSION*

March 2009 to September 2018 (Post Financial Crisis Period)



- After several years of significant disappointment, earnings stabilized in 2016 and rebounded sharply in 2017. Estimates in 2018 have deteriorated but remain positive.
- However, it remains important to recognize there is significant dispersion within emerging markets. This is not a homogenous asset class.

Past performance cannot guarantee future results.

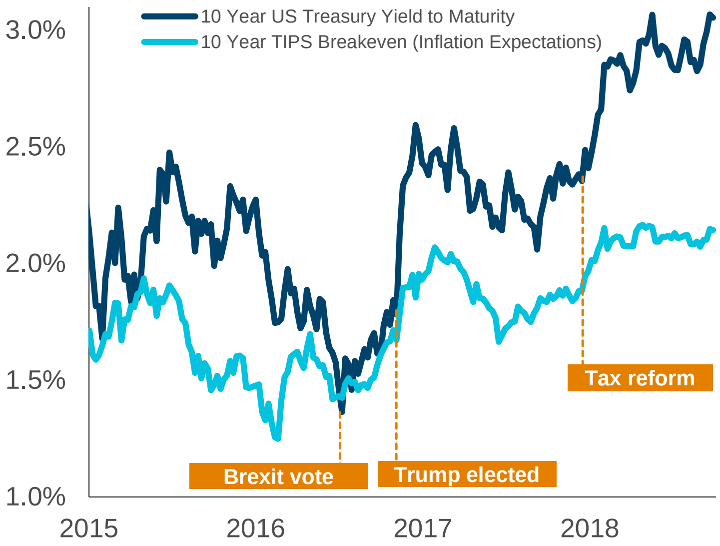
Sources: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved. MSCI. See Additional Disclosures on slide 37. *Returns are based on MSCI Indices

FIXED INCOME

U.S. rates continue to move higher

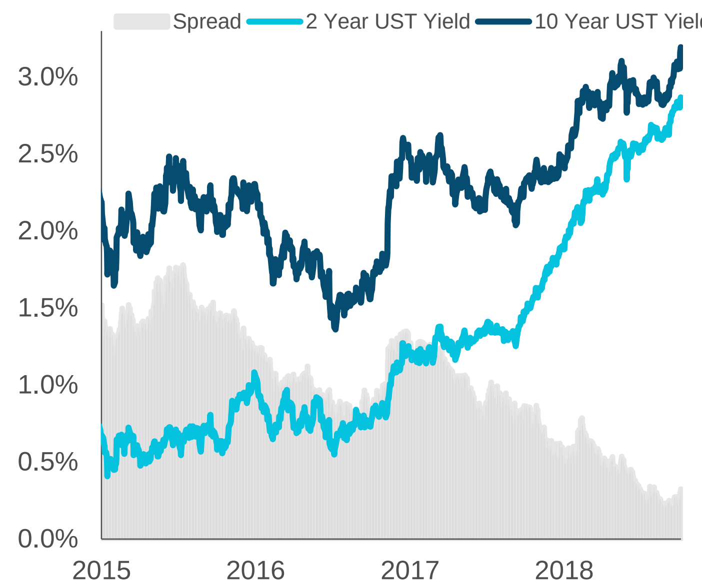
10 YEAR TREASURY YIELD VS. INFLATION EXPECTATIONS

1/1/14 TO 9/30/18



TREASURY YIELD COMPARISONS

1/1/15 to 9/30/18



U.S. TREASURY YIELD CURVES

	9/30/2017	6/30/2018	9/30/2018
2 Year	1.47%	2.52%	2.81%
5 Year	1.92%	2.73%	2.95%
10 Year	2.31%	2.85%	3.05%
30 Year	2.87%	2.99%	3.20%

Past performance cannot guarantee future results.

Yields are based on benchmark U.S. Treasury bonds

Source: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved.

Fed Policy: There appears to be a very high likelihood of one more Fed hike in 2018, but the path in 2019 and beyond remains more uncertain. Inflation is on the rise but within target levels. A tight labor market has yet to translate into the type of acceleration in inflation that would force the Fed to move faster than they have planned. However, rising short term rates and a stronger U.S. dollar have resulted in tighter financial conditions both in the U.S. and abroad—a factor that could eventually cause the Fed to re-consider the current trajectory of rate hikes.

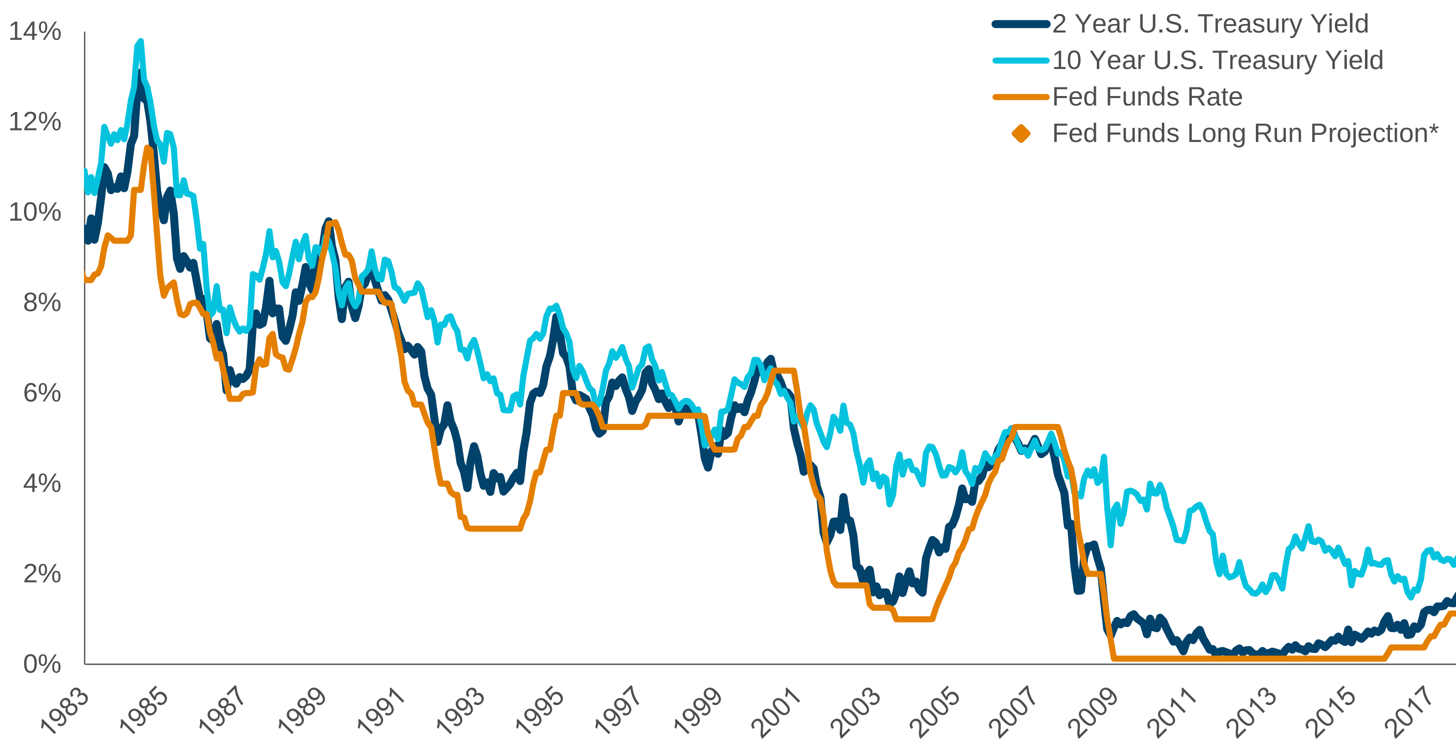
Long Rates: Longer term yields accelerated sharply in September after moving in a trading range for most of the year. Supply-demand dynamics are becoming increasingly important as treasury issuance marches higher due to the widening budget deficit, while demand from the Fed and foreign buyers has faded.

