

# Economic and Market Review

2017, the year just about everything went up

DECEMBER 2017

# Important information and disclosures

*Please remember that all investments carry some level of risk, including the potential loss of Principal invested. They do not typically grow at an even rate of return and may experience negative growth. As with any type of portfolio structuring, attempting to reduce risk and increase return could, at certain times, unintentionally reduce returns.*

Diversification does not assure a profit and does not protect against loss in declining markets.

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Standard Deviation is a statistical measure of the degree to which an individual value in a probability distribution tends to vary from the mean of the distribution. The greater the degree of dispersion, the greater the risk.

Correlations measure the strength and direction of a linear relationship between two random variables. The value will range between -1 and 1. Rolling correlations are trailing correlations in overlapping cycles for a given period of time. The periods shift based on a chosen length (typically 1 month) resulting in a continuous stream of trailing correlations e.g. a three year rolling value shifted by 1 month will show you the trailing 3 year value for each month displayed. Correlations are useful for understanding the behavior of correlations over multiple time periods. Demonstrates patterns or longer term trends in the return data.

Rolling returns are trailing returns in overlapping cycles for a given period of time. The returns shift based on a chosen length (typically 1 month) resulting in a continuous stream of trailing returns e.g. a three year rolling return shifted by 1 month will show you the trailing 3 year return for each month displayed.

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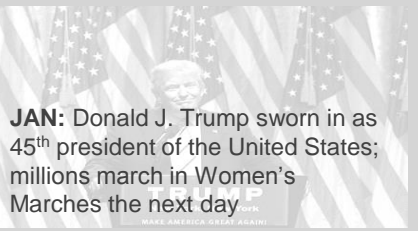
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# 2017 year in review


## GLOBAL MARKETS CLIMB OVER 20%




**JAN:** Donald J. Trump sworn in as 45<sup>th</sup> president of the United States; millions march in Women's Marches the next day




**MAY:** Emmanuel Macron elected President of France



**DEC:** U.S. Tax Cut and Jobs Act signed into law




**AUG:** Total solar eclipse captivated the nation



**MARCH:** Britain invokes Article 50 of BREXIT


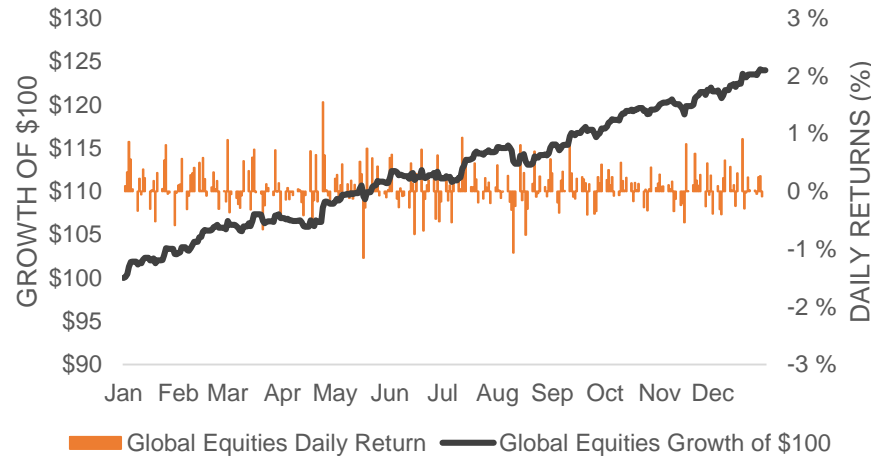


**FEB:** Oscar best picture mix-up




**Continued terrorist attacks**

### 2017 GROWTH AND VOLATILITY




**North Korea nuclear weapons escalation**



**AUG/SEPT:** Hurricanes Harvey, Irma, and Maria ravaged Texas, Florida, and Puerto Rico

**Global markets provided attractive returns – Consider staying diversified.**



**DEC:** Bitcoin ends the year up over 1,200%

Global Equities represented by MSCI All Country World Index.

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# Economic Indicators Dashboard

## MARKET VOLATILITY

- › Remained historically low on confidence in positive economic growth, but remains a watchpoint

## YIELD SPREAD



- › Narrowing reflected flattening yield curve

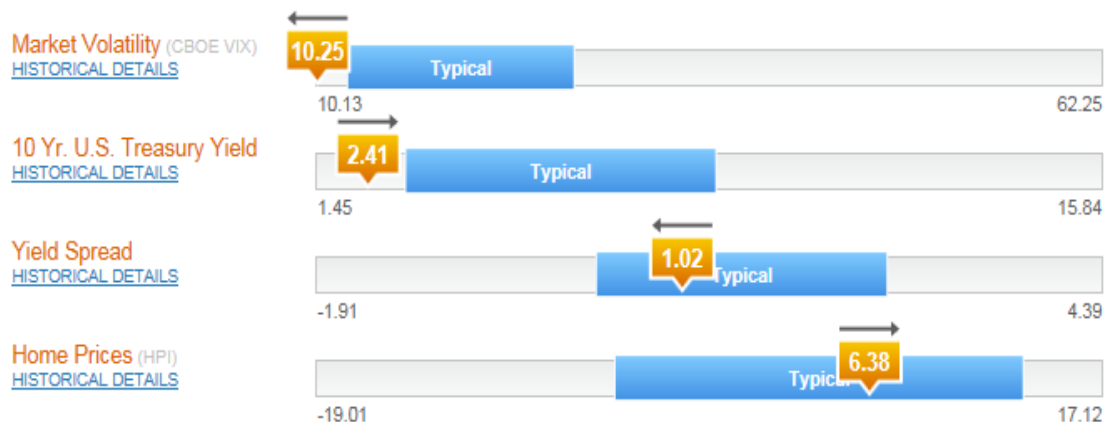
## HOME PRICES

- › Significant improvement since Jan 2009: -19.01 at the time
- › Indicator reflects year-over-year % change

