



VERTEX PLANNING PARTNERS  
— LLC —

Q2

Quarterly Market Review

Second Quarter 2018



# Quarterly Market Review

Second Quarter 2018

This report features world capital market performance and a timeline of events for the last quarter. It begins with a global overview, then features the returns of stock and bond asset classes in the US and international markets.

The report also illustrates the impact of globally diversified portfolios and features a quarterly topic.

## Overview:

Quarterly Topic:  $E+R=O$ , a Formula for Success

Market Summary

World Stock Market Performance

World Asset Classes

US Stocks

International Developed Stocks

Emerging Markets Stocks

Select Country Performance

Select Currency Performance

vs. US Dollar

Real Estate Investment Trusts (REITs)

Commodities

Fixed Income

Impact of Diversification



# E+R=O, a Formula for Success<sup>1</sup>

Second Quarter 2018

Combining an enduring investment philosophy with a simple formula that helps maintain investment discipline can increase the odds of having a positive financial experience.

*“The important thing about an investment philosophy is that you have one you can stick with.”*

David Booth

Founder and Executive Chairman  
Dimensional Fund Advisors

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## AN ENDURING INVESTMENT PHILOSOPHY

Investing is a long-term endeavor. Indeed, people will spend decades pursuing their financial goals. But being an investor can be complicated, challenging, frustrating, and sometimes frightening. This is exactly why, as David Booth says, it is important to have an investment philosophy you can stick with, one that can help you stay the course.

This simple idea highlights an important question: How can investors, maintain discipline through bull markets, bear markets, political strife, economic instability, or whatever crisis du jour threatens progress towards their investment goals?

Over their lifetimes, investors face many decisions, prompted by events that are both within and outside their control. Without an enduring philosophy to inform their choices, they can potentially suffer unnecessary anxiety, leading to poor decisions and outcomes that are damaging to their long-term financial well-being.

When they don't get the results they want, many investors blame things outside their control. They might point the finger at the government, central banks, markets, or the economy. Unfortunately, the majority will not do the things that might be more beneficial—evaluating and reflecting on their own responses to events and taking responsibility for their decisions.

**e+r=o**

Some people suggest that among the characteristics that separate

highly successful people from the rest of us is a focus on influencing outcomes by controlling one's reactions to events, rather than the events themselves. This relationship can be described in the following formula:

**e+r=o (Event + Response = Outcome)**

Simply put, this means an outcome—either positive or negative—is the result of how you respond to an event, not just the result of the event itself. Of course, events are important and influence outcomes, but not exclusively. If this were the case, everyone would have the same outcome regardless of their response.

Let's think about this concept in a hypothetical investment context. Say a major political surprise, such as Brexit, causes a market to fall (event). In a panicked response, potentially fueled by gloomy media speculation of the resulting uncertainty, an investor sells some or all of his or her investment (response). Lacking a long-term perspective and reacting to the short-term news, our investor misses out on the subsequent market recovery and suffers anxiety about when, or if, to get back in, leading to suboptimal investment returns (outcome).

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1. Jack Canfield, *The Success Principles: How to Get from Where You Are to Where You Want to Be* (New York: HarperCollins Publishers, 2004).



# E+R=O, a Formula for Success<sup>1</sup>

(continued from page 3)

To see the same hypothetical example from a different perspective, a surprise event causes markets to fall suddenly (e). Based on his or her understanding of the long-term nature of returns and the short-term nature of volatility spikes around news events, an investor is able to control his or her emotions (r) and maintain investment discipline, leading to a higher chance of a successful long-term outcome (o).

This example reveals why having an investment philosophy is so important. By understanding how markets work and maintaining a long-term perspective on past events, investors can focus on ensuring that their responses to events are consistent with their long-term plan.

## THE FOUNDATION OF AN ENDURING PHILOSOPHY

An enduring investment philosophy is built on solid principles backed by decades of empirical academic evidence. Examples of such principles might be: trusting that prices are set to provide a fair expected return; recognizing the difference between investing and speculating; relying on the power of diversification to manage risk and increase the reliability of outcomes; and benchmarking your progress against your own realistic long-term investment goals.

Combined, these principles might help us react better to market events, even when those events are globally significant or when, as

some might suggest, a paradigm shift has occurred, leading to claims that “it’s different this time.” Adhering to these principles can also help investors resist the siren calls of new investment fads or worse, outright scams.

## THE GUIDING HAND OF A TRUSTED ADVISOR

Without education and training—sometimes gained from bitter experience—it is hard for non-investment professionals to develop a cogent investment philosophy. And even the most self-aware find it hard to manage their own responses to events. This is why a financial advisor can be so valuable—by providing the foundation of an investment philosophy and acting as an experienced counselor when responding to events.

