

Mid-Year Outlook

# Investment Outlook



Apollo Wealth Management, Ltd.

May 2017

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## What Happened Last Quarter?

Stock rally rolled on, bonds bounced back

### U.S. Equity



**U.S. stocks climbed but stalled late in the quarter as investors adjusted their expectations of Trump's policy reforms.**

- U.S. stocks delivered robust performance due to favorable earnings reports and upbeat economic outlooks. But investor optimism faded after health care reform legislation failed.
- Growth stocks returned to favor, outperforming value, as investors sought stocks that tend to advance during times of economic growth.
- Large-cap stocks benefited from global economic prospects, outperforming their mid- and small-cap counterparts.

### Non-U.S. Equity



**Improving earnings growth, economic data, and consumer and business confidence drove up non-U.S. stocks.**

- Stock performance was stronger outside the U.S., as developed and emerging markets rallied.
- Valuations in Europe remained relatively attractive compared with U.S. stocks. The stronger yen weighed on stock performance in Japan.
- Emerging markets benefited from the cyclical upswing in global economic activity, improved commodity prices, a weaker dollar, and less protectionist rhetoric from the Trump administration.

### Global Fixed Income



**The post-election bond market sell-off dissolved as investors tempered their reform expectations.**

- The Fed's more subdued outlook aided Treasuries and helped support broad bond market returns.
- In the corporate sector, demand for yield, a stock market rally, and policy reform expectations boosted high-yield returns.
- Global bond yields were volatile at times but finished the quarter little changed. The U.S. dollar was weaker versus most major currencies, which lifted non-U.S. bond returns for unhedged U.S. investors.

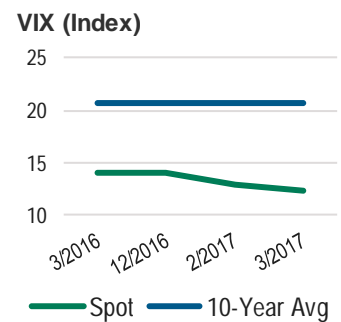
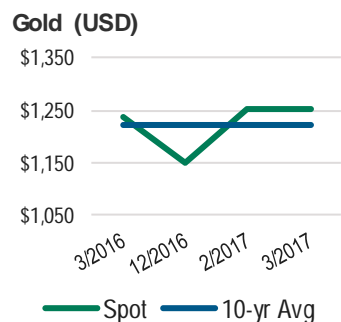
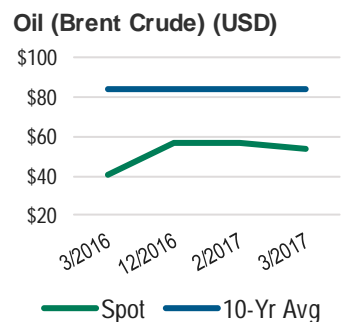
Historically, small- and/or mid-cap stocks have been more volatile than the stock of larger, more-established companies. Smaller companies may have limited resources, product lines and markets, and their securities may trade less frequently and in more limited volumes than the securities of larger companies. International investing involves special risks, such as political instability and currency fluctuations. Investing in emerging markets may accentuate these risks. The lower-rated securities in which high-yield assets invest are subject to greater credit risk, default risk and liquidity risk. See Appendix for definitions.

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# Quarterly Market Recap – Equity and Commodities

As of 3/31/2017

Indexes	Current and 52-Week Range				Returns (%)		
	Current	Low	Range	High	Quarter	YTD	1 Year
<b>Equity</b>							
S&P 500	2,368	2,001		2,396	6.07	6.07	17.17
DJIA	20,728	17,140		21,116	5.19	5.19	19.91
MSCI EAFE	1,081	878		1,084	7.25	7.25	11.67
MSCI Europe	1,547	1,245		1,547	7.44	7.44	9.76
MSCI Japan	912	724		943	4.49	4.49	14.44
MSCI Emerging Markets	51,531	43,676		51,767	11.44	11.44	17.21
<b>Specialty</b>							
S&P Goldman Sachs Com	387	310		408	-5.05	-5.05	8.45
FTSE EPRA/NAREIT Global	2,061	1,924		2,158	3.18	3.18	2.06
U.S. Dollar Index	101	93		103	-1.61	-1.61	6.27

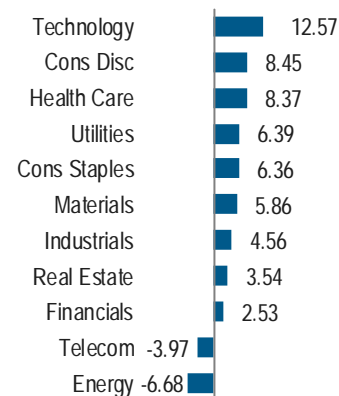


Data from 3/31/2016 to 3/31/2017  
Source: FactSet

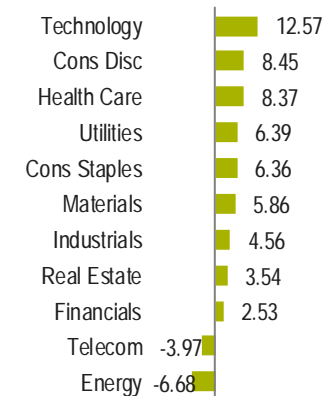
Past performance is no guarantee of future results. Commodities are raw materials or agricultural products that can be bought or sold on an exchange or market. None of these indices are investment products that are available for purchase, and the indices do not take into account fees and expenses associated with an actual investment product. See Appendix for index definitions.

## S&P 500 Sector Returns

### Quarter (%)



### YTD (%)



## U.S. Equity Style Returns

	Qtr (%)				YTD (%)		
	Value	Core	Growth		Value	Core	Growth
Larg	3.27	6.03	8.91	Larg	3.27	6.03	8.91
Mid	3.76	5.15	6.89	Mid	3.76	5.15	6.89
Smal	-0.13	2.47	5.35	Smal	-0.13	2.47	5.35

Represented by the Russell Indices. See Appendix for definitions.

## Non-U.S. Equity Style Returns

	Qtr (%)				YTD (%)		
	Value	Core	Growth		Value	Core	Growth
Larg	6.05	7.25	8.52	Larg	6.05	7.25	8.52
Mid	7.39	8.32	8.99	Mid	7.39	8.32	8.99
Smal	8.55	8.78	9.01	Smal	8.55	8.78	9.01

Represented by the MSCI Indices. See Appendix for definitions.

Observations as of the most recent quarter end. Historically, small-cap stocks are subject to more risk than stocks of larger, more established companies.

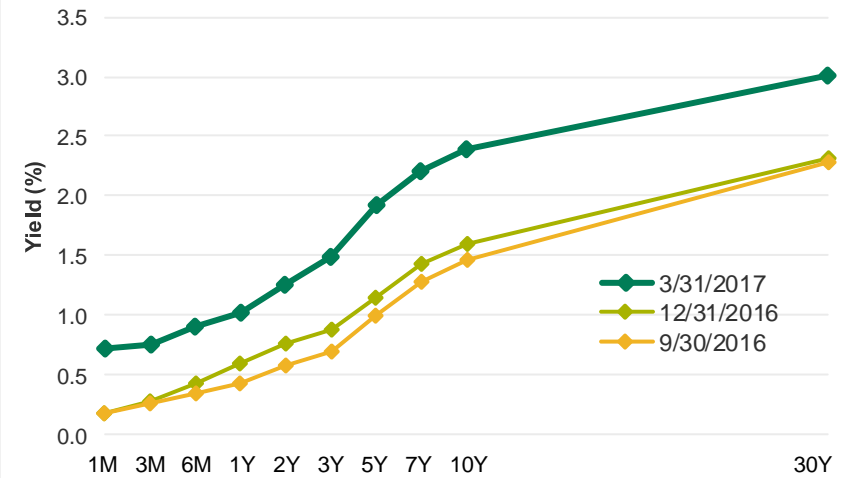
# Quarterly Market Recap – Fixed Income and Currencies