## UNEMPLOYMENT

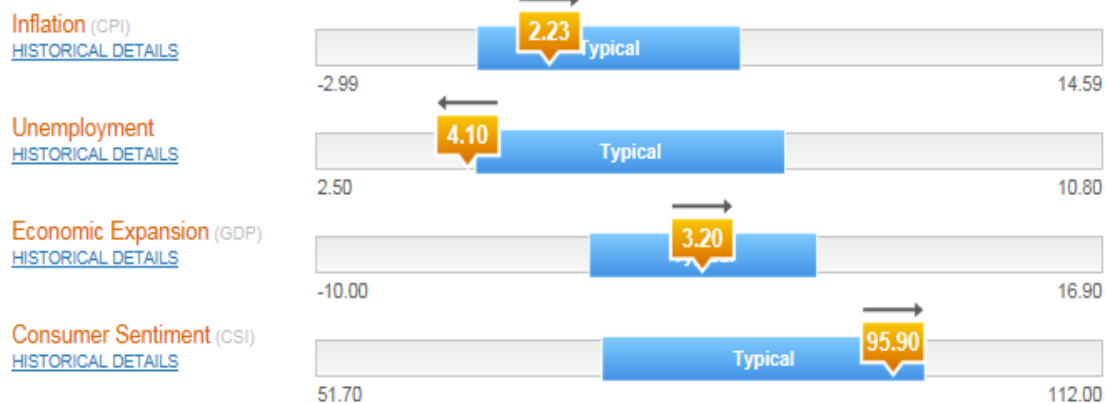
- › Lowest level in 18 years

MOST RECENT  | 3-MO. TREND  | TYPICAL RANGE  | ACTUAL RANGE 



▲ MARKET INDICATORS

▼ ECONOMIC INDICATORS



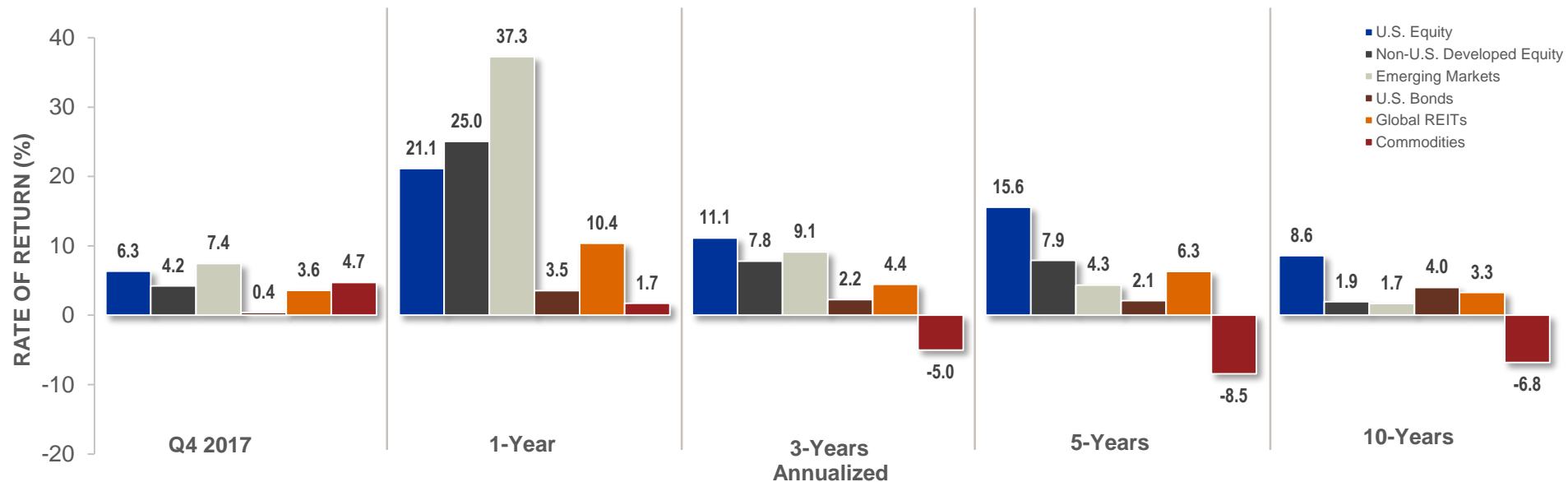
<http://www.russellinvestments.com>, current state as of 1/11/2018. See appendix for category definitions.

Russell Investments' Economic Indicators Dashboard charts several key indicators to help investors assess economic and market trends.

# Capital markets

PERIODS ENDING DECEMBER 2017

## Capital Market Returns



**U.S. equity:** (Russell 3000® Index) U.S. stock index which includes the 3,000 largest U.S. stocks as measured by market capitalization

**Non-U.S. developed equity:** (MSCI EAFE Index) International market index that includes Western Europe, Japan, Australia and Canada

**Emerging markets:** (MSCI Emerging Markets Index) Emerging markets index that includes S. Korea, Brazil, Russia, India and China

**U.S. bonds:** (Bloomberg Barclays U.S. Aggregate Bond Index) Broad index for U.S. Fixed Income market

**Global REITs:** (FTSE EPRA/NAREIT Developed Index) Index for global publicly traded real estate securities

**Commodities:** (Bloomberg Commodity Index Total Return) Broad index of common commodities

### CAPITAL MARKETS DECEMBER 31, 2017:

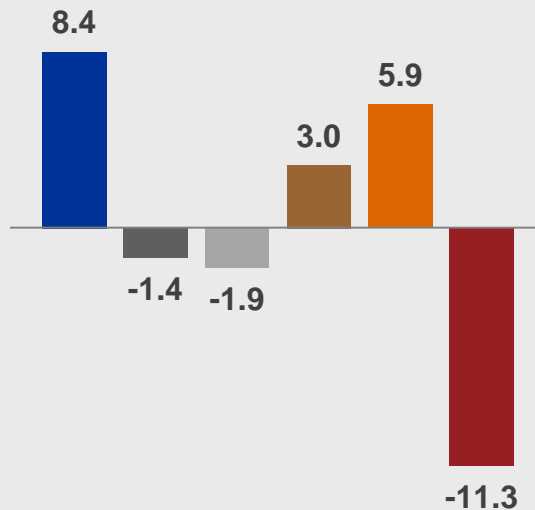
- › **U.S. equity** up on strong earnings growth and newly signed tax bill
- › **Developed non-U.S.** stock markets continued upward on strong consumer confidence and low inflation
- › **Emerging markets** up on improving economic growth and strong technology performance
- › **U.S. bonds** up as markets priced in higher growth and inflation
- › **Global real estate** up across most regions as interest rates remained basically unchanged in 2017
- › **Commodities** up for 2017, but the various sector returns were mixed

Source: Russell Investments, Barclays, Bloomberg, MSCI and FTSE NAREIT.

Index returns represent past performance, are not a guarantee of future performance, and are not indicative of any specific investment.

# What a difference a year can make

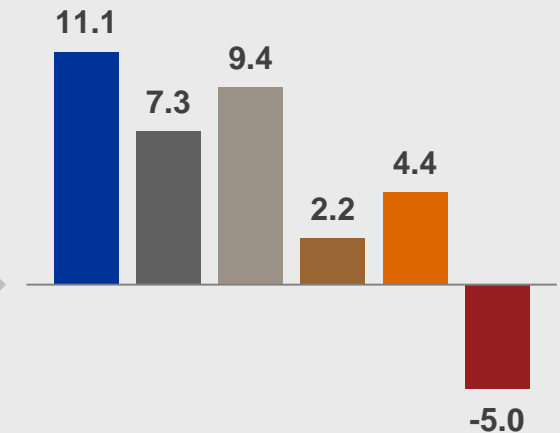
3-YEARS ENDING DECEMBER 2016  
Annualized %



3-YEAR RETURN REFLECTS

Dropping 2014	Adding 2017
+12.6%	+21.1%
-1.7%	+25.0%
-4.0%	+37.3%
+6.0%	+3.5%
+15.0%	+10.4%
-17.0%	+1.7%

3-YEARS ENDING DECEMBER 2017  
Annualized %



■ U.S. Equity ■ Non-U.S. Stocks ■ Emerging Markets  
■ U.S. Bonds ■ Global REITS ■ Commodities

■ U.S. Stocks ■ Non-U.S. Stocks ■ Emerging Markets  
■ U.S. Bonds ■ Global REITS ■ Commodities

- › 2017 was a strong reminder why investment decisions should be based on more than “what’s been working”
- › Market leadership can switch quickly
- › Global diversification helps to position portfolios for “what’s next”

U.S. Equity: Russell 3000® Index; Non-U.S. Stocks: MSCI World ex USA Index; Emerging Markets: MSCI Emerging Markets Index; U.S. Bonds: Bloomberg Barclays U.S. Aggregate Index; Global REITS: FTSE/NAREIT EPRA Index; Commodities: Bloomberg Commodity Indexes.

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# What worked and what didn't work in 2017

## What worked

## What ~~didn't~~ work

### 2017 RETURNS AS OF DECEMBER 31, 2017



### WHAT WORKED

- › All asset classes were up for 2017 with **emerging markets & non-U.S. equities** providing solid gains on strong economic data & earnings
- › **Infrastructure** up with low inflation and the continued economic expansion

### WHAT ~~DIDN'T~~ WORK

- › **Commodities** up in 2017 with mixed returns across the various sectors. The top sector was aluminum +31.2% and the worst sector was natural gas -36.4%
- › **Cash** up slightly for the year

U.S. Small Cap: Russell 2000® Index; U.S. Large Cap: Russell 1000® Index; Global: MSCI World Net Index; Non-U.S.: MSCI EAFE Net index; Infrastructure: S&P Global Infrastructure Index; Global High Yield: Bloomberg Barclays Global High Yield Index; Global REITs: FTSE EPRA/NAREIT Developed Index; Cash: Citigroup 1-3 Month T-Bill Index; EM Equity: MSCI Emerging Markets Index; U.S. Bonds: Bloomberg Barclays U.S. Aggregate Bond Index; EMD: JPM EMBI Plus Bond Index; Commodities: Bloomberg Commodity Index Total Return; Balanced Index: 5% U.S. Small Cap, 15% U.S. Large Cap, 10% Global, 12% Non-U.S., 4% Infrastructure, 5% Global High Yield, 4% Global REITs, 0% Cash, 6% EM Equity, 30% U.S. Bonds, 5% EMD and 4% Commodities.