FIXED INCOME

How much further could rates rise from here?

FED FUNDS VS. 2 TO 10 YEAR SPREAD

January 1983 to September 2018



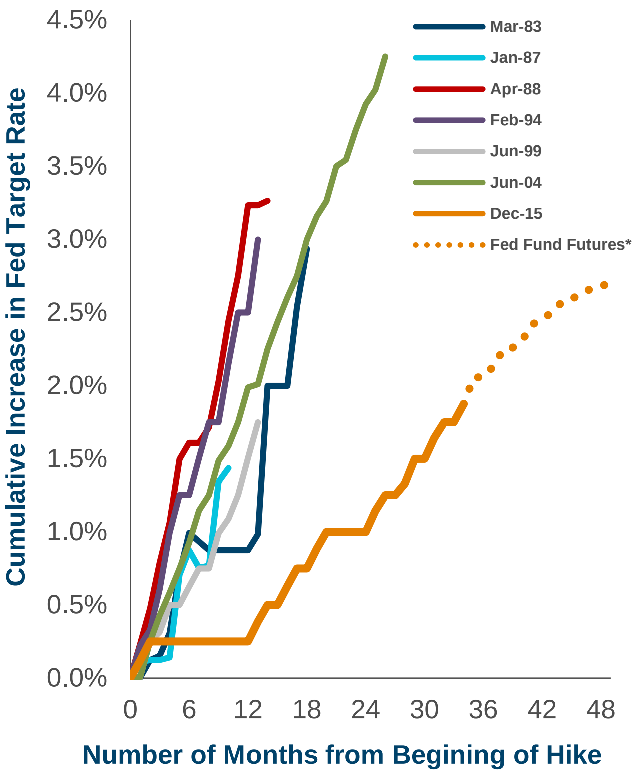
- The Fed is engaged in the 5th tightening cycle of the past 30 years.
- Except for 1994, the 2 year Treasury yield, 10 year Treasury yield, and Fed Funds Rates peaked at similar levels.
- With the FOMC's long run projection of the Fed Funds Rate at 3.0%, this suggests there is limited upside potential in the 10-Yr and supports curve flattening trajectory.
- However, the rising U.S. budget deficit means a rising supply of U.S. treasuries…will there be enough demand at current rates to offset the increase?

Sources: [Federal Reserve Board]/Haver Analytics *Based on Federal Reserve June 13, 2018 Summary of Economic Projections

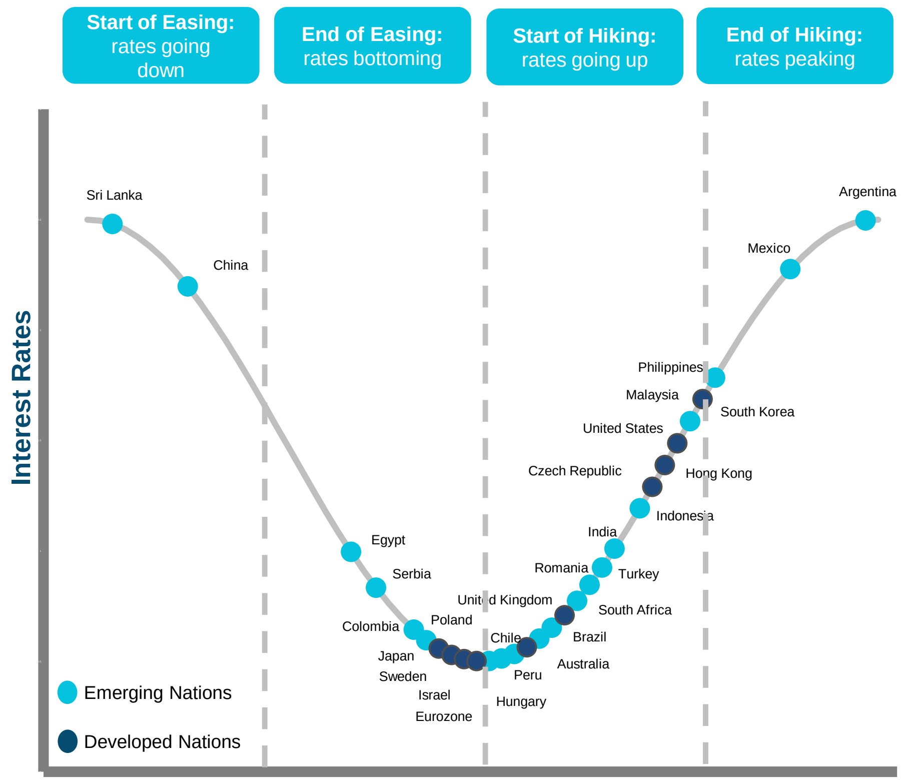
Rising rates: How concerned should bond investors be?

As of September 30, 2018

LOW AND SLOW: PRIOR FED RATE HIKING CYCLES VS. CURRENT CYCLE



ILLUSTRATIVE INTEREST RATE CYCLE



Country classifications in the chart are in line with IMF groupings as of reporting date.