As of 3/31/2017

Indexes	Current and 52-Week Range				Returns (%)		
	Current	Low	Range	High	Qtr	YTD	1 Year
<b>Fixed Income</b>							
BB U.S. Aggregate	102.53	101.47		107.93	0.82	0.82	0.44
BB U.S. Inv Grade Corp	104.00	102.77		109.75	-0.01	-0.01	-1.53
BB U.S. High Yield Corp	100.83	91.16		101.94	2.70	2.70	16.39
BB U.S. TIPS	104.17	102.01		108.49	1.26	1.26	1.48
BB U.S. Municipal	107.48	105.31		112.79	1.58	1.58	0.15
BB Glob Agg Unhedged	107.15	106.25		112.69	1.76	1.76	-1.90
BB Global Tsy ex-U.S. (UH)	112.85	112.12		119.32	-1.23	-1.23	-2.99
JPMorgan CEMBI Broad Div	102.35	98.85		103.94	2.97	2.97	8.69
JPMorgan EMBI Global Div	810.47	742.28		814.03	3.87	3.87	8.92
JPMorgan GBI-EM Global Div	325.69	302.31		325.69	3.23	3.23	7.52

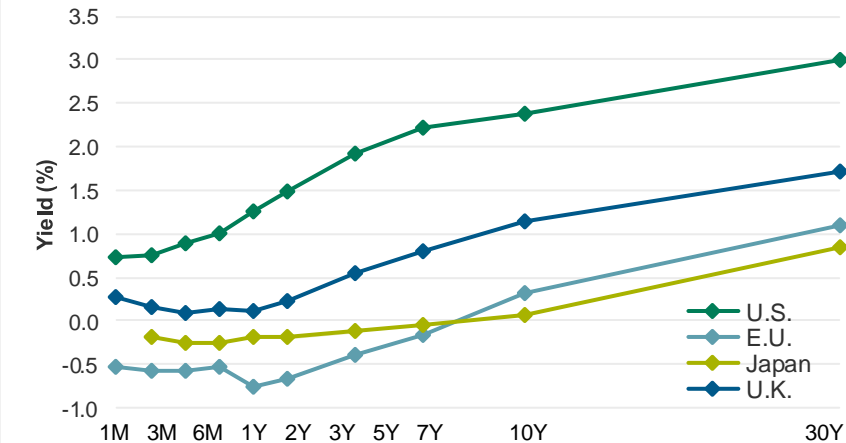
BB=Bloomberg Barclays; UH=Unhedged

### U.S. Treasury Yield Curve

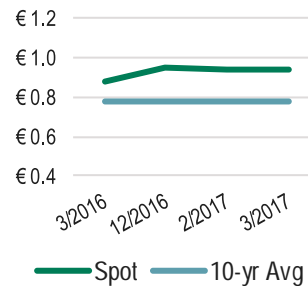


### Global Yield Curves

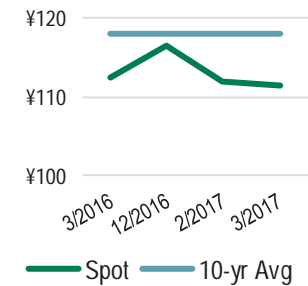
As of 3/31/2017



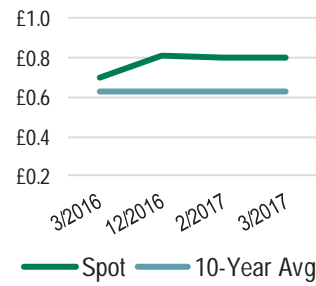
### EUR/USD



### JPY/USD



### GBP/USD








Data from 3/31/2016 to 3/31/2017. Past performance is no guarantee of future results. See appendix for index definitions. Source: FactSet

Data as of 3/31/2017. Source: Bloomberg

Yield is a rate of return for bonds and other fixed-income securities. A yield curve line graph shows yields of fixed-income securities from a single sector from a range of different maturities at a single point in time.

## Macroeconomic Outlook

Spring is bringing global economic green shoots, but risks remain

 <b>Global Economy</b>	<ul style="list-style-type: none"><li>▪ We see moderate, synchronized global growth.</li></ul>
 <b>U.S. Economy</b>	<ul style="list-style-type: none"><li>▪ Modest growth is running below “Trump Bump” expectations.</li></ul>
 <b>Inflation</b>	<ul style="list-style-type: none"><li>▪ Inflation is steadily rising from low levels.</li></ul>
 <b>Monetary Policy</b>	<ul style="list-style-type: none"><li>▪ Stimulus still dominates global monetary policy, but divergence continues.</li></ul>
 <b>Interest Rates</b>	<ul style="list-style-type: none"><li>▪ Long-term rates are range-bound.</li></ul>

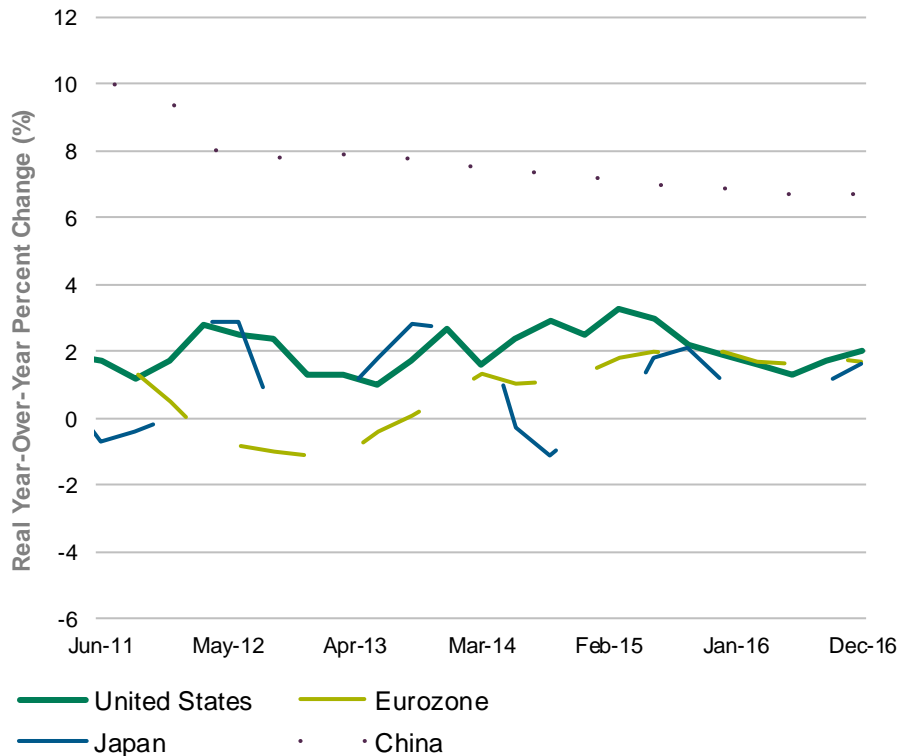
Opinions and estimates offered constitute our judgment and along with other portfolio data, are subject to change without notice.

# Global Economy and Monetary Policy

Global growth is moving in sync, while the Fed's rate policy continues to diverge from other central banks

**Economic Growth:** We're seeing synchronized growth in the U.S., Europe and Japan, supported by central bank stimulus. The Organisation for Economic Co-operation and Development (OECD) just raised its 2017 global growth estimate from 3.3% to 3.6%.