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# The greater the reward, the greater the risk? Not in 2017

U.S. EQUITIES DELIVERED ABOVE AVERAGE RETURNS, HISTORICALLY LOW RISK

## 20 YEARS OF S&P 500<sup>®</sup> MONTHLY RETURNS (%)

	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	STD DEV
<b>2017</b>	<b>1.9</b>	<b>4.0</b>	<b>0.1</b>	<b>1.0</b>	<b>1.4</b>	<b>0.6</b>	<b>2.1</b>	<b>0.3</b>	<b>2.1</b>	<b>2.3</b>	<b>3.1</b>	<b>1.1</b>	<b>3.9</b>
2016	-5.0	-0.1	6.8	0.4	1.8	0.3	3.7	0.1	0.0	-1.8	3.7	2.0	10.3
2015	-3.0	5.7	-1.6	1.0	1.3	-1.9	2.1	-6.0	-2.5	8.4	0.3	-1.6	13.7
2014	-3.5	4.6	0.8	0.7	2.3	2.1	-1.4	4.0	-1.4	2.4	2.7	-0.3	8.3
2013	5.2	1.4	3.8	1.9	2.3	-1.3	5.1	-2.9	3.1	4.6	3.0	2.5	8.5
2012	4.5	4.3	3.3	-0.6	-6.0	4.1	1.4	2.3	2.6	-1.8	0.6	0.9	10.5
2011	2.4	3.4	0.0	3.0	-1.1	-1.7	-2.0	-5.4	-7.0	10.9	-0.2	1.0	15.9
2010	-3.6	3.1	6.0	1.6	-8.0	-5.2	7.0	-4.5	8.9	3.8	0.0	6.7	19.3
2009	-8.4	-10.6	8.8	9.6	5.6	0.2	7.6	3.6	3.7	-1.9	6.0	1.9	22.3
2008	-6.0	-3.2	-0.4	4.9	1.3	-8.4	-0.8	1.4	-8.9	-16.8	-7.2	1.1	21.0
2007	1.5	-2.0	1.1	4.4	3.5	-1.7	-3.1	1.5	3.7	1.6	-4.2	-0.7	9.7
2006	2.6	0.3	1.2	1.3	-2.9	0.1	0.6	2.4	2.6	3.3	1.9	1.4	5.6
2005	-2.4	2.1	-1.8	-1.9	3.2	0.1	3.7	-0.9	0.8	-1.7	3.8	0.0	7.9
2004	1.8	1.4	-1.5	-1.6	1.4	1.9	-3.3	0.4	1.1	1.5	4.0	3.4	7.3
2003	-2.6	-1.5	1.0	8.2	5.3	1.3	1.8	2.0	-1.1	5.7	0.9	5.2	11.4
2002	-1.5	-1.9	3.8	-6.1	-0.7	-7.1	-7.8	0.7	-10.9	8.8	5.9	-5.9	20.6
2001	3.5	-9.1	-6.3	7.8	0.7	-2.4	-1.0	-6.3	-8.1	1.9	7.7	0.9	19.9
2000	-5.0	-1.9	9.8	-3.0	-2.1	2.5	-1.6	6.2	-5.3	-0.4	-7.9	0.5	17.2
1999	4.2	-3.1	4.0	3.9	-2.4	5.5	-3.1	-0.5	-2.7	6.3	2.0	5.9	13.1
1998	1.1	7.2	5.1	1.0	-1.7	4.1	-1.1	-14.5	6.4	8.1	6.1	5.8	21.5

**21.8%** CALENDAR YEAR RETURN

**3.9%** STANDARD DEVIATION

**0** DOWN MONTHS

Beat 20-year annualized return of 7.2%

Lowest ever annual volatility\*

First time in history\*

Source: Morningstar Direct  
Standard Deviation based on monthly returns

\* Since inception of S&P 500<sup>®</sup> Index in 1926

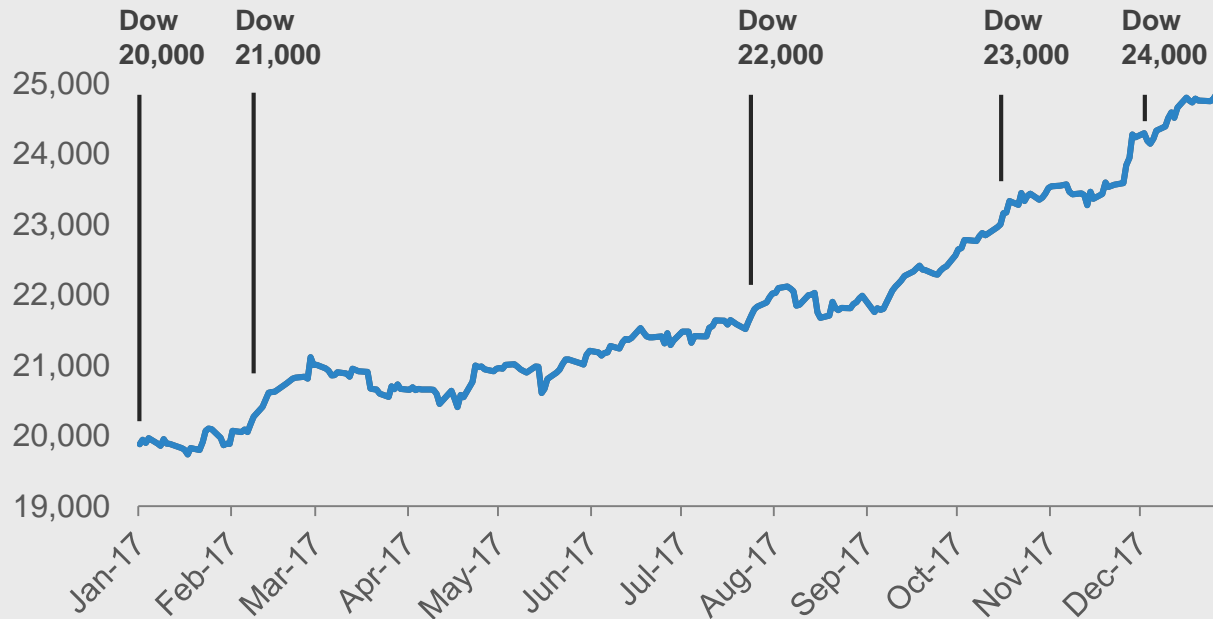
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# 500 points ain't what it used to be

DON'T BE COERCED INTO ACTION BY HEADLINES IN 2018

## DOW JONES INDUSTRIAL AVERAGE (DJIA)

went up almost 5,000 points in 2017



- › Volatility was historically low in 2017; that may not continue in 2018
- › At a DJIA of 25,000, a 1% decrease is equal to 250 points
- › A 250 point loss today (1%) is equal to nearly a 10% decrease in 1987
- › As markets go higher, volatility will create the appearance of greater gains and losses
- › Be prepared, not afraid