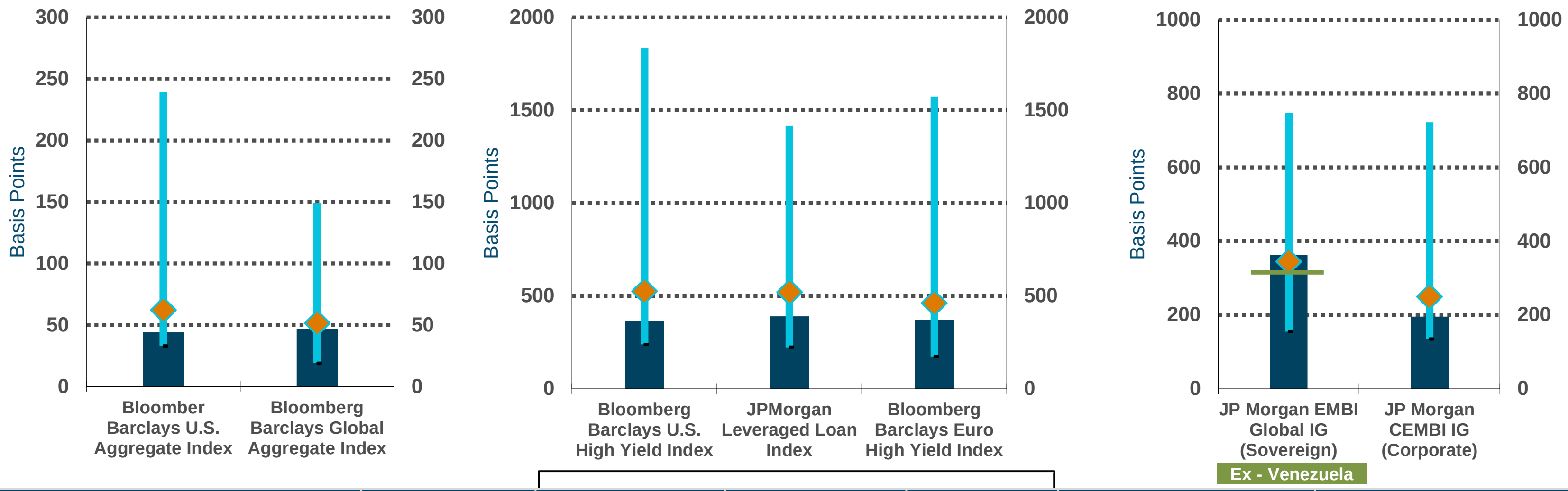
- While the U.S. Fed has embarked on a rate hiking cycle, it is important to recognize that this cycle is projected to be considerably more gradual than past cycles and have a much lower than normal end point.
- While the U.S. is at the beginning of an upturn in its interest rate cycle, many other countries have stable or falling rates.

Sources: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved. [Federal Reserve Board]/Haver Analytics and CB Rates
*As of July 3, 2018

Credit Sectors: Spreads are tight relative to history

FIXED INCOME

Option-Adjusted Spreads as of September 30, 2018



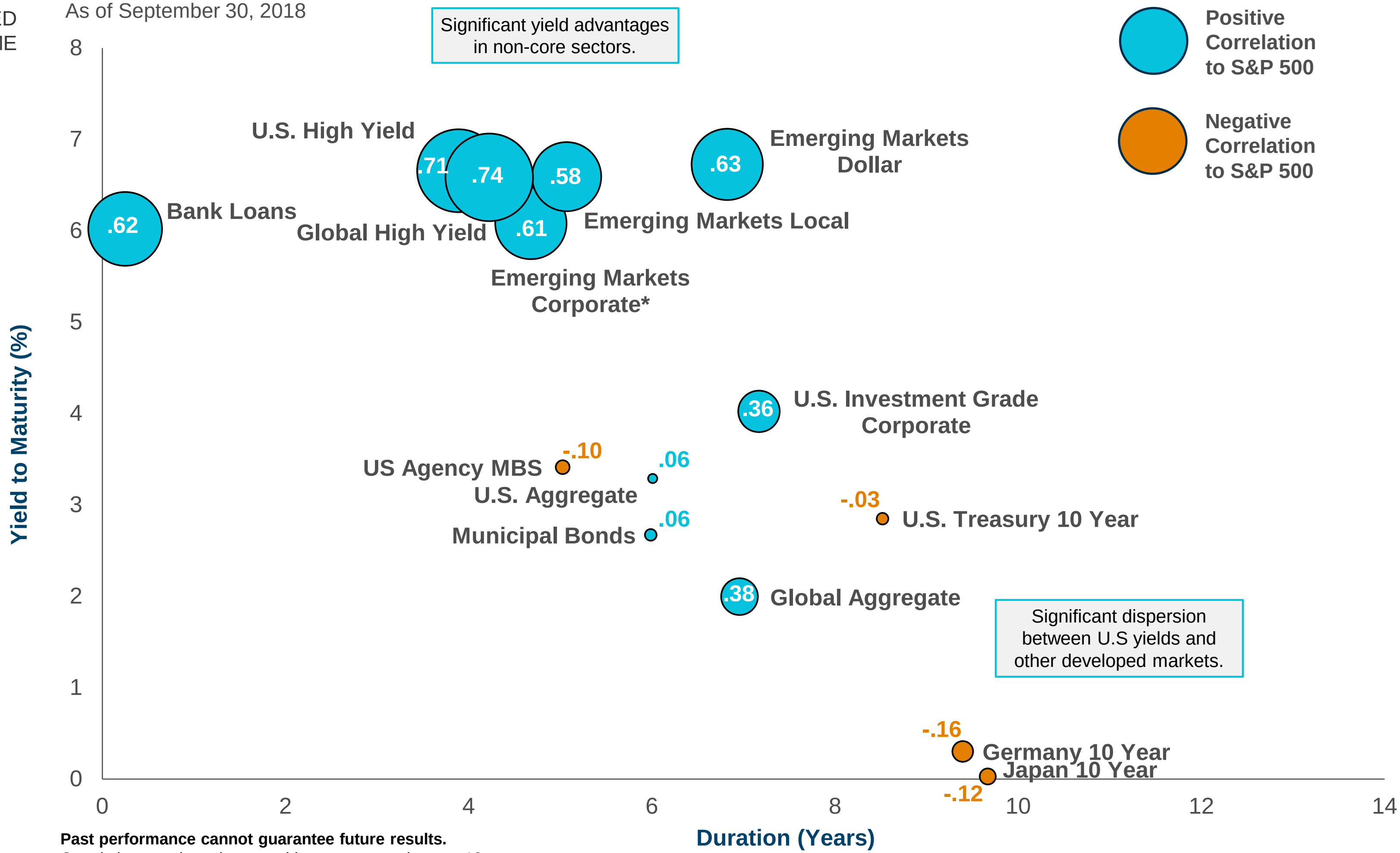
Historical Sector Spreads (Past 15 Years)	Current (9/30/2018)	Average	High	Low	Current Valuation to 15-Year Average	Current Spread to 15-Year Average
Bloomberg Barclays U.S. Aggregate Index	39 bps	62 bps	239 bps	33 bps	-37%	-23 bps
Bloomberg Barclays Global Aggregate Index	45 bps	52 bps	149 bps	19 bps	-14%	-7 bps
Bloomberg Barclays U.S. High Yield Index	316 bps	521 bps	1833 bps	238 bps	-39%	-205 bps
S&P/LTSA U.S. Leveraged Loan Index[1]	374 bps	517 bps	1415 bps	222 bps	-28%	-143 bps
Bloomberg Barclays Euro High Yield Index	313 bps	460 bps	1574 bps	173 bps	-32%	-147 bps
JP Morgan EMBI Global IG (Sovereign)	362 bps	345 bps	748 bps	155 bps	5%	17 bps
JP Morgan CEMBI IG (Corporate)	195 bps	250 bps	722 bps	135 bps	-22%	-55 bps