Investing will always be both alluring and scary at times, but a view of how to approach investing combined with the guidance of a professional advisor can help people stay the course through challenging times. Advisors can provide an objective view and help investors separate emotions from investment decisions. Moreover, great advisors can educate, communicate, set realistic financial goals, and help their clients deal with their responses even to the most extreme market events.

In the spirit of the  $e+r=o$  formula, good advice, driven by a sound philosophy, can help increase the probability of having a successful financial outcome.

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Adapted from “E+R=O, a Formula for Success,” The Front Foot Adviser, by David Jones, Vice President and Head of Financial Adviser Services, EMEA.

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Past performance is no guarantee of future results. There is no guarantee investment strategies will be successful. Investing involves risks including possible loss of principal. Investors should talk to their financial advisor prior to making any investment decision. There is always the risk that an investor may lose money. A long-term investment approach cannot guarantee a profit.

All expressions of opinion are subject to change. This article is distributed for informational purposes, and it is not to be construed as an offer, solicitation, recommendation, or endorsement of any particular security, products, or services.



## Vertex Planning Partners Q2'18 Review

The Second Quarter of 2018 witnessed a sharp contrast between domestic and international markets. US equities enjoyed a strong quarter, with small capitalization companies pacing their larger counterparts while global ex-US markets continued their struggles from the First Quarter on the heels of slowing international GDP growth and a rising dollar.

One of the most important events taking place is the unprecedented shift from a market focused on Monetary Policy (Fed Balance Sheet Expansion and Ultra-Low rates) to one driven by Fiscal Policy (Tax cuts and Deficit Spending). At this stage of the market cycle, we can anticipate accelerated growth, potentially leading to the Fed to increase short term rates the US high enough to lead to an eventual recession in an effort to stave off inflationary risks.

One positive contributor to inflation growth is the massive tax break enacted recently, with companies having more cash to pass along to both employees, investors, as well as increasing investments. A possible negative contributor to the rise in inflation may be the unorthodox method of the current administration publicly renegotiating international trade agreements and threatening tariffs. If imposed, the US consumer might bear the brunt of higher cost of goods as we are a net importer, and countries look to retaliate against US policy.

The change in US policy has come at a difficult time for International markets, as the growth enjoyed during 2017 began to lose its steam in 2018. International risk assets have remained volatile, with bear markets occurring in a number of Emerging Market stock exchanges as investors weigh the impact on trade negotiations.

While performance can vary greatly over the short term, we believe that for long term investors it remains favorable to hold a globally diversified portfolio with positions in regions with both positive valuations and attractive long term demographics.

### **The impact of our outlook is expressed in the following themes carried through to our portfolios:**

- *Broad global diversification utilizing low-cost investments*
- *Active management to focus on the quality of the underlying business and management with the ability to hedge currency fluctuations*
- *Exposure to Real Estate / Infrastructure / Commodities Sectors that historically have been an effective hedge against rising prices and declining currency values*
- *Alternative strategies that aim to take advantage of increased volatility in rates, currencies and public equity and bond markets*
- *Quantitative managers who seek to profit from momentum created by uncertainty*
- *Pursue high risk/reward performance through actively managed fixed income investing in credit instruments with lower rate risk*

The opinions voiced in this material are for general information only and are not intended to provide specific advice or recommendations for any individual. All performance referenced is historical and is no guarantee of future results. All indices are unmanaged and may not be invested into directly. The economic forecasts set forth may not develop as predicted.

No strategy assures success or protects against loss and there is no guarantee that their objectives will be met.


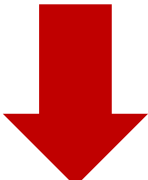




Alternative investments may not be suitable for all investors and should be considered as an investment for the risk capital portion of the investor's portfolio. The strategies employed in the management of alternative investments may accelerate the velocity of potential losses