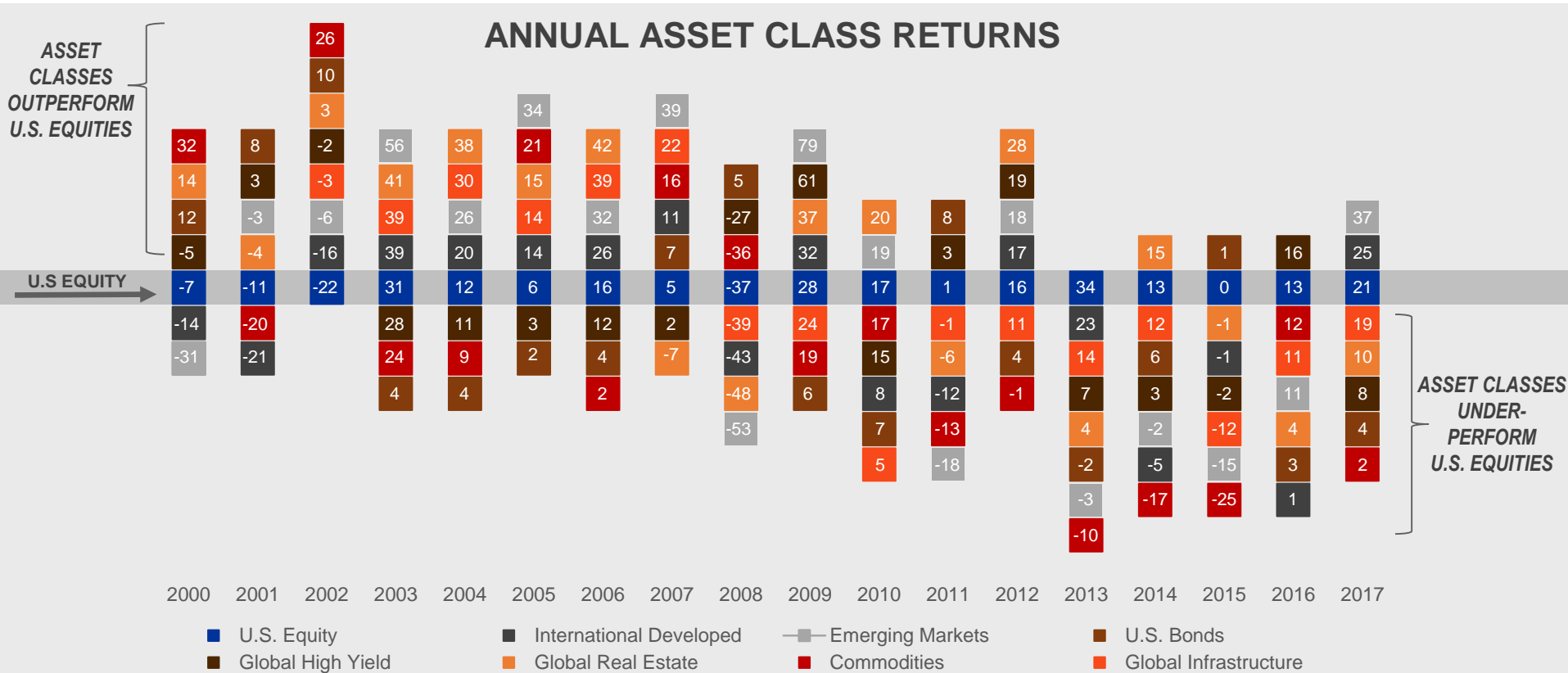
### PULLBACK IN PERCENTAGE TERMS

DOW LEVEL		-1%	-5%	-10%	-15%	-20%
<b>PULLBACK IN POINT TERMS</b>						
Aug-87	2,597	(26)	(130)	(260)	(390)	(519)
Oct-95	5,000	(50)	(250)	(500)	(750)	(1,000)
Oct-99	10,877	(109)	(544)	(1,088)	(1,632)	(2,175)
Sep-07	13,930	(139)	(697)	(1,393)	(2,090)	(2,786)
Dec-17	24,719	(247)	(1,236)	(2,472)	(3,708)	(4,944)

Source: Factset  
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# Diversification on your side

## U.S. MARKETS VS. THE REST



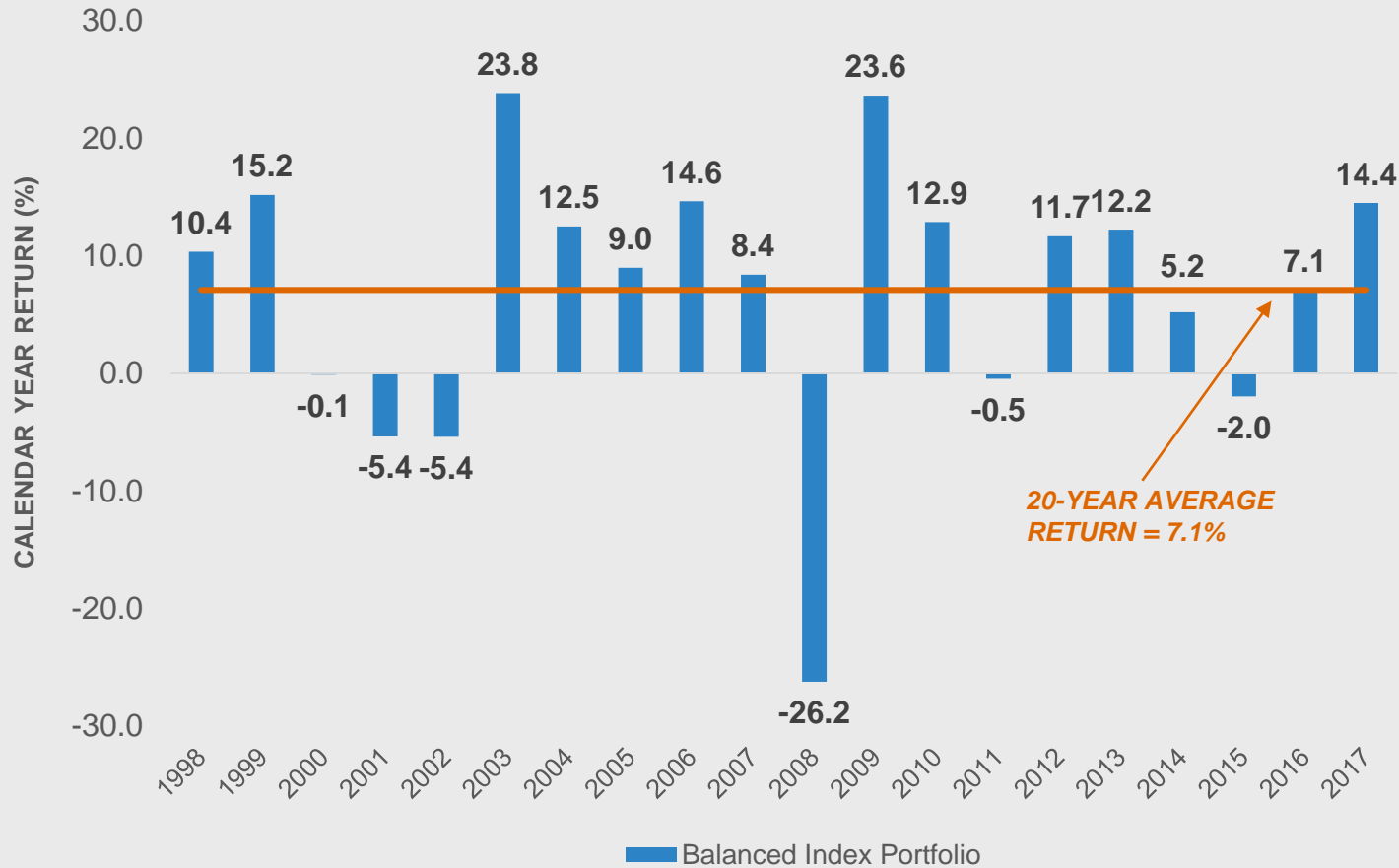
<b>2000 – 2007:</b>	U.S. equities underperformed most asset classes
<b>2013 – 2016:</b>	U.S. equities outperformed most asset classes
<b>2017:</b>	Global diversification rewarded as both emerging markets equities and international developed equities outperformed

U.S. equities—Russell 3000® Index; International Developed equities—MSCI EAFE; Emerging Markets: MSCI Emerging Markets; U.S. Bonds—Bloomberg Barclays U.S. Aggregate Bond Index; Global high yield—Bank of America/Merrill Lynch Global High Yield Index; Global real estate—FTSE EPRA/NAREIT Developed Index; Commodities—Bloomberg Commodity Index; Global infrastructure—S&P Global Infrastructure Index. Index returns represent past performance, are not a guarantee of future performance, and are not indicative of any specific investment. Indexes are unmanaged and cannot be invested in directly.