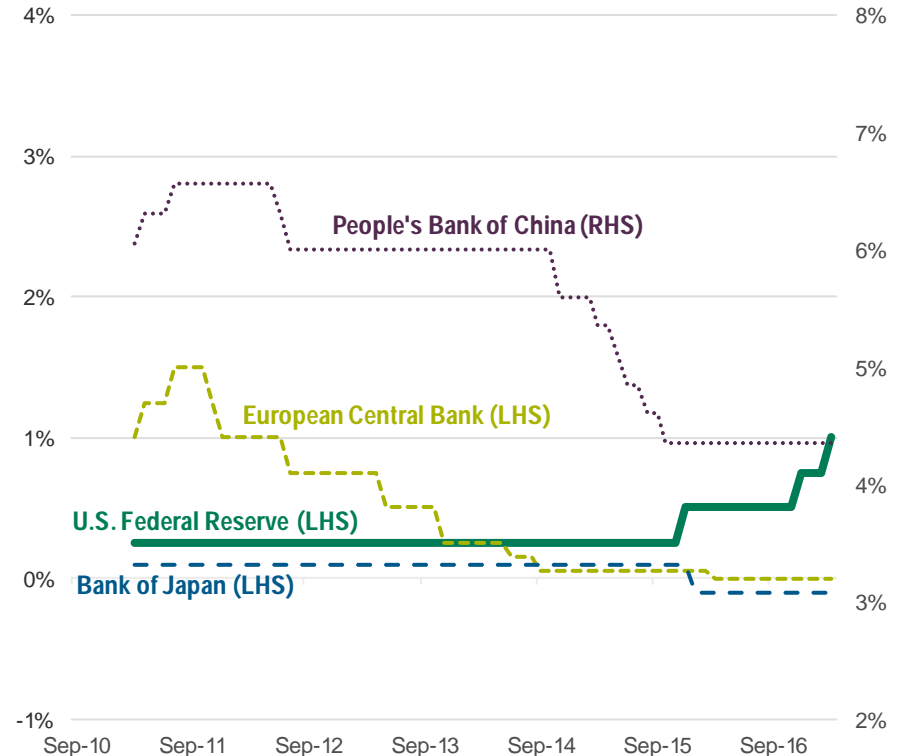
## Global GDP



Data from 12/31/2007 to 12/31/2016.  
 Source: Bloomberg  
 Gross domestic product (GDP) is a measure of the total economic output in goods and services for an economy.  
 International investing involves special risks, such as political instability and currency fluctuations. Investing in emerging markets may accentuate these risks.

**Monetary Policy:** Massive bond buying and low interest rates are supporting global equity market gains. Global divergence from rate normalization in the U.S. fosters U.S. dollar strength, and the Federal Reserve wants to continue gradual rate hikes.

## Central Bank Policy Rates



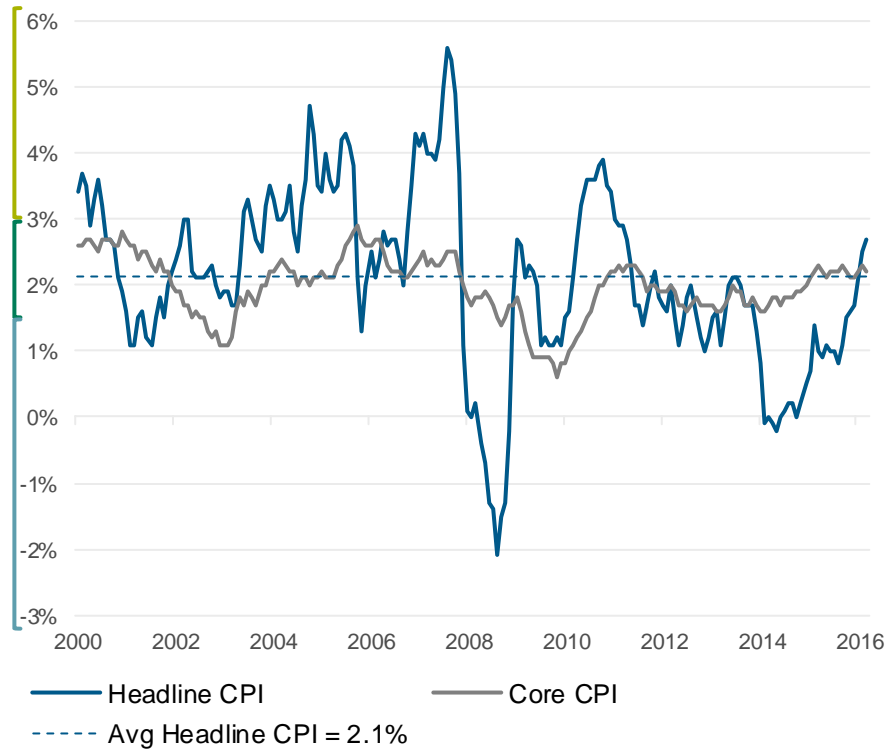
Data from 3/31/2011 to 3/31/2017. RHS shows China rates. Rates shown are the upper-bound of the central banks' policy rates.  
 Source: FactSet

# U.S. Inflation

Inflation is steadily rising from low levels

**U.S. Consumer Price Index:** U.S. inflation expectations have increased significantly over the last quarter, and headline and core CPI are now outpacing historical averages.

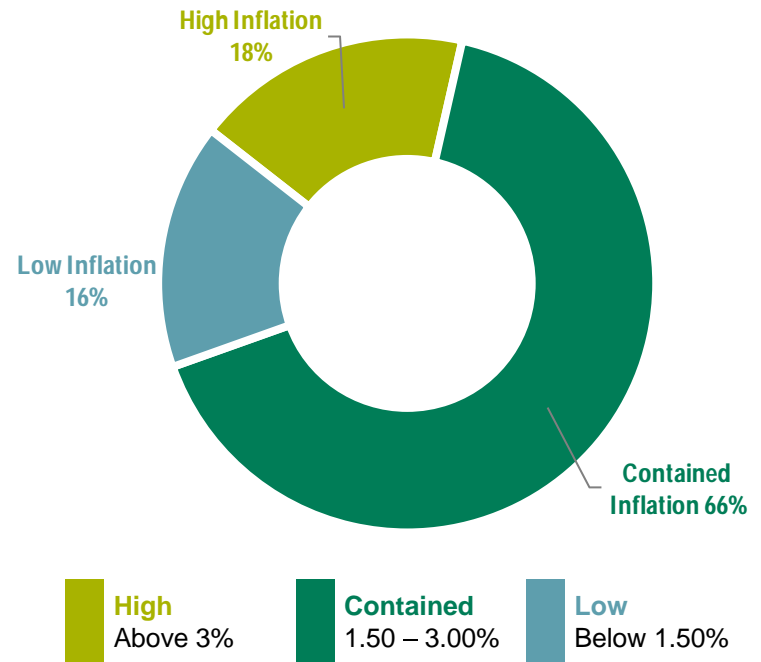
**Change in Headline CPI (Year-Over-Year)**



Data from 12/31/2000 to 2/28/2017. CPI: Consumer Price Index measures change in price paid by urban consumers for a representative basket of goods and services. Headline CPI is the entire basket; core CPI removes food and energy prices.  
 Source: Bloomberg

**Inflation Expectations:** We still believe inflation will remain contained over the next 12 months.

**Our Take: Probabilities of Three Inflation Scenarios**



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## U.S. Interest Rates

Long-term rates are range-bound; global conditions still favor low rates

**U.S. Rates Stuck in a Range:** Global economic and financial market conditions continue to lean against major upward movements in long-term interest rates.