- Credit spreads are tight relative to history as credit markets offer attractive duration and yield versus government bonds. However, this is gradually changing as short term rates in the U.S. are rising quickly.
- Corporate fundamentals remain strong. The credit cycle is in its latter stages, but there do not appear to be any red flags on the near term horizon.
- Emerging markets bonds have sold off on concerns about U.S. dollar strength, rising U.S. rates, and country specific issues. EM sovereign spreads are now above 15 year averages. However, Venezuela is having an outsized effect on aggregate spread levels. Excluding Venezuela, sovereign spreads are 50 basis points lower (currently 319).

Sources: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved. J.P. Morgan. MSCI. See Additional Disclosures on slide 37. [1] Bank Loan Index data as of 12/31/2006.

Fixed Income: Higher yielding sectors also carry higher correlations with equities

As of September 30, 2018



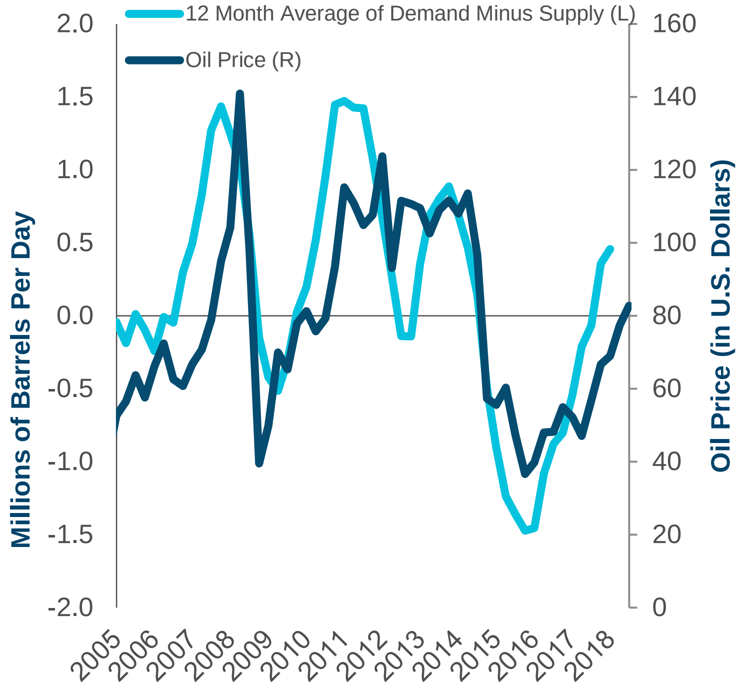
Past performance cannot guarantee future results.
Correlations are based on monthly returns over the past 10 years.
Sources: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved., S&P/LSTA
Indices Used: Bank Loans = S&P/LTSA U.S. Leveraged Loan Index, U.S High Yield = Bloomberg Barclays U.S. High Yield Index, Global High Yield = Bloomberg Barclays Global High Yield Index, Emerging Markets Local = JP Morgan GBI-EM Global Diversified Index, Emerging Markets Corporate = JP Morgan CEMBI Broad Diversified Index, Emerging Markets Dollar = JP Morgan EMBI Global Index, U.S. Investment Grade Corporate = Bloomberg Barclays U.S. Investment Grade Corporate Index, U.S. Aggregate = Bloomberg Barclays U.S. Aggregate Bond Index, Municipal Bonds = Bloomberg Barclays Municipal Bond Index, Global Aggregate = Bloomberg Barclays Global Aggregate Bond Index, U.S. Agency MBS = Bloomberg Barclays US Aggregate Securitized MBS Index, U.S. Treasury 10 Year, Germany 10 Year, and Japan 10 Year are based on benchmark government bonds
* Due to data availability, correlation data is based on returns from January 2011 to present, rather than 10 years.

REAL ASSETS

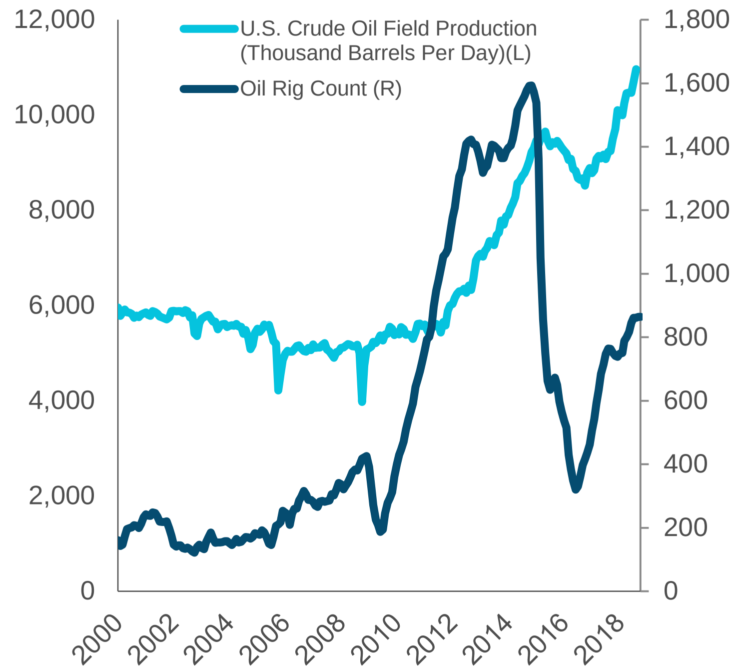
Oil: Oversupply issue has temporarily receded