# Historical balanced index portfolio returns

HOW DOES 2017 COMPARE?

**CALENDAR YEAR RETURNS**  
(January 1, 1998 to December 31, 2017)



## 2017 BALANCED INDEX PORTFOLIO

- > Strongest return since 2009
- > More than double the 20-year average return
- > Fifth best return in past 20 years

Source: Morningstar Direct. Balanced Index Portfolio: 30% Russell 3000® TR USD, 20% MSCI World ex-USA NR USD, 5% MSCI EM NR USD (MSCI EM GR USD prior to 1/1/2001), 35% Bloomberg Barclays U.S. Aggregate Bond TR USD, 5% FTSE NAREIT All Equity REITs TR USD, & 5% Bloomberg Commodity TR USD.

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# Russell Investments' 2018 global market outlook

RUNNING WITH THE BULLS

## UNITED STATES

Too much of a good thing?

## EUROZONE

Mid-cycle renaissance

## ASIA-PACIFIC

Low rates, solid growth

### KEY EXPECTATIONS

- › 2.3% GDP growth
- › 3 Fed rate hikes in 2018
- › 10-year Treasury yield at 2.7% by year-end 2018

**Underweight:** Expensive valuations without enough cyclical support

- › 1.8-2.4% GDP growth
- › 5%-10% earnings growth
- › Reasonable valuations
- › Rising euro slight headwind

**Overweight:** Robust growth and favorable politics

- › 4.75% GDP growth
- › Positive outlook for China
- › Good support from Australia & Japan but likely to be outperformed by developing economies

**Overweight:** Tailwind from resilient global trade, but valuations now slightly expensive



Given global uncertainty and high valuations, we believe in diversifying sources of returns

There is no guarantee the stated expectations will be met.  
As of 11/30/2017. Forecasting represents predictions of market prices and/or volume patterns utilizing varying analytical data. It is not representative of a projection of the stock market, or of any specific investment.

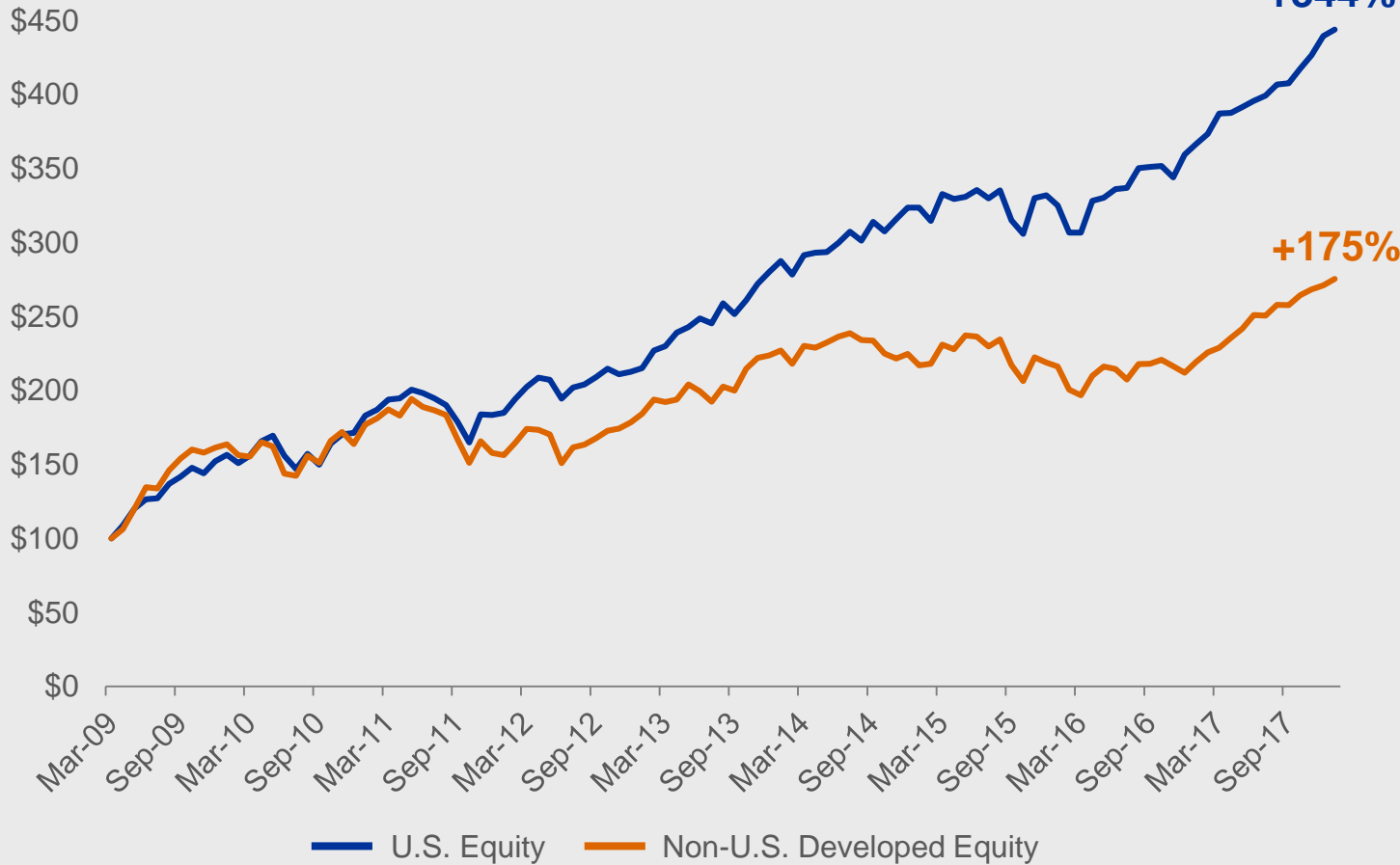
# Markets rally post global financial crisis

POTENTIALLY MORE ROOM FOR NON-U.S. EQUITY GROWTH?