### Rates and Yields

	Current 3/31/2017	3 Mos Ago 12/30/2016	1 Year Ago 3/31/2016
<b>Fed Funds Target Rate</b>	1.00%	0.75%	0.50%
<b>Prime Rate</b>	4.00%	3.75%	3.50%
<b>3-Month Treasury</b>	0.75%	0.50%	0.21%
<b>2-Year Treasury</b>	1.26%	1.20%	0.72%
<b>10-Year Treasury</b>	2.39%	2.44%	1.77%
<b>30-Year Treasury</b>	3.01%	3.07%	2.61%
<b>30-Year Mortgage</b>	4.14%	4.32%	3.71%
<b>10-Year TIPS</b>	0.43%	0.50%	0.16%
<b>Barclays U.S. Aggregate</b>	2.61%	2.61%	2.17%
<b>Barclays U.S. High Yield</b>	6.18%	6.46%	8.39%
<b>Barclays U.S. Municipal</b>	2.46%	2.65%	1.93%

Source: FactSet

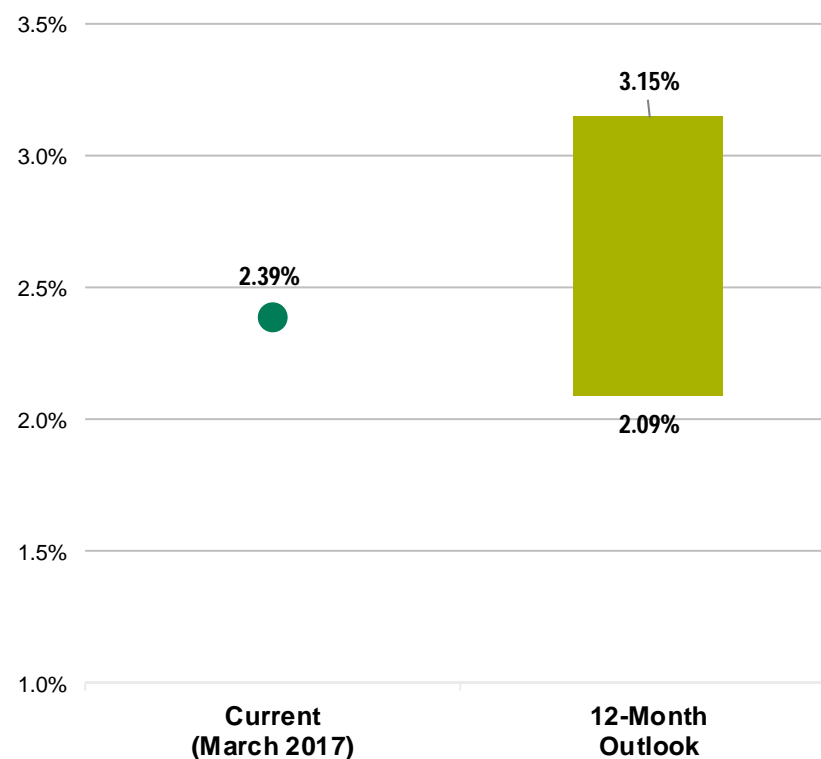
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**Yield Expectations:** Twelve months from now, we believe the U.S. 10-year Treasury yield will be within a range of 2.09% to 3.15%.

### 10-Year Treasury Yield Expectations

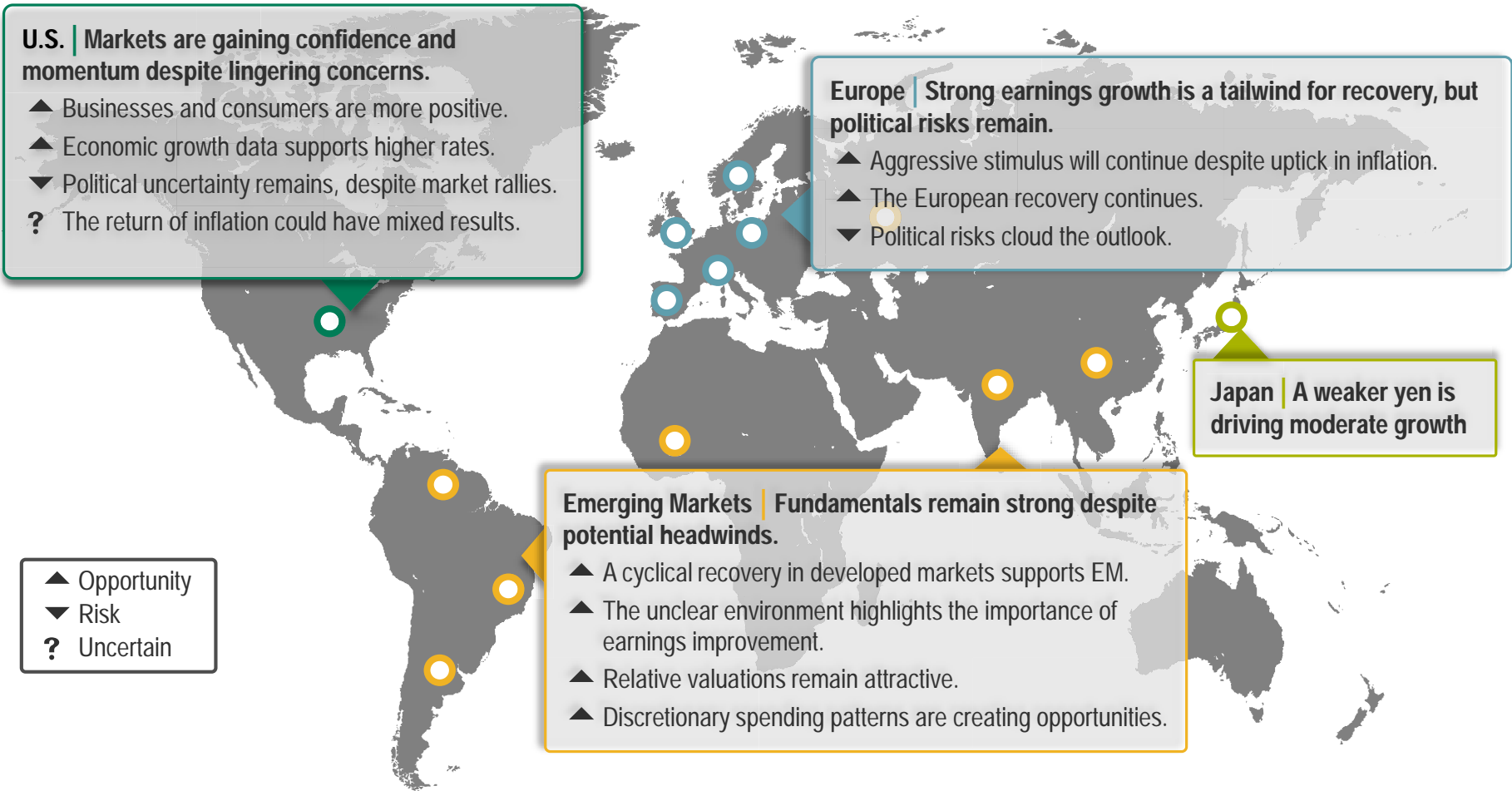


Data as of March 2017. Opinions expressed are those of the Advisor and are no guarantee of future performance of any investment product. This information is not intended to serve as investment advice; it is for education purposes only. Yield is the rate of return on bonds and other fixed-income securities.

Source for current yield: Bloomberg.