As of September 30, 2018

OIL PRICE (BRENT CRUDE) VS.
GLOBAL DEMAND MINUS SUPPLY



U.S. OIL RIG COUNT VS.
U.S. OIL PRODUCTION



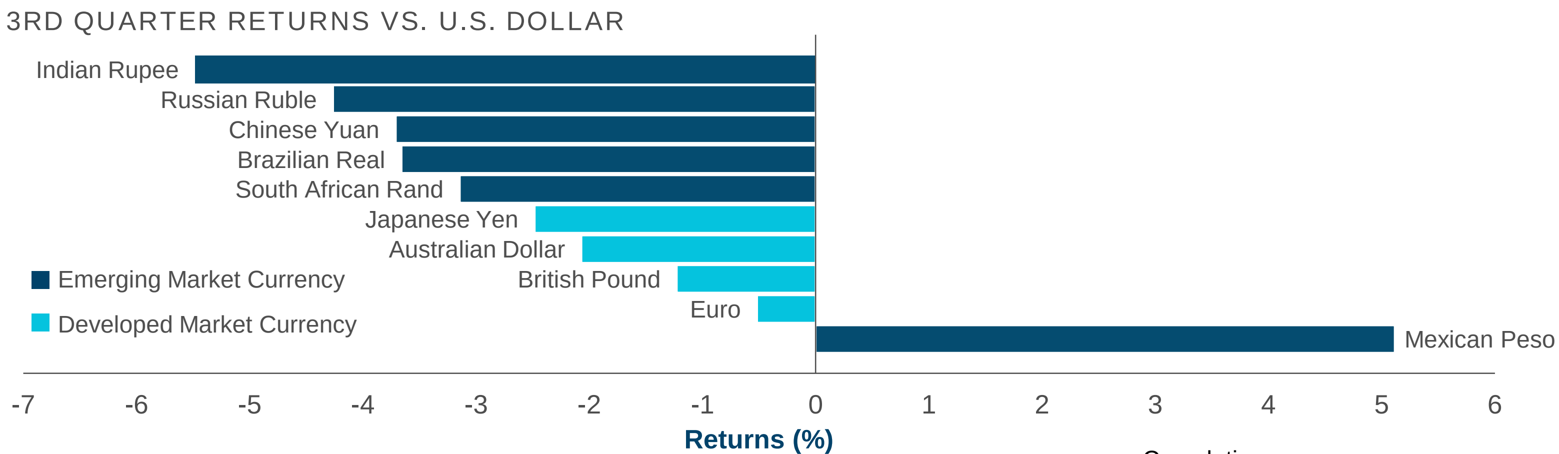
- Oil prices fell dramatically because of oversupply in the market from 2014 through 2016. This imbalance has receded recently as global oil demand has increased while OPEC and Russia have limitted their production targets.
- While there has been a significant pullback in the number of oil rigs in the U.S., production has not fallen significantly because rig productivity is improving dramatically due to technology improvements.

Source: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved.

CURRENCY

Currencies: U.S. Dollar continues to strengthen

As of September 30, 2018



% Change Currency vs. USD	QTD	1 Year	3 Year	5 Year	10 year
			Cumulative		
Mexican Peso	5.1	-2.7	-9.2	-29.7	-42.4
Euro	-0.5	-1.4	3.6	-14.2	-20.5
British Pound	-1.2	-3.0	-14.1	-19.1	-29.2
Australian Dollar	-2.1	-7.7	3.4	-22.3	-12.8
Japanese Yen	-2.5	-0.8	5.6	-13.5	-6.7
South African Rand	-3.1	-4.4	-0.9	-28.8	-42.7
Brazilian Real	-3.7	-20.3	0.9	-43.6	-53.9
Chinese Yuan	-3.7	-3.1	-7.4	-11.1	-0.5
Russian Ruble	-4.3	-11.5	0.2	-50.6	-61.7
Indian Rupee	-5.5	-9.6	-8.9	-13.8	-35.8

Past performance cannot guarantee future results.

Source: T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved.

Risk Disclosure

Key Risks -The following risks are materially relevant to the information highlighted in this material:
Even if the asset allocation is exposed to different asset classes in order to diversify the risks, a part of these assets is exposed to specific key risks.

Equity risk - in general, equities involve higher risks than bonds or money market instruments.

Credit risk - a bond or money market security could lose value if the issuer's financial health deteriorates.

Currency risk - changes in currency exchange rates could reduce investment gains or increase investment losses.

Default risk - the issuers of certain bonds could become unable to make payments on their bonds.

Emerging markets risk - emerging markets are less established than developed markets and therefore involve higher risks.

Foreign investing risk - Investing in foreign countries other than the country of domicile can be riskier due to the adverse effects of currency exchange rates, differences in market structure and liquidity, as well as specific country, regional, and economic developments.

Interest rate risk - when interest rates rise, bond values generally fall. This risk is generally greater the longer the maturity of a bond investment and the higher its credit quality.

Real estate investments risk - real estate and related investments can be hurt by any factor that makes an area or individual property less valuable.

Small and mid-cap risk - stocks of small and mid-size companies can be more volatile than stocks of larger companies.

Style risk - different investment styles typically go in and out of favour depending on market conditions and investor sentiment.

Important Information

Source for Bloomberg Barclays index data: Bloomberg Index Services Ltd. Copyright© 2018, Bloomberg Index Services Ltd. Used with permission

Source for MSCI data: MSCI. MSCI makes no express or implied warranties or representations and shall have no liability whatsoever with respect to any MSCI data contained herein. The MSCI data may not be further redistributed or used as a basis for other indices or any securities or financial products. This report is not approved, reviewed, or produced by MSCI.

Source for Russell data: Frank Russell Company ("Russell") is the source and owner of the Russell Index data contained or reflected in these materials and all trademarks and copyrights related thereto. Russell® is a registered trademark of Russell. Russell is not responsible for the formatting or configuration of this material or for any inaccuracy in T. Rowe Price Associates' presentation thereof.