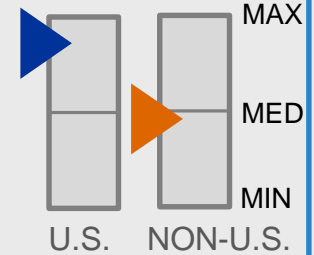
## GLOBAL EQUITY MARKETS

Growth of \$100

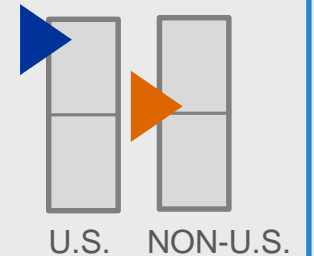
March 2009 - December 2017



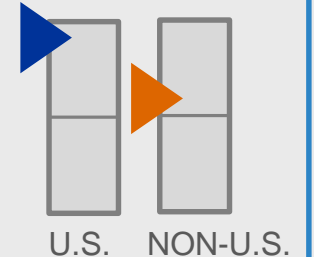
CURRENT EQUITY P/E vs. 2000 - 2017



CURRENT EQUITY P/B vs. 2000 - 2017



CURRENT EQUITY P/CF vs. 2000 - 2017



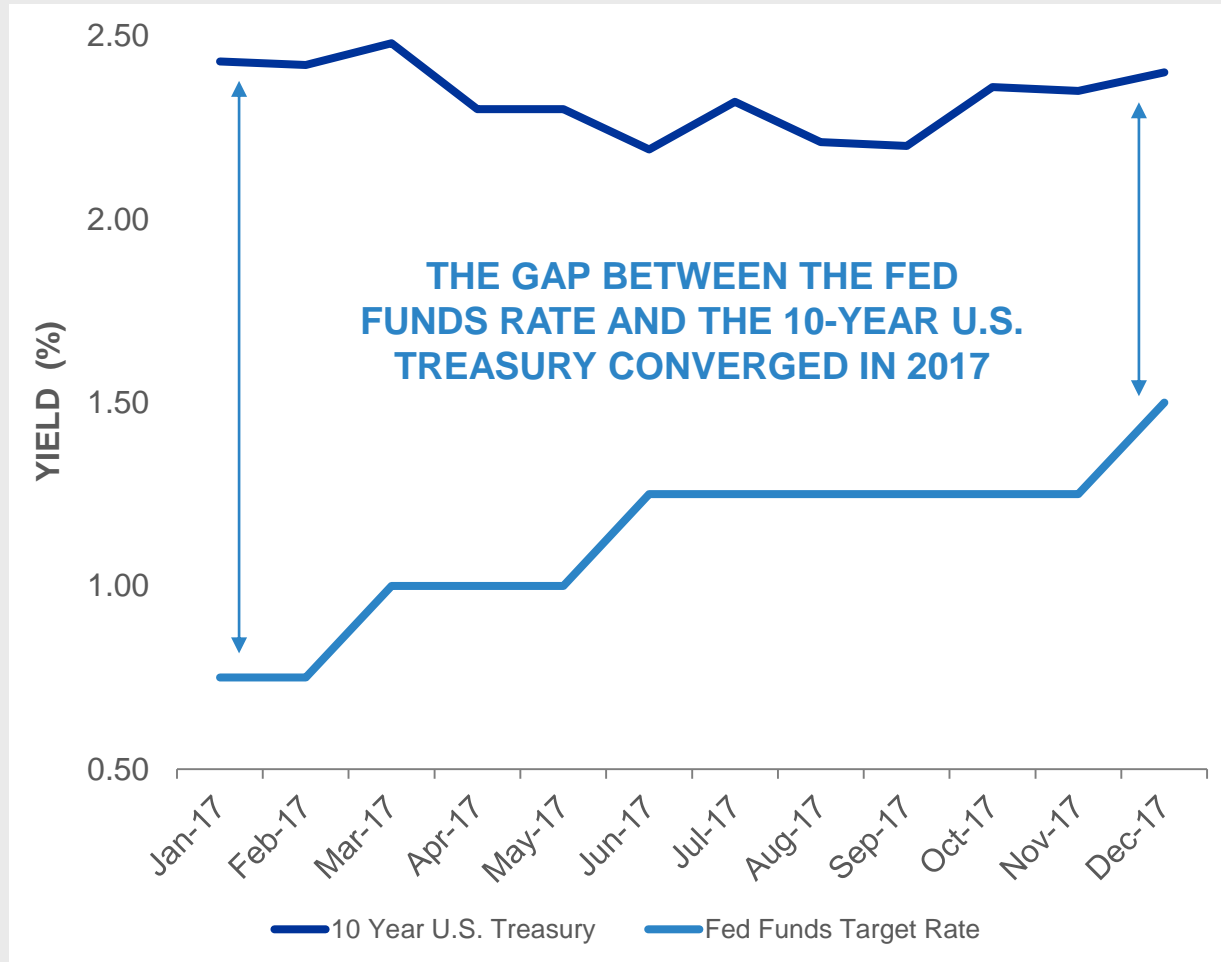
Sources: U.S. Equity — Russell 3000® Index; Non-U.S. Developed Equity — MSCI EAFE Index; P/E — Price to Earnings, P/B — Price to Book, P/CF — Price to Cash Flow. Blue and orange triangles represent current readings for U.S. Equity and Non-U.S. Developed Equity, respectively.

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# The yield curve flattened in 2017

LONGER-TERM INTEREST RATES CHANGED LITTLE DESPITE FED RAISES

## FED FUNDS RATE VS. 10-YEAR U.S. TREASURY YIELD: 2017

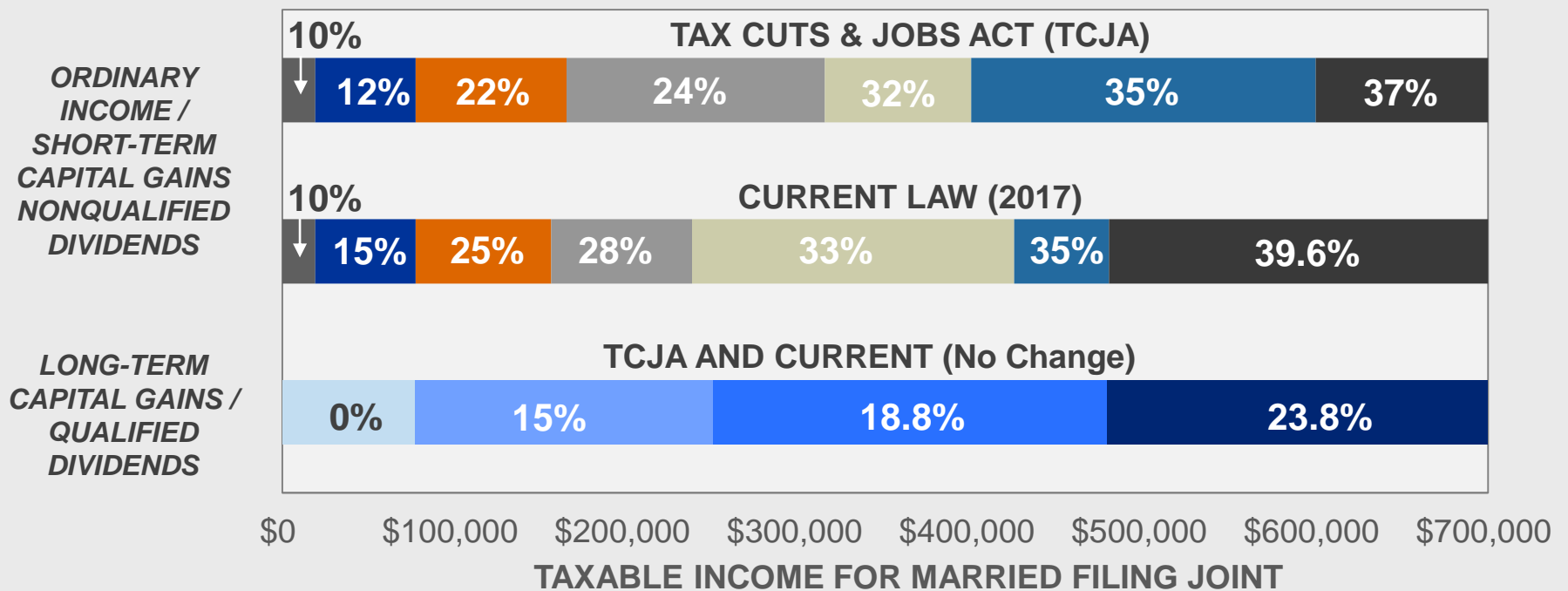


- › Don't bail on bonds just because the Fed is raising rates
- › The Federal Reserve raised the Fed Funds target rate three times in 2017
- › Longer-term rates stayed relatively flat for the year
- › Most investors' bond exposure is to medium-term rates

Source: <https://fred.stlouisfed.org/>



# Individual investor tax code changes



## WHAT'S NOT CHANGING?

- › Tax rates/thresholds for long-term capital gains / qualified dividends
- › 3.8% Net Investment Income Tax (NIIT)
- › Treatment of municipal bond interest
- › Cost Basis Rules: No FIFO rules

## WHAT IS CHANGING?

- › Lower rates/new income thresholds
- › Higher std. deduction/no personal exemption\*
- › Reduced limits to mortgage interest deduction
- › \$10k limit state/local taxes & property taxes
- › Treatment of pass-through income
- › Individual changes sunset after 2025

<https://www.congress.gov/bill/115th-congress/house-bill/1/text>. \*Reduced Personal Exemption if legally blind, or over 65 years of age.