# Global and Non-U.S. Equity Outlook

U.S. continues to lead amid signs of global earnings improvement



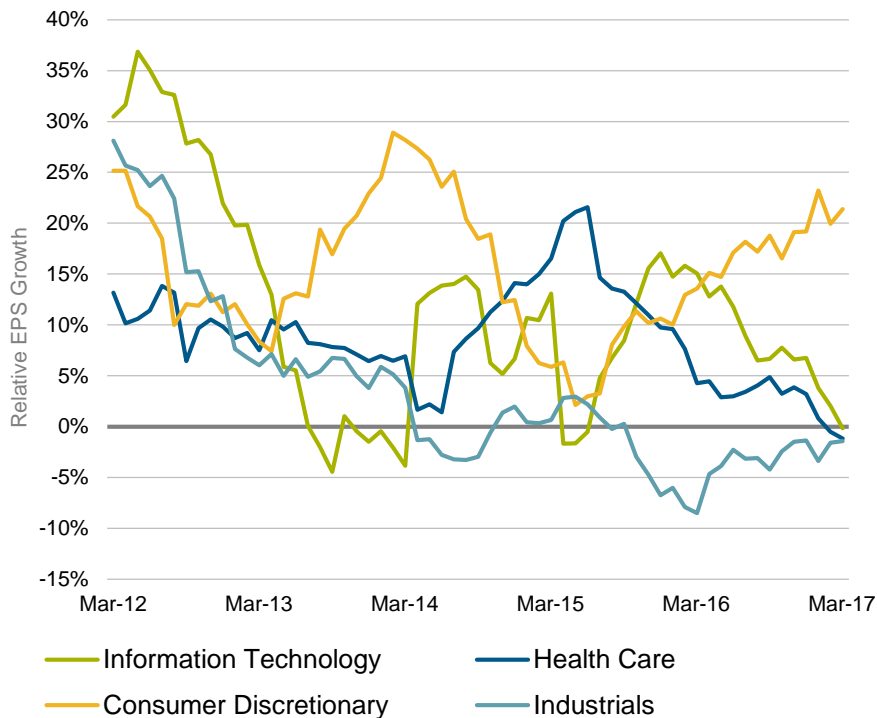
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# U.S. Growth Equity Outlook

Trump administration promotes a growth agenda

**Earnings Growth by Sector:** The chart below shows earnings per share (EPS) growth relative to the S&P 500 Index for key sectors.

**Sector EPS Growth Relative to Total Market**



Data from 3/31/2011 to 3/31/2017. Sector EPS growth is relative to S&P 500.  
 Source: FactSet  
 Past performance is no guarantee of future results.

**Sector Outlook:** Our growth managers give their latest outlook for the key sectors impacting the growth space.



**Technology**

The tech sector is poised to lead in a growth environment, but investors must be selective.



**Health Care**

“Repeal and replace” is more divisive than anticipated, and the new administration’s stance on drug prices leaves pharma under a cloud.



**Consumer Discretionary**

Despite strong earnings growth, consumers are more focused on finding value in retail and spending less overall. Border taxes and trade policy also create uncertainty.



**Industrials**

U.S. infrastructure is ripe for build-out, but industrial demand trends still remain relatively weak.

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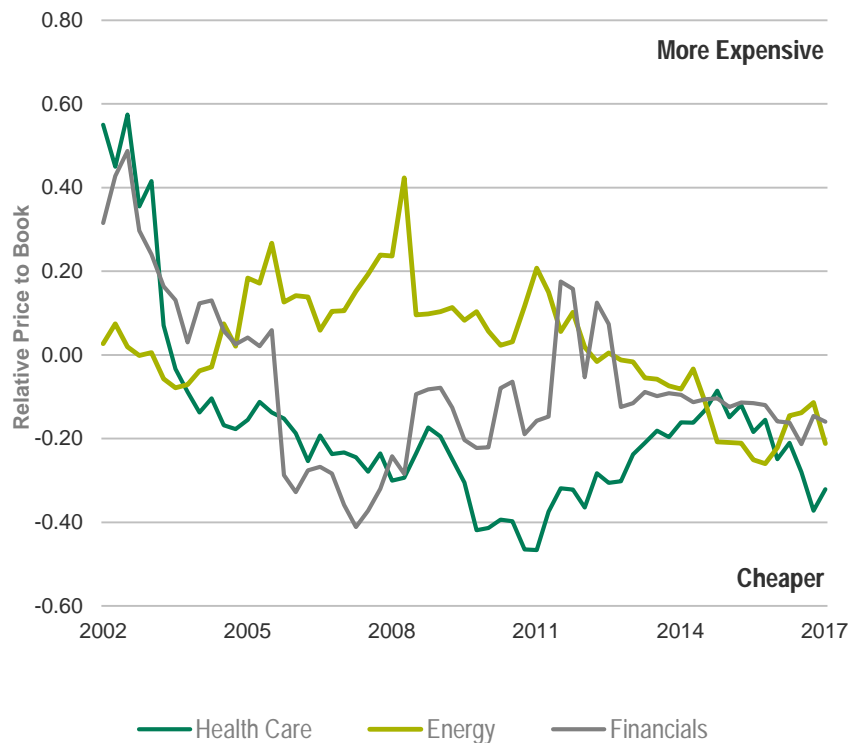
# U.S. Value Equity Outlook

Clarity emerges amid political volatility

**Expensive or Cheap?** Price-to-book ratio compares a stock’s market value to its book value (value according to its financial statements). The chart below shows whether a sector is more expensive or cheaper than the broad market, as represented by the S&P 500 Index.

## Valuations Compared to Broader Market

Sector Price-to-Book Relative to Total Market



Data from 3/31/2002 to 3/31/2017. Sector price to book is relative to S&P 500.

Source: Bloomberg

S&P 500 Health Care, S&P 500 Financials, and S&P 500 Energy are sectors of the S&P 500 Index, defined in the appendix. Past performance is no guarantee of future results.

**Sector Outlook:** Our value team gives their latest outlook for key sectors in the value space.



Financials

The sector is bolstered by rising rates and appears to be primed for a run. Companies are hoping for another “Trump Bump.”



Health Care

The direction is clouded by political wrangling, and the “repeal and replace” consequences are hard to handicap.



Energy

OPEC production limits will make an impact. Integrated oil companies present opportunities.



Real Estate

Attractive valuations and strong supply/demand fundamentals favor the U.S. Political pressures weigh on Europe, but key Asia/Pacific markets hold promise.

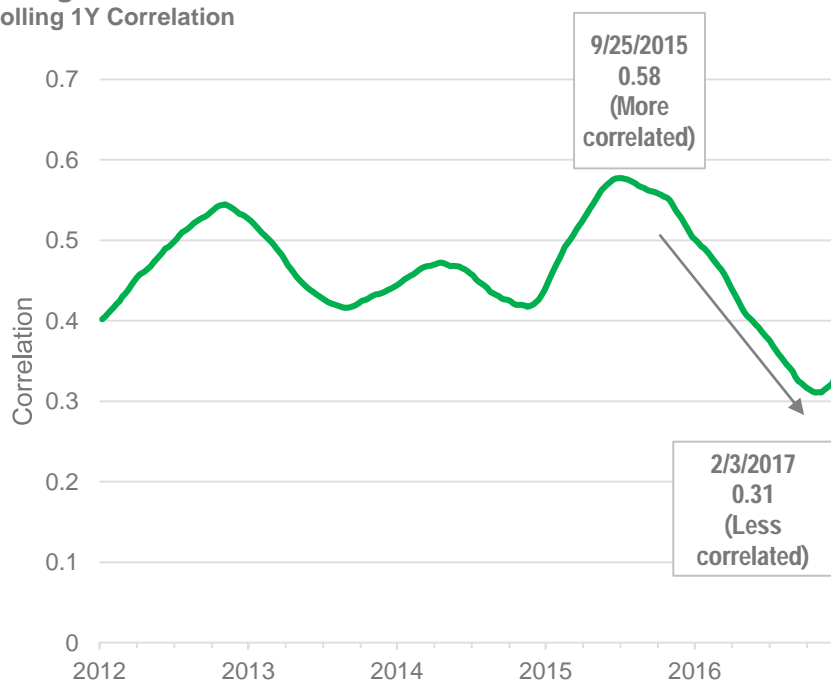
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## Disciplined Equity Outlook

We favor a disciplined multi-factor approach, as fundamentals ultimately drive returns

**Stock prices and earnings are out of sync.** Since late 2015, we've seen a general dislocation of equity returns and fundamental measures such as earnings. At the end of 2016, correlation of returns to earnings was at the lowest level in five years.