Source for Standard & Poor's and LTSA data: Copyright © 2018, S&P Global Market Intelligence (and its affiliates, as applicable). Reproduction of S&P and LTSA indices in any form is prohibited except with the prior written permission of S&P Global Market Intelligence ("S&P"). None of S&P, its affiliates or their suppliers guarantee the accuracy, adequacy, completeness or availability of any information and is not responsible for any errors or omissions, regardless of the cause or for the results obtained from the use of such information. In no event shall S&P, its affiliates or any of their suppliers be liable for any damages, costs, expenses, legal fees, or losses (including lost income or lost profit and opportunity costs) in connection with any use of S&P information. The S&P/ LSTA Leveraged Loan Index is a product of S&P Global Market Intelligence, a division of S&P Global Inc. ("S&P")and has been licensed for use by T. Rowe Price. Standard & Poor's® and S&P® are registered trademarks of Standard & Poor's Financial Services LLC, a division of S&P; LSTA® is a trademark of Loan Syndications and Trading Association, Inc. and has been licensed for use by S&P. T. Rowe Price is not sponsored, endorsed, sold or promoted by S&P, its respective affiliates, or LSTA and none of such parties make any representation regarding the advisability of investing in such product(s) nor do they have any liability for any errors, omissions, or interruptions of the S&P/ LSTA Leveraged Loan Index.

Source for J.P. Morgan data: "Information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval. Copyright © 2018, J.P. Morgan Chase & Co. All rights reserved.

This material is being furnished for general informational purposes only. The material does not constitute or undertake to give advice of any nature, including fiduciary investment advice, and prospective investors are recommended to seek independent legal, financial and tax advice before making any investment decision. T. Rowe Price group of companies including T. Rowe Price Associates, Inc. and/or its affiliates receive revenue from T. Rowe Price investment products and services. **Past performance is not a reliable indicator of future performance**. The value of an investment and any income from it can go down as well as up. Investors may get back less than the amount invested.

The material does not constitute a distribution, an offer, an invitation, a personal or general recommendation or solicitation to sell or buy any securities in any jurisdiction or to conduct any particular investment activity. The material has not been reviewed by any regulatory authority in any jurisdiction.

Information and opinions presented have been obtained or derived from sources believed to be reliable and current; however, we cannot guarantee the sources' accuracy or completeness. There is no guarantee that any forecasts made will come to pass. The views contained herein are as of the date noted on the material and are subject to change without notice; these views may differ from those of other T. Rowe Price group companies and/or associates. Under no circumstances should the material, in whole or in part, be copied or redistributed without consent from T. Rowe Price.

The material is not intended for use by persons in jurisdictions which prohibit or restrict the distribution of the material and in certain countries the material is provided upon specific request.

It is not intended for distribution to retail investors in any jurisdiction.

T. Rowe Price analysis using data from FactSet Research Systems Inc. All rights reserved.

Australia - Issued in Australia by T. Rowe Price Australia Limited (ABN: 13 620 668 895 and AFSL: 503741), Level 50, Governor Phillip Tower, 1 Farrer Place, Suite 50B, Sydney, NSW 2000, Australia. For Wholesale Clients only.

Canada - Issued in Canada by T. Rowe Price (Canada), Inc. T. Rowe Price (Canada), Inc.'s investment management services are only available to Accredited Investors as defined under National Instrument 45-106. T. Rowe Price (Canada), Inc. enters into written delegation agreements with affiliates to provide investment management services.

DIFC - Issued in the Dubai International Financial Centre by T. Rowe Price International Ltd. This material is communicated on behalf of T. Rowe Price International Ltd by its representative office which is regulated by the Dubai Financial Services Authority. For Professional Clients only.

EEA - Issued in the European Economic Area by T. Rowe Price International Ltd, 60 Queen Victoria Street, London EC4N 4TZ which is authorised and regulated by the UK Financial Conduct Authority. For Professional Clients only.

Hong Kong - Issued in Hong Kong by T. Rowe Price Hong Kong Limited, 21/F, Jardine House, 1 Connaught Place, Central, Hong Kong. T. Rowe Price Hong Kong Limited is licensed and regulated by the Securities & Futures Commission. For Professional Investors only.

Singapore - Issued in Singapore by T. Rowe Price Singapore Private Ltd., No. 501 Orchard Rd, #10-02 Wheelock Place, Singapore 238880. T. Rowe Price Singapore Private Ltd. is licensed and regulated by the Monetary Authority of Singapore. For Institutional and Accredited Investors only.

Switzerland - Issued in Switzerland by T. Rowe Price (Switzerland) GmbH, Talstrasse 65, 6th Floor, 8001 Zurich, Switzerland. For Qualified Investors only.

USA - Issued in the USA by T. Rowe Price Associates, Inc., 100 East Pratt Street, Baltimore, MD, 21202, which is regulated by the U.S. Securities and Exchange Commission. For Institutional Investors only.

Glossary of Terms

GDP (Gross Domestic Product): A widely-accepted measure of economic growth

PMI (Purchasing Manager Index): Is an indicator of the economic health of the manufacturing sector. The PMI index is based on five major indicators: new orders, inventory levels, production, supplier deliveries and the employment environment. Services PMI is a similar index that applies to service, rather than manufacturing sectors.

P/E Ratio (Price to Earnings Ratio): Shows the "multiple" of earnings at which a stock is selling. The P/E ratio is calculated by dividing a stock's current price by its current earnings per share. A high multiple means that investors are optimistic about future growth and have bid up the stock's price.

EPS (Earnings Per Share): Is the portion of a company's profit allocated to each outstanding share of common stock. Earnings per share serves as an indicator of a company's profitability.

12 Months Forward Earnings: Is the estimated earnings of a company over the coming 12-month period.

Forward P/E Ratio: The Forward P/E Ratio is calculated by dividing a stock's current price by its estimated forward earnings per share.

Shiller CAPE (Cyclically Adjusted Price to Earnings): The cyclically adjusted price-to-earnings ratio, commonly known as Shiller CAPE is a valuation measure usually applied to the U.S. S&P 500 equity market. It is defined as price divided by the average of ten years of earnings (moving average), adjusted for inflation. It is principally used to assess likely future returns from equities over a 10-year timescale, with higher than average CAPE values implying lower than average long-term annual average returns.

Earnings Growth: The rate at which a company's earnings are expected to increase in the future.

Earnings Surprise: An earnings surprise occurs when a company's reported quarterly or annual profits are above or below analysts' expectations. These analysts, who work for a variety of financial firms and reporting agencies, base their expectations on a variety of sources - previous quarterly or annual reports, current market conditions, as well as the company's own earnings' predictions or "guidance."