# Late cycle investing is challenging

THE TASK IS TO KEEP UP WITHOUT GETTING RUN OVER

*On the one hand ...*

*... but on the other*

Late cycle in U.S.

2019 recession risks?

Monetary policy shifts

Geopolitical risks

U.S. shares expensive

Bonds expensive

Credit looks stretched



Record highs

Momentum is strong

Non-U.S. growth

Earnings surprises

Yields still low

U.S. tax cut tailwinds

Bonds rangebound

***Keep long term perspective. Discipline and diversification can help manage through uncertain times.***

# Bitcoin.com?

EUPHORIA OR DANGER? AMAZON.COM OR PETS.COM?

## CUMULATIVE RETURN OF BITCOIN AND EMERGING MARKETS EQUITY IN 2017



## DOTCOM DELUSION

pets.com

**MCI**

amazon.com

Google

broadcast.com

## CRYPTOCURRENCY CRAZE

MONERO

*bitcoin*

DOGECOIN

ripple

ethereum

Source: Bitcoin price: coindesk. EM Equity: MSCI Emerging Markets Index. All company and service names referenced here are for identification purposes only. Use of these names and brands does not imply endorsement.

# Important information and disclosures

## Risks of asset classes discussed in this presentation:

Global, International and Emerging markets return may be significantly affected by political or economic conditions and regulatory requirements in a particular country. Investments in non-U.S. markets can involve risks of currency fluctuation, political and economic instability, different accounting standards and foreign taxation. Such securities may be less liquid and more volatile. Investments in emerging or developing markets involve exposure to economic structures that are generally less diverse and mature, and political systems with less stability than in more developed countries.

## Real Asset risks:

Investments in infrastructure-related companies have greater exposure to adverse economic, financial, regulatory, and political risks, including, governmental regulations. Global securities may be significantly affected by political or economic conditions and regulatory requirements in a particular country.

Commodities may have greater volatility than traditional securities. The value of commodities may be affected by changes in overall market movements, changes in interest rates or sectors affecting a particular industry or commodity, and international economic, political and regulatory developments.

Declines in the value of real estate, economic conditions, property taxes, tax laws and interest rates all present potential risks. Investments in international markets can involve risks of currency fluctuation, political and economic instability, different accounting standards, and foreign taxation.

Small capitalization (small cap) investments involve stocks of companies with smaller levels of market capitalization (generally less than \$2 billion) than larger company stocks (large cap). Small cap investments are subject to considerable price fluctuations and are more volatile than large company stocks. Investors should consider the additional risks involved in small cap investments.

Large capitalization (large cap) investments involve stocks of companies generally having a market capitalization between \$10 billion and \$200 billion. The value of securities will rise and fall in response to the activities of the company that issued them, general market conditions and/or economic conditions.

Defensive style emphasizes investments in equity securities of companies that are believed to have lower than average stock price volatility, characteristics indicating high financial quality, (which may include lower financial leverage) and/or stable business fundamentals.

Dynamic style emphasizes investments in equity securities of companies that are believed to be currently undergoing or are expected to undergo positive change that will lead to stock price appreciation. Dynamic stocks typically have higher than average stock price volatility, characteristics indicating lower financial quality, (which may include greater financial leverage) and/or less business stability.

Although stocks have historically outperformed bonds, they also have historically been more volatile. Investors should carefully consider their ability to invest during volatile periods in the market.

An Investment Grade is a system of gradation for measuring the relative investment qualities of bonds by the usage of rating symbols, which range from the highest investment quality (least investment risk) to the lowest investment quality (greatest investment risk).

Gross domestic product (GDP) refers to the market value of all final goods and services produced within a country in a given period. It is often considered an indicator of a country's standard of living.

## Bonds:

With fixed income securities, such as bonds, interest rates and bond prices tend to move in opposite directions. When interest rates fall, bond prices typically rise and conversely when interest rates rise, bond prices typically fall. When interest rates are at low levels there is risk that a sustained rise in interest rates may cause losses to the price of bonds. Bond investors should carefully consider these risks such as interest rate, credit, repurchase and reverse repurchase transaction risks. Greater risk, such as increased volatility, limited liquidity, prepayment, non-payment and increased default risk, is inherent in portfolios that invest in high yield ("junk") bonds or mortgage backed securities, especially mortgage backed securities with exposure to sub-prime mortgages. Investment in non-U.S. and emerging market securities is subject to the risk of currency fluctuations and to economic and political risks associated with such foreign countries. When interest rates are at low levels there is risk that a sustained rise in interest rates may cause losses to the price of bonds.

## Growth:

Growth investments focus on stocks of companies whose earnings/profitability are accelerating in the short-term or have grown consistently over the long-term. Such investments may provide minimal dividends which could otherwise cushion stock prices in a market decline. A stock's value may rise and fall significantly based, in part, on investors' perceptions of the company, rather than on fundamental analysis of the stocks. Investors should carefully consider the additional risks involved in growth investments.

## Value:

Value investments focus on stocks of income-producing companies whose price is low relative to one or more valuation factors, such as earnings or book value. Such investments are subject to risks that the stocks' intrinsic values may never be realized by the market, or, that the stocks may turn out not to have been undervalued. Investors should carefully consider the additional risks involved in value investments.

# Index definitions

**Bloomberg Barclays Global High-Yield Index:** An index which provides a broad-based measure of the global high-yield fixed income markets. The Global High-Yield Index represents that union of the U.S. High-Yield, Pan-European High-Yield, U.S. Emerging Markets High-Yield, CMBS High-Yield, and Pan-European Emerging Markets High-Yield Indices.

**Bloomberg Barclays High Yield Municipal Bond Index:** An unmanaged index considered representative of noninvestment-grade bonds. FactSet Research Systems Inc. Barclays Intermediate U.S. Credit Index is an unmanaged index of dollar-denominated, investment-grade, publicly issued securities with maturities of one to 10 years.

**Bloomberg Barclays Intermediate Treasury Index:** Measures the performance of U.S. Dollar denominated U.S. Treasuries, government-related and investment grade U.S. corporate securities that have a remaining maturity of greater than one year and less than ten years.

**Bloomberg Barclays Short Treasury Index:** Is composed of all treasuries that have a remaining maturity between one and twelve months.

**Bloomberg Barclays U.S. Aggregate Bond Index:** An index, with income reinvested, generally representative of intermediate-term government bonds, investment grade corporate debt securities, and mortgage-backed securities. (specifically: Barclays Government/Corporate Bond Index, the Asset-Backed Securities Index, and the Mortgage-Backed Securities Index).

**Bloomberg Barclays U.S. Credit Bond Index:** Measures the performance of investment grade corporate debt and agency bonds that are dollar denominated and have a remaining maturity of greater than one year.

**Bloomberg Commodity Index Family:** Represents the major commodity sectors within the broad index: Energy (including petroleum and natural gas), Petroleum (including crude oil, heating oil and unleaded gasoline), Precious Metals, Industrial Metals, Grains, Livestock, Softs, Agriculture and ExEnergy. Also available are individual commodity sub-indexes on the 19 components currently included in the DJ-UBSCI<sup>SM</sup>, plus Brent crude, cocoa, feeder cattle, gas oil, lead, orange juice, platinum, soybean meal and tin.

**Bloomberg Commodity Index Total Return:** Composed of futures contracts on physical commodities. Unlike equities, which typically entitle the holder to a continuing stake in a corporation, commodity futures contracts normally specify a certain date for the delivery of the underlying physical commodity. In order to avoid the delivery process and maintain a long futures position, nearby contracts must be sold and contracts that have not yet reached the delivery period must be purchased. This process is known as "rolling" a futures position.

**BofA Merrill Lynch Global High Yield Index:** Tracks the performance of USD, CAD, GBP and EUR denominated below investment grade corporate debt publicly issued in the major domestic or Eurobond markets.