**Correlation of S&P 500 Total Returns versus Change in Forward EPS**  
Rolling 1Y Correlation



Source: FactSet. Data from 3/31/2012 to 3/31/2017. Correlation of 1 = Movement in the same direction, -1 = Movement in the opposite direction.

**Earnings Per Share (EPS)** is the portion of a company's profits allocated to each outstanding share of its common stock. It is as an indicator of a company's profitability. **Forward EPS** is a calculation of analysts' forecasted earnings for the company.

**Factor Overview:** We discuss factors that are influencing stock returns in the U.S. and globally.



U.S. Equities

The relationship between earnings and stock prices has broken down, as seen in the chart on the left. As this relationship normalizes, fundamental measures will once again drive stock prices.



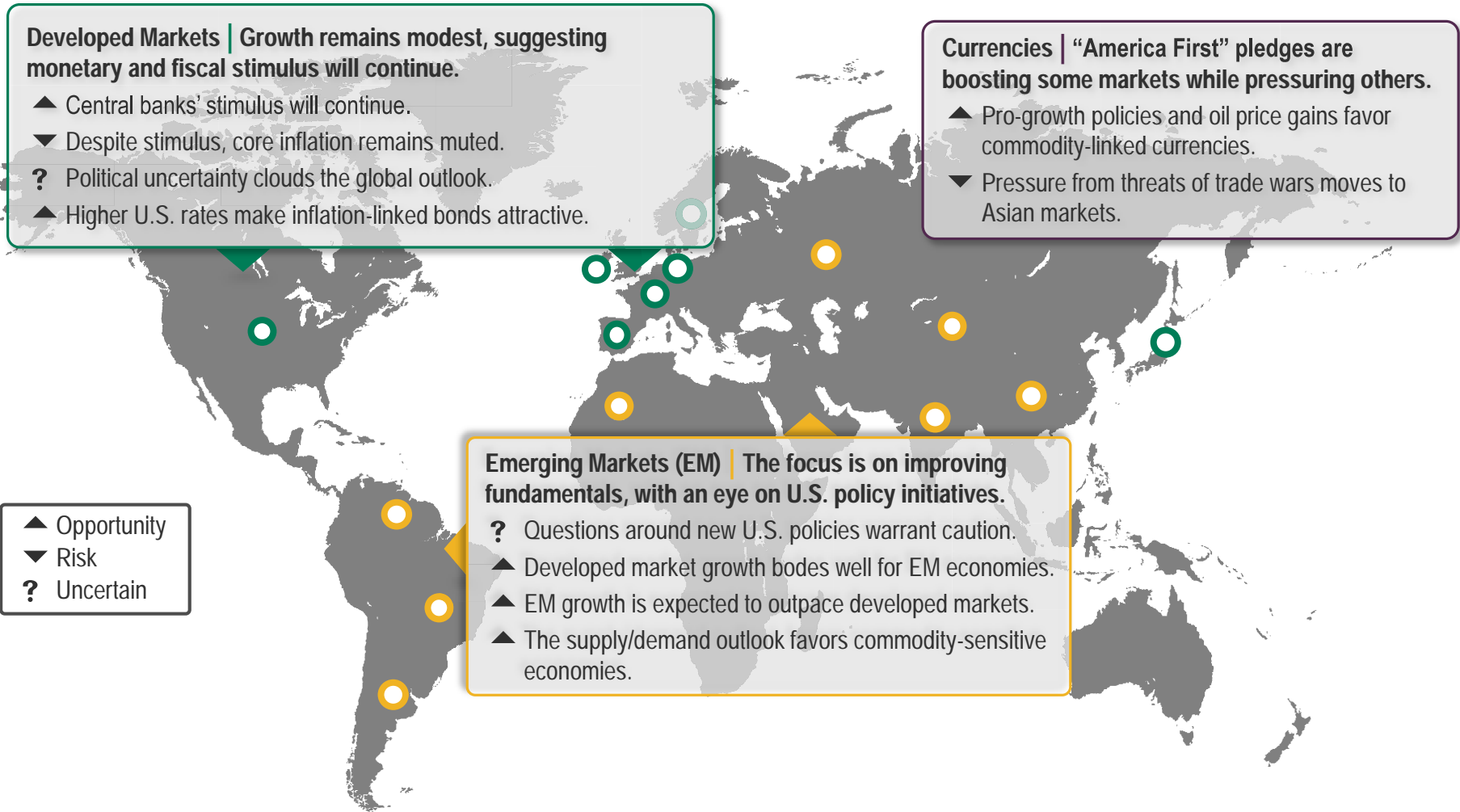
Global and Non-U.S. Equities

Valuations have stretched as a result of last year's strong rally, but they're still below historical averages. This suggests value may still have room to run in both developed and emerging markets.

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# Global Fixed Income Outlook

Baby steps for global growth amid political and economic challenges



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## U.S. Fixed Income Outlook

Renewed Fed activity doesn't mean a major bond market sell-off

**Spreads, Ratios, and Breakevens:** In general, wide spreads and high yield ratios indicate sectors are trading at relatively cheaper values, while narrow spreads and low ratios indicate richer sectors. Low TIPS breakevens correspond with lower inflation expectations and cheaper TIPS.

**Spreads vs. 10-Year U.S. Treasury (in bps)  
Trailing 5-Year Range**

Sector	LOW	CURRENT			HIGH
	U.S. Investment Grade Corporates	97	118		
U.S. High Yield Corporates	323	383			839
U.S. Securitized	15	30			102

**U.S. Breakeven Inflation Rate (in bps)  
Trailing 5-Year Range**

Sector	LOW	CURRENT			HIGH
	U.S. TIPS (10-Yr)	120		197	

**Yield Ratio to 10-Year U.S. Treasury (in bps)  
Trailing 5-Year Range**

Sector	LOW	CURRENT			HIGH
	U.S. Municipals (10-Yr Ratio)	82		94	

Data from 3/31/2012 to 3/31/2017

Source: Bloomberg, FactSet, PERFORM

Sectors are represented by Barclays indices. See Appendix for index definitions.

**Basis points** - One basis point equals one one-hundredth of a percentage point (0.01%).

**A municipal yield ratio** is the ratio of the yield of a municipal security of a certain maturity divided by the yield of a U.S. Treasury security of the same maturity.

**Sector Outlook:** We discuss our latest outlook for key sectors in the fixed income space.



U.S. Investment Grade/High-Yield Corporates  
Spreads are tight, but yields are still attracting investment flows.



U.S. Securitized  
Rising rates favor adjustable-rate and mortgage credit over fixed-rate agency MBS.



U.S. TIPS  
Inflation protection (e.g., TIPS) are favored over nominal Treasuries and agencies.



U.S. Municipals  
The November sell-off after Trump's win helped create pockets of relative value.

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**Spreads** are measured differences or gaps that exist between two interest rates or yields that are being compared with each other.

**Breakeven inflation rate** is the difference between the nominal yield on a fixed-income investment and the real yield on an inflation-linked investment of similar maturity and credit quality.

**U.S. Treasury Inflation-Protected Securities (TIPS)** are inflation-linked debt securities issued by the U.S. Treasury.