Revenue Growth: The rate at which a company's revenues are expected to increase in the future

Revenue Surprise: A revenue surprise occurs when a company's reported quarterly or annual revenues are above or below analysts' expectations. These analysts, who work for a variety of financial firms and reporting agencies, base their expectations on a variety of sources - previous quarterly or annual reports, current market conditions, as well as the company's own predictions or "guidance."

Dividend Yield: A financial ratio that indicates how much a company pays out in dividends each year relative to its share price. Dividend yield is represented as a percentage and can be calculated by dividing the dollar value of dividends paid in a given year per share of stock held by the dollar value of one share of stock.

Glossary of Terms (continued)

BBB U.S. Corporate: Subset of broader index tracking the performance of U.S. dollar denominated investment grade rated corporate debt publically issued in the US domestic market. This subset includes all securities with a given investment grade rating BBB.

Buybacks: A buyback, also known as a repurchase, is the purchase by a company of its outstanding shares that reduces the number of its shares on the open market. Companies buy back shares for a number of reasons, such as to increase the value of shares still available by reducing the supply of them or eliminate any threats by shareholders who may be looking for a controlling stake.

Capex: Capital expenditure, or Capex, are funds used by a company to acquire or upgrade physical assets such as property, industrial buildings or equipment. It is often used to undertake new projects or investments by the firm. This type of outlay is also made by companies to maintain or increase the scope of their operations. These expenditures can include everything from repairing a roof to building, to purchasing a piece of equipment, or building a brand new factory.

Buyback Yield: Buyback yield simply measures the percentage change in outstanding shares over a period of time. Buyback yield is the repurchase of outstanding shares over the existing market capitalization of a company. For example, if a company purchased $50 million dollars of its own stock and its market capitalization was $500 million, the buyback yield would be 10%.

Dividend Payout Ratio: Payout ratio is the proportion of earnings paid out as dividends to shareholders, typically expressed as a percentage. The payout ratio can also be expressed as dividends paid out as a proportion of cash flow. The payout ratio is a key financial metric used to determine the sustainability of a company's dividend payments. A lower payout ratio is generally preferable to a higher payout ratio, with a ratio greater than 100% indicating the company is paying out more in dividends than it makes in net income.

EBITDA: Earnings before interest, tax, depreciation and amortization. EBITDA is a measure of a company's earnings that removes the effects of financing decisions, accounting decisions, and tax rates.

Yield to Maturity: The Yield to Maturity is the internal rate of return earned by an investor who buys a bond today at the market price, assuming that the bond will be held until maturity, and that all coupon and principal payments will be made on schedule. Yield to maturity is the discount rate at which the sum of all future cash flows from the bond (coupons and principal) is equal to the price of the bond.

Duration: The average time (expressed in years) needed for an investor to receive the present value of the future cash flows on a fixed-income investment. It is used to measure a bond or bond fund's sensitivity to interest rate changes. For example, a fund with a duration of six years would fall about 6% in price in response to a one-percentage-point rise in interest rates, and vice versa.

Correlation: A statistic that measures the degree to which two securities, asset classes, indexes, etc. move in relationship to each other.

Yield Curve: A curve on a graph in which the yield of fixed-interest securities is plotted against the length of time they have to run to maturity.

Glossary of Terms (continued)

Average: A number expressing the central or typical value in a set of data. Most commonly the mean, which is calculated by dividing the sum of the values in the set by their number.

Median: Denoting a value lying at the midpoint of a frequency distribution of observed values, such that there is an equal probability of falling above or below it.

Standard Deviation: Standard Deviation is a statistical measure of historic volatility. Generally, it is a measure of the extent to which numbers are spread around their average. The wider the dispersions, the larger the standard deviation. The higher the deviation, the greater the volatility. Mathematically, in a series of numbers, 68% of the distribution lies within one standard deviation of the mean.

Sharpe Ratio: The Sharpe Ratio is a measure for calculating risk-adjusted return. The Sharpe ratio is the average return earned in excess of the risk-free rate per unit of volatility or total risk.

M1 Money Supply: M1 is a metric for the money supply of a country and includes physical money — both paper and coin — as well as checking accounts, demand deposits and negotiable order of withdrawal (NOW) accounts. The most liquid portions of the money supply are measured by M1 because it contains currency and assets that can be converted to cash quickly.

MFI Loans: MFI Loans relate to loans and advances in all currencies made by MFIs to non-financial businesses, including to small and medium-sized enterprises.

Monetary Financial Institutions (MFIs), as in a definition provided by the European Central Bank, are defined as central banks, resident credit institutions as defined in Community Law, and other resident financial institutions whose business is to receive deposits or close substitutes for deposits from entities other than MFIs and, for their own account, to grant credits and/or make investments in securities.

FOMC: The Federal Open Market Committee (FOMC) is the branch of the Federal Reserve Board that determines the direction of monetary policy.

CCAR: Comprehensive Capital Analysis and Review (CCAR) is a United States regulatory framework introduced by the U.S. Federal Reserve in order to assess, regulate, and supervise large banks and financial institutions. CCAR is also commonly referred to as “bank stress tests”.

Glossary of Indices

Citi Surprise Index: The Citigroup Economic Surprise Index, or CESI, tracks how economic data are faring relative to expectations. The index rises when economic data exceed economists' consensus estimates and falls when data come in below estimates.

CBOE (Chicago Board of Exchange) Market Volatility Index: Commonly known as VIX, the CBOE Market Volatility Index, is a popular measure of the implied volatility of S&P 500 index options. The VIX is calculated by the Chicago Board Options Exchange (CBOE). The VIX is often referred to as the fear index or the fear gauge, the VIX represents one measure of the market's expectation of stock market volatility over the next 30-day period.

Bloomberg Barclays U.S. Treasury Index: Tracks fixed-rate local currency government debt of investment grade countries. The index represents the Treasury sector of the Global Aggregate Index and currently contains issues from 37 countries denominated in 23 currencies. The three major components of this index are the U.S. Treasury Index, the Pan-European Treasury Index, and the Asian-Pacific Treasury Index, in addition to Canadian, Chilean, Mexican, and South-African government bonds.

Bloomberg Barclays U.S. Aggregate Bond Index: The index is market capitalization weighted that includes Treasury securities, Government agency bonds, Mortgage backed bonds, and Corporate bonds. It excludes Municipal bonds and Treasury Inflation-Protected securities because of tax treatment.

Bloomberg Barclays U.S. Corporate High Yield Index: Measures the U.S. corporate market of non-investment grade, fixed-rate corporate bonds. Securities are classified as high yield if the middle rating of Moody’s, Fitch, and S&P is Ba1/BB+/BB+ or below.