**Citigroup 1-3 Month T-Bill Index:** An unmanaged index that tracks short-term U.S. government debt instruments.

**FTSE NAREIT:** An Index designed to present investors with a comprehensive family of REIT performance indexes that span the commercial real estate space across the U.S. economy, offering exposure to all investment and property sectors. In addition, the more narrowly focused property sector and sub-sector indexes provide the facility to concentrate commercial real estate exposure in more selected markets.

**FTSE NAREIT all Equity Index:** Measures the performance of the commercial real estate space across the U.S. economy offering exposure to all investment and property sectors.

**FTSE EPRA/NAREIT Developed Index:** A global market capitalization weighted index composed of listed real estate securities in the North American, European and Asian real estate markets.

**JPM Emerging Market Bond Index (EMBI):** Dollar-denominated sovereign bonds issued by a selection of emerging market countries.

**JPM EMBI Plus Bond Index:** Tracks total returns for traded external debt instruments in the emerging markets.

**MSCI country indices:** Indices which include securities that are classified in that country according to the MSCI Global Investable Market Index Methodology, together with companies that are headquartered or listed in that country and carry out the majority of their operations in that country.

**The MSCI AC (All Country) Asia ex Japan Index:** A free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of Asia, excluding Japan. The MSCI AC Asia ex Japan Index consists of the following 10 developed and emerging market country indexes: China, Hong Kong, India, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan, and Thailand.

**MSCI EAFE (Europe, Australasia, Far East) Index:** A free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the U.S. and Canada.

**MSCI Emerging Markets Index:** A float-adjusted market capitalization index that consists of indices in 21 emerging economies: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Morocco, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, and Turkey.

**MSCI Emerging Markets Information Technology Index:** Tracks the information technology sector of the emerging markets (GICS sector classification).

**MSCI Europe Index:** A free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of the developed markets in Europe. The MSCI Europe Index consists of the following 15 developed market country indexes: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

**MSCI World Index:** A market cap weighted stock market index of 1,653 stocks from companies throughout the world.

**MSCI World ex-USA Index:** The MSCI All Country (AC) World ex U.S. Index tracks global stock market performance that includes developed and emerging markets but excludes the U.S.

**Russell 1000<sup>®</sup> Index:** Measures the performance of the large-cap segment of the U.S. equity universe. It is a subset of the Russell 3000<sup>®</sup> Index and includes approximately 1000 of the largest securities based on a combination of their market cap and current index membership.

**Russell 1000<sup>®</sup> 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.

**Russell 1000<sup>®</sup> 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.

**Russell 1000<sup>®</sup> Defensive Index:** Subset of top 1000 U.S. equities with companies that demonstrate less than average exposure to certain risk. (lower stock price volatility, higher quality balance sheets, stronger earnings profile).

**Russell 1000<sup>®</sup> Dynamic Index:** Subset of top 1000 U.S. equities with companies that demonstrate than average exposure to certain risks. (higher stock price volatility, lower quality balance sheets, uneven earnings profile).

**Russell 2000<sup>®</sup> Index:** Measures the performance of the small-cap segment of the U.S. equity universe. The Russell 2000 Index is a subset of the Russell 3000<sup>®</sup> Index representing approximately 10% of the total market capitalization of that index. It includes approximately 2000 of the smallest securities based on a combination of their market cap and current index membership.

**Russell 2000<sup>®</sup> Growth Index:** Measures the performance of the large-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.

**Russell 2000<sup>®</sup> Value Index:** Measures the performance of the large-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.

## Index definitions (cont'd)

**Russell 3000® Index:** Index measures the performance of the largest 3000 U.S. companies representing approximately 98% of the investable U.S. equity market.

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

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

**The S&P 500® Index** is a free-float capitalization-weighted index published since 1957 of the prices of 500 large-cap common stocks actively traded in the United States. The stocks included in the S&P 500® are those of large publicly held companies that trade on either of the two largest American stock market exchanges: the New York Stock Exchange and the NASDAQ.

**The S&P Global Infrastructure Index:** Provides liquid and tradable exposure to 75 companies from around the world that represent the listed infrastructure universe. To create diversified exposure across the global listed infrastructure market, the index has balanced weights across three distinct infrastructure clusters: Utilities, Transportation, and Energy.

**U.S. Energy:** Within the Russell 3000®, those energy-related businesses, such as oil companies involved in the exploration, production, servicing, drilling and refining processes, and companies primarily involved in the production and mining of coal and other fuels used in the generation of consumable energy. Gas extraction, distribution and pipeline companies classify into this Sector.

**U.S. Health Care:** Within the Russell 3000®, those companies that manufacture health care equipment and supplies or provide health care-related services such as lab services, in-home medical care and health care facilities. Also included are companies involved in research, development and production of pharmaceuticals and biotechnology.

**U.S. Material & Processing:** Within the Russell 3000®, those companies that extract or process raw materials, and companies that manufacture chemicals, construction materials, glass, paper, plastic, forest products and related packaging products. Metals and minerals miners, metal alloy producers, and metal fabricators are included.

**U.S. Technology:** Within the Russell 3000®, those companies that serve the information technology, telecommunications technology and electronics industries.

# Economic Indicators Dashboard definitions

## *Market Indicators*

**HOME PRICES** – The S&P/Case-Shiller Home Price Index is a measurement of U.S. residential real estate prices, tracking changes in top 20 metropolitan regions. This indicator value represents the trailing year over year % change in the home prices index as of last month-end. Residential real estate represents a large portion of the US economy and the Home Price index helps us monitor the value of real estate.

**MARKET VOLATILITY(VIX)** – CBOE VIX (Chicago Board Options Exchange Volatility Index) measures annualized implied volatility as conveyed by S&P 500 stock index option prices and is quoted in percentage points per annum. For instance, a VIX value of 15 represents an annualized implied volatility of 15% over the next 30 day period. The VIX measures implied volatility, which is a barometer of investor sentiment and market risk.

**10 YR. U.S. TREASURY YIELD** – The yield on the 10 year U.S. Treasury note issued by the U.S. Government. It is important because it is seen as a benchmark for interest rate movements and borrowing costs in the economy.

**YIELD SPREAD** – The spread between 3 month Treasury bill yields and 10 year Treasury note yields measures the market outlook for future interest rates. A normal or upward-sloping yield curve, can imply that investors expect the economy to grow and inflation to eat into asset returns. They thus demand a higher yield for long-term Treasuries. An inverted yield curve has often been an indicator of coming recessions, but not always. For example, reduced inflation expectations could cause the yield curve to flatten.

## *Economic Indicators*

**CONSUMER SENTIMENT** – The University of Michigan Survey of Consumer Sentiment Index is an economic indicator which measures the degree of optimism that consumers feel about the overall state of the economy and their personal financial situation.

**ECONOMIC EXPANSION (GDP)** – GDP (Gross Domestic Product) measures the total market value of a nation's output of goods and services during a specific time period. It is usually measured on a quarterly basis. Current GDP is based on the current prices of the period being measured. Nominal GDP growth refers to GDP growth in nominal prices (unadjusted for price changes). Real GDP growth refers to GDP growth adjusted for price changes. Calculating Real GDP growth allows economists to determine if production increased or decreased, regardless of changes in the purchasing power of the currency.

**INFLATION** – The Consumer Price Index (CPI) NSA (non-seasonally adjusted) measures changes in the price level of a market basket of consumer goods and services purchased by households. This indicator value represents the trailing year over year % change in the CPI index as of last month-end.

**UNEMPLOYMENT** – The Bureau of Labor Statistics measures employment and unemployment of all persons over the age of 15 using two different labor force surveys conducted by the United States Census Bureau (within the United States Department of Commerce) and the Bureau of Labor Statistics (within the United States Department of Labor) that gather employment statistics monthly. The data reported here is seasonally adjusted (SA) to account for seasonal gains in employment leading up to Christmas.