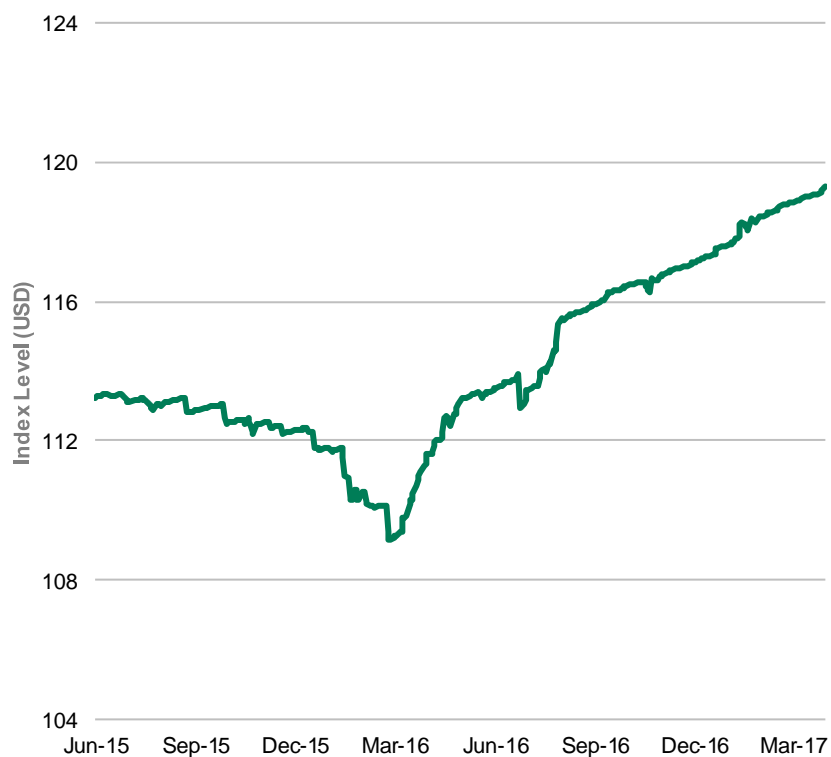
**Reflation trade** is an investment made on the assumption that the world economy will rebound due to reflation (a reversal of deflation due to a government's economic fiscal or monetary policy to stimulate the economy).

## Alternatives Outlook

Shifts in the post-election market favor a broad opportunity set

**Alternative Income:** Collateralized loan obligations (CLOs) have benefited from a favorable supply/demand environment and could be appealing to investors due to their floating interest rate payments.

### JPMorgan CLO Post-Crisis Total Return Index



Data from 6/1/2015 to 3/31/2017  
Source: Bloomberg

Alternative funds that hold a variety of non-traditional investments also often employ more complex trading strategies than traditional mutual funds. Each of these different alternative asset classes and investment strategies have unique risks making them more suitable for investors with an above average tolerance risk. Market-neutral strategies invest approximately equal dollar amounts in long positions (expected to increase in value) and short positions (expected to decrease). Short position refers to the sale of an asset borrowed, not owned, by the seller in anticipation of a price decline. If the seller can buy the asset later at a lower price, a profit results. If the price rises, the borrower/seller suffers a loss. Long position is the typical ownership of an investment; it gives the owner the right to transfer ownership, any income generated by the asset, and any profits or losses. Past performance is no guarantee of future results. See Appendix for index definitions.

**Long/Short Equity and Market Neutral:** Trends in correlations bode well for stock pickers, as the tendency for stocks to move in tandem continues to trend downward.

### Citigroup Realized Correlation



Data from 6/1/2015 to 3/31/2017  
Source: Bloomberg

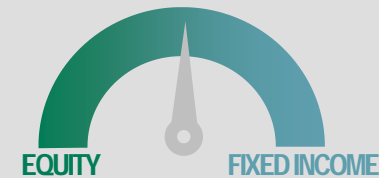


# Multi-Asset Strategies

Diversification and patience are key amid uncertainty

## Asset Class

Equity valuation levels are difficult to justify; we're waiting for the fundamental follow-through before making any weight changes.



## Equity – Region

We favor developed markets over U.S. over emerging markets as a result of changing valuations and interest rates in the U.S.



## Equity – Style/Capitalization

We're neutral by style, and our models find large-cap stocks more attractive than small.



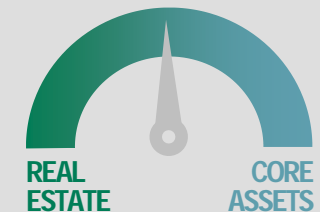
## Bonds

Our outlook for higher rates and inflation argues for credit-sensitive and inflation-protected bonds.



## Real Assets

We're adding inflation protection because breakeven rates are still attractive.



Opinions expressed are those of the Advisor and are no guarantee of future performance of any investment product. This information is not intended to serve as investment advice; it is for education purposes only. REITS = Real estate investment trusts. TIPS = Treasury inflation-protected securities. See Appendix for definitions. Historically, small- and/or mid-cap stocks have been more volatile than the stock of larger, more-established companies. Past performance is no guarantee of future results.

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## Definitions for Slide 3 (What Happened Last Quarter?)

**Yield** is a rate of return for bonds and other fixed-income securities.

**Yield curve** is a line graph shows yields of fixed-income securities from a single sector from a range of different maturities at a single point in time.

**High-yield corporate bonds** are higher-risk, high-yielding taxable bonds comprised of debt instruments from corporations rated below BBB by Standard & Poor's.

## Definitions for Slide 4 (Equity and Commodities)

**S&P 500 Index** is composed of 500 selected common stocks, most of which are listed on the New York Stock Exchange.

**Dow Jones Industrial Average (DJIA)** is made up of 30 blue chip stocks that trade daily on the New York Stock Exchange.

**MSCI EAFE (Europe, Australasia, Far East) Index** is a widely followed group of stocks from 20 developed market countries.

**MSCI Europe Index** is designed to measure equity market performance in Europe.

**MSCI Japan Index** is designed to measure equity market performance in Japan.

**MSCI Emerging Markets Index** is a free float-adjusted market capitalization index designed to measure equity market performance of emerging markets.

**S&P Goldman Sachs Commodities Index** is a composite index of commodity sector returns representing an unleveraged, long-only investment in commodity futures that is broadly diversified across the spectrum of commodities.

**FTSE EPRA/NAREIT Global Index** tracks the performance of listed real estate companies and REITs in both developed and emerging markets.

**U.S. Dollar Index** is a measure of the value of the U.S. dollar relative to a basket of foreign currencies.

**Oil (Brent Crude)** is type of sweet crude oil that is used as a major benchmark price for purchases of oil worldwide.

**Gold spot price** is the price of an ounce of gold, denominated in U.S. dollars.

**The Chicago Board Options Exchange (CBOE) VIX Index** tracks the expected 30-day future volatility of the S&P 500 Index and is a widely used measure of market volatility and risk.

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## Definitions for Slide 4 (Style Boxes)

### **Russell style box returns are based on the following indices (left to right, top to bottom):**

Large-cap value: The **Russell 1000® Value Index** measures the performance of the large-cap value segment of the U.S. equity universe. It includes those Russell 1000 companies with lower price-to-book ratios and lower expected growth values.

Large-cap core: The **Russell 1000® Index** is a market-capitalization weighted, large-cap index created by Frank Russell Company to measure the performance of the 1,000 largest publicly traded U.S. companies, based on total market capitalization.

Large-cap growth: The **Russell 1000® Growth Index** measures the performance of the large-cap growth segment of the U.S. equity universe. It includes those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

Mid-cap value: The **Russell Midcap Value Index** measures the performance of the mid-cap value segment of the U.S. equity universe. It includes those Russell Midcap companies with lower price-to-book ratios and lower forecasted growth values.

Mid-cap core: The **Russell Midcap Index** measures the performance of the mid-cap segment of the U.S. equity universe. It is a subset of the Russell 1000 Index and includes approximately 800 of the smallest securities based on a combination of their market cap and current index membership.

Mid-cap growth: The **Russell Midcap Growth Index** measures the performance of the mid-cap growth segment of the U.S. equity universe. It includes those Russell Midcap companies with higher price-to-book ratios and higher forecasted growth values.