JP Morgan Emerging Markets Bond Index: A benchmark index for measuring the total return performance of international government bonds issued by emerging market countries that are considered sovereign (issued in something other than local currency) and that meet specific liquidity and structural requirements. The JP Morgan EMBI measures only U.S. dollar denominated bonds.

JP Morgan GBI-EM Global Diversified Index: A comprehensive emerging market debt benchmark that track local currency bonds issued by emerging market governments.

JP Morgan CEMBI Broad Diversified Index: A global, liquid corporate emerging markets benchmark that tracks U.S.-denominated corporate bonds issued by emerging markets entities.

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

Bloomberg Barclays Global High Yield Index: A multicurrency measure of global high yield debt market. The index represents the union of the U.S. High Yield, the Pan-European High Yield, and Emerging Markets Hard Currency High Yield Indices.

Glossary of Indices (continued)

Bloomberg Barclays U.S. CMBS (Commercial Mortgage Backed Securities) ERISA-Eligible Index: The index measures the performance of investment grade commercial mortgage backed securities. The index includes only CMBS that are ERISA eligible with first priority of principal repayment and are rated one of the three highest ratings categories by Fitch, Moody's, or Standard & Poor's.

Bloomberg Barclays Global Aggregate Bond Index: The index is a market-weighted index of global government, government-related agencies, corporate and securitized fixed-income investments.

Bloomberg Barclays Global Treasury Index: Tracks fixed-rate local currency government debt of investment grade countries. The index represents the Treasury sector of the Global Aggregate Index and currently contains issues from 37 countries denominated in 23 currencies.

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

Bloomberg Barclays U.S. Treasury TIPS (Treasury Inflation Protected Securities) Index: The index includes all publicly issued, U.S. Treasury inflation-protected securities that have at least one year remaining to maturity, are rated investment grade, and have $250 million or more of outstanding face value.

Bloomberg Barclays U.S. ABS (Asset Backed Securities) Index: A fixed-income index that focuses on asset-backed securities. The index includes pass-through, controlled-amortization and bullet-structured securities, which have a minimum average life of one year.

Bloomberg Barclays Euro Investment Grade Corporates Index: A broad based benchmark that measures the investment grade, euro-denominated, fixed-rate corporate bond market.

Bloomberg Barclays Euro High Yield Index: Index measures the market of non-investment grade, fixed-rate corporate bonds denominated in Euro

Bloomberg Barclays U.S. Corporate Investment Grade Index: An index that measures the performance of investment grade corporate bonds.

Merrill Lynch MOVE Index: The Merrill lynch Option Volatility Estimate (MOVE) Index is a yield curve weighted index of the normalized implied volatility on 1-month Treasury options which are weighted on the 2, 5, 10, and 30 year contracts.

Credit Suisse Leveraged Loan Index: The index represents tradable, senior-secured, U.S.-dollar-denominated non-investment-grade loans

PCE (Personal Consumption Expenditures) Price Index: The Personal Consumption Expenditures Index (PCE) is a measure price changes of consumer goods and services. Expenditures noted on the index include actual expenditures and expenditures that are attributed to households in the United States; data that pertains to services, durables and non-durables is measured through the index.

Glossary of Indices (continued)

CPI (Consumer Price Index): The Consumer Price Index (CPI) is a measure that examines the weighted average of prices of a basket of consumer goods and services. It is calculated by taking price changes for each item in the predetermined basket of goods and averaging them. Changes in the CPI are used to assess price changes associated with the cost of living.

S&P 500 Index: The Standard & Poor's 500, often abbreviated as the S&P 500, is an American stock market index based on the market capitalizations of 500 large companies having common stock listed on the NYSE or NASDAQ. The S&P 500 index components and their weightings are determined by S&P Dow Jones Indices.

Russell 2000 Index: The Russell 2000 Index is a small-cap stock market index of the bottom 2,000 stocks in the Russell 3000 Index. The Russell 2000 is by far the most common benchmark for mutual funds that identify themselves as "small-cap", while the S&P 500 index is used primarily for large capitalization stocks.

Russell 3000 Index: A market capitalization weighted equity index maintained by the Russell Investment Group that seeks to be a benchmark of the entire U.S. stock market. More specifically, this index encompasses the 3,000 largest U.S.-traded stocks, in which the underlying companies are all incorporated in the U.S.

MSCI EAFE Index: The MSCI EAFE Index is designed to represent the performance of large and mid-cap securities across 21 developed markets, including countries in Europe, Australasia and the Far East, excluding the U.S. and Canada. The Index is available for a number of regions, market segments/sizes and covers approximately 85% of the free float-adjusted market capitalization in each of the 21 countries.

MSCI Emerging Markets Index: The MSCI Emerging Markets Index is an index designed to measure equity market performance in global emerging markets. It is a float-adjusted market capitalization index that consists of indices in 23 emerging economies: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey and the United Arab Emirates.

MSCI All Country World Index: The MSCI ACWI is a market capitalization weighted index designed to provide a broad measure of equity-market performance throughout the world. The index is comprised of stocks from both developed and emerging markets and contains stocks from 46 different countries. There are 23 countries classified as developed markets and 23 countries considered emerging markets.

MSCI Regional Indices: Market capitalization weighted indices by region derived by MSCI.

GSCI Commodity Index: Serves as a benchmark for investment in the commodity markets and as a measure of commodity performance over time. It is a tradable index that is readily available to market participants of the Chicago Mercantile Exchange.

MSCI AC World Metals and Mining Index: Is comprised of large and mid cap stocks across 23 developed markets countries and 23 emerging market countries. All securities are classified in the metals and mining industry.

Glossary of Indices (continued)

FTSE EPRA/NAREIT Developed Real Estate Index: Designed to track the performance of listed real estate companies and REITs worldwide. The index incorporates REITs and Real Estate Holding & Development companies.

MSCI AC World Infrastructure Index: Captures the global opportunity set of companies that are owners or operators of infrastructure assets. Constituents are selected from the equity universe of MSCI ACWI.

S&P/Case Shiller 20 City Index: Measures the value of residential real estate in 20 major U.S. metropolitan areas: Atlanta, Boston, Charlotte, Chicago, Cleveland, Dallas, Denver, Detroit, Las Vegas, Los Angeles, Miami, Minneapolis, New York, Phoenix, Portland, San Diego, San Francisco, Seattle, Tampa and Washington, D.C.

T. Rowe Price®

THANK YOU