Small-cap value: The **Russell 2000® Value Index** measures the performance of the small-cap value segment of the U.S. equity universe. It includes those Russell 2000 companies with lower price-to-book ratios and lower expected growth values.

Small-cap core: The **Russell 2000 Index®** measures the performance of the small-cap segment of the U.S. equity universe. It is a subset of the Russell 3000 Index and includes approximately 2000 of the smallest securities based on a combination of their market cap and current index membership.

Small cap growth: The **Russell 2000® Growth Index** measures the performance of the small-cap growth segment of the U.S. equity universe. It includes those Russell 2000 companies with higher price-to-book ratios and higher forecasted growth values.

### **MSCI style box returns are based on the following indices (left to right, top to bottom):**

Large-cap value: **MSCI EAFE Value Index** is a market capitalization-weighted index that monitors the performance of value stocks from Europe, Australasia, and the Far East.

Large-cap core: **MSCI EAFE (Europe, Australasia, Far East) Index** is designed to measure developed market equity performance, excluding the U.S. and Canada.

Large-cap growth: **MSCI EAFE Growth Index** is a market capitalization-weighted index that monitors the performance of growth stocks from Europe, Australasia, and the Far East.

Mid-cap value: **MSCI AC (All Country) World ex-US Mid Cap Value Index** represents the performance of mid-cap value stocks in developed and emerging markets, excluding the United States.

Mid-cap core: **MSCI AC (All Country) World ex-U.S. Mid Cap Index** represents the performance of mid-cap stocks in developed and emerging markets, excluding the United States.

Mid-cap growth: **MSCI AC (All Country) World ex-U.S. Mid Cap Growth Index** represents the performance of mid-cap growth stocks in developed and emerging markets, excluding the United States.

Small-cap value: **MSCI AC (All Country) World ex-U.S. Small Cap Value Index** represents the performance of small-cap value stocks in developed and emerging markets, excluding the United States.

Small-cap core: **MSCI AC (All Country) World ex-U.S. Small Cap Index** represents the performance of small-cap stocks in developed and emerging markets, excluding the United States.

Small cap growth: **MSCI AC (All Country) World ex-U.S. Small Cap Growth Index** represents the performance of small-cap growth stocks in developed and emerging markets, excluding the United States.

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## Definitions for Slide 5 (Fixed Income and Currencies)

**Bloomberg Barclays (BB) U.S. Aggregate Bond Index** represents securities that are taxable, registered with the Securities and Exchange Commission, and U.S. dollar-denominated. The index covers the U.S. investment-grade fixed-rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities.

**Bloomberg Barclays (BB) U.S. Corporate Investment-Grade Bond Index** consists of publicly issued U.S. corporate and specified foreign debentures that are registered with the Securities and Exchange Commission and meet specific maturity, liquidity, and quality requirements.

**Bloomberg Barclays (BB) U.S. Corporate High-Yield Bond Index** is an unmanaged index that covers the USD-denominated, non-investment-grade, fixed-rate, taxable corporate bond market.

**Bloomberg Barclays (BB) U.S. Treasury Inflation Protected Securities (TIPS) Index** consists of TIPS with a remaining maturity of one year or more.

**Bloomberg Barclays (BB) Municipal Bond Index** is a rules-based, market-value-weighted index engineered for the tax-exempt bond market.

**Bloomberg Barclays (BB) Global Aggregate Index (unhedged)** is a broad-based measure of the global investment-grade fixed income markets and includes the U.S. Aggregate, the Pan-European Aggregate, and the Asian-Pacific Aggregate Indices. The index also includes Eurodollar and Euro-Yen corporate bonds, Canadian government, agency and corporate securities, and USD investment grade 144A securities.

**Bloomberg Barclays (BB) Global Treasury Bond Index (unhedged)** is composed of those securities included in the Bloomberg Barclays Global Aggregate Bond Index that are Treasury securities, with the U.S. excluded.

**J.P. Morgan CEMBI Broad Diversified Index** is a global, liquid corporate emerging markets benchmark that tracks U.S.-denominated corporate bonds issued by emerging markets entities.

**J.P. Morgan EMBI Global Diversified Index** tracks U.S.-denominated sovereign bonds issued by emerging market countries.

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Source: Bloomberg Index Services Ltd.

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## Definitions for Slide 9

**Federal Reserve's short-term interest rate target (fed funds target)** is determined by meetings of the Federal Reserve's Federal Open Market Committee, which occur about eight times a year. The federal funds rate is an overnight interest rate banks charge each other for loans.

**Prime rate** is the interest rate that commercial banks charge their most credit-worthy customers. The prime interest rate, or prime lending rate, is largely determined by the federal funds rate.

**3-Month Treasury Bill, 2-Year Treasury Note, 10-Year Treasury Note, and 30-Year Treasury Bond** are debt securities issued by the U.S. Treasury and backed by the direct "full faith and credit" pledge of the U.S. government Treasury securities include bills (maturing in one year or less), notes (maturing in two to 10 years) and bonds (maturing in more than 10 years). They are generally considered among the highest quality and most liquid securities in the world.

**30-Year Mortgage** – National average 30-year fixed-rate mortgage interest rate provided by Freddie Mac.

**10-year TIPS yield** is the yield of a 10-year Treasury inflation-protected security (inflation-linked debt securities issued by the U.S. Treasury).

**Bloomberg Barclays U.S. Aggregate Bond Index** represents securities that are taxable, registered with the Securities and Exchange Commission, and U.S. dollar-denominated. The index covers the U.S. investment-grade fixed-rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities.

**Bloomberg Barclays U.S. High Yield (Barclays U.S. Corporate High-Yield Bond Index)** is an unmanaged index that covers the USD-denominated, non-investment-grade, fixed-rate, taxable corporate bond market.

**Bloomberg Barclays Municipal Bond Index** is a market value-weighted index designed for the tax-exempt bond market.

## Definitions for Slides 11, 12 and 13

**S&P 500 Index** is composed of 500 selected common stocks, most of which are listed on the New York Stock Exchange.

**Earnings Per Share (EPS)** is the portion of a company's profits allocated to each outstanding share of its common stock. It is as an indicator of a company's profitability.

**Forward EPS** is a calculation of analysts' forecasted earnings for the company.

## Definitions for Slide 15

U.S. Investment-Grade Corporates: **Bloomberg Barclays U.S. Aggregate Corporate Index** is an unmanaged index considered representative of the U.S. investment-grade, fixed-rate bond market.

U.S. High-Yield Corporates: **Bloomberg Barclays U.S. Corporate High-Yield Bond Index** is an unmanaged index that covers the USD-denominated, non-investment-grade, fixed-rate, taxable corporate bond market.

U.S. Securitized: **Bloomberg Barclays U.S. Securitized Bond Index** is an unmanaged index of asset-backed securities, collateralized mortgage-backed securities, and fixed-rate mortgage-backed securities.

U.S. Municipals: **Bloomberg Barclays Municipal Bond Index** is a market value-weighted index designed for the tax-exempt bond market.

U.S. TIPS: **Bloomberg Barclays U.S. Treasury Inflation Protected Securities (TIPS) Index** consists of TIPS with a remaining maturity of one year or more.

## Definitions for Slides 16 and 17

**Citigroup Realized Correlation Index** calculates the average pairwise correlation of the largest 49 stocks in the S&P (by their weights in the Index). Correlation is computed based on returns over the last 6 months.

**J.P. Morgan CLO Index** measures U.S.-dollar-denominated collateralized loan obligation market valuations. (CLOs are securities backed by corporate loans.)

**Real estate investment trusts (REITs)** are securities that trade like stocks and invest in real estate through properties or mortgages.

**Treasury inflation-protected securities (TIPS)** are inflation-linked debt securities issued by the U.S. Treasury.

Source: Bloomberg Index Services Ltd.