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# Market Summary

## Index Returns

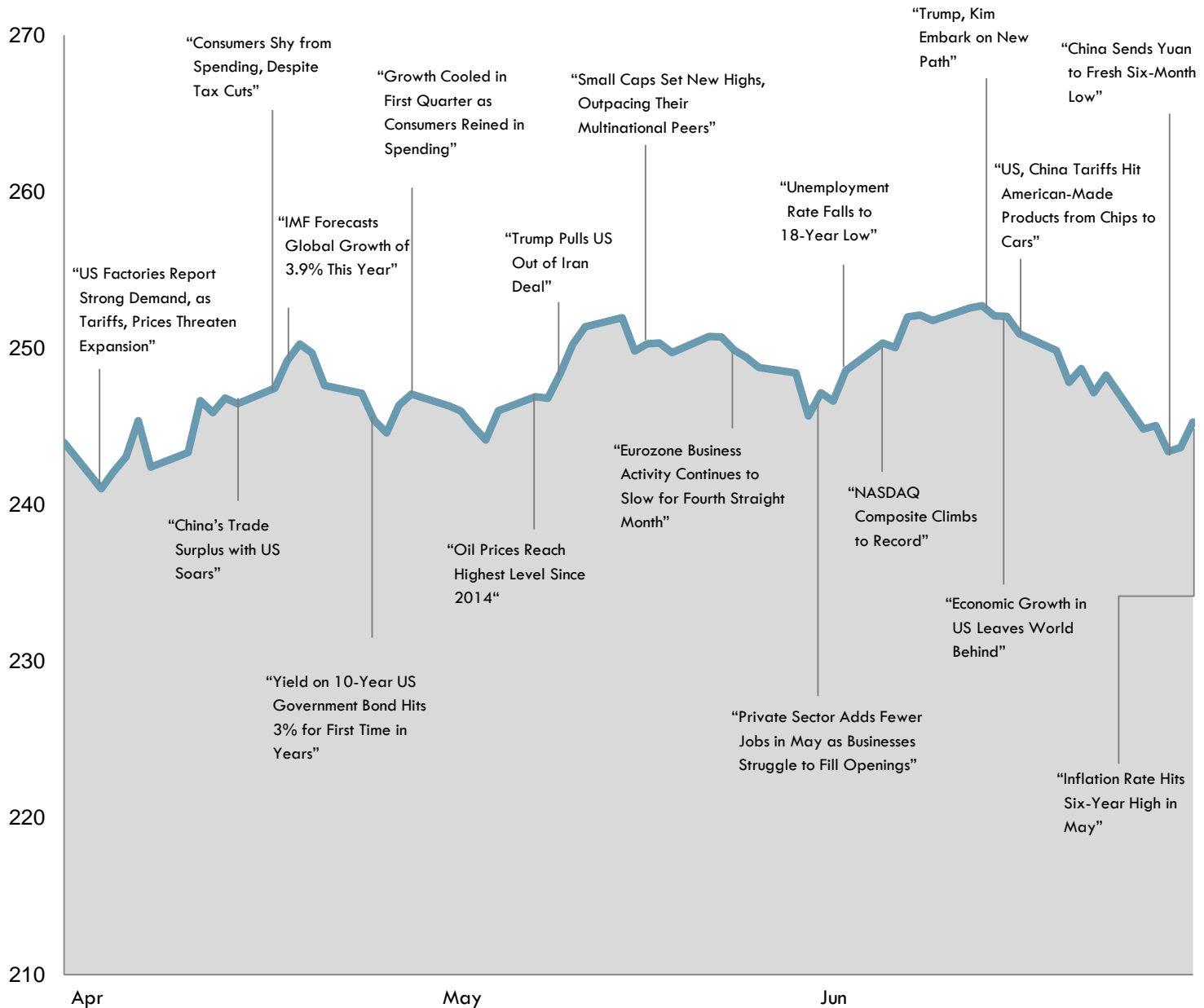
	US Stock Market	International Developed Stocks	Emerging Markets Stocks	Global Real Estate		US Bond Market	Global Bond Market ex US
Q2 2018	STOCKS					BONDS	
	3.89%	-0.75%	-7.96%	6.05%		-0.16%	0.48%
							
Since Jan. 2001							
Avg. Quarterly Return	2.0%	1.5%	3.0%	2.6%		1.1%	1.1%
Best Quarter	16.8% Q2 2009	25.9% Q2 2009	34.7% Q2 2009	32.3% Q3 2009		4.6% Q3 2001	4.6% Q4 2008
Worst Quarter	-22.8% Q4 2008	-21.2% Q4 2008	-27.6% Q4 2008	-36.1% Q4 2008		-3.0% Q4 2016	-2.7% Q2 2015

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: US Stock Market (Russell 3000 Index), International Developed Stocks (MSCI World ex USA Index [net div.]), Emerging Markets (MSCI Emerging Markets Index [net div.]), Global Real Estate (S&P Global REIT Index [net div.]), US Bond Market (Bloomberg Barclays US Aggregate Bond Index), and Global Bond Market ex US (Bloomberg Barclays Global Aggregate ex-USD Bond Index [hedged to USD]). S&P data © 2018 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. MSCI data © MSCI 2018, all rights reserved. Bloomberg Barclays data provided by Bloomberg. FTSE fixed income © 2018 FTSE Fixed Income LLC, all rights reserved.



# World Stock Market Performance

MSCI All Country World Index with selected headlines from Q2 2018



These headlines are not offered to explain market returns. Instead, they serve as a reminder that investors should view daily events from a long-term perspective and avoid making investment decisions based solely on the news.

Graph Source: MSCI ACWI Index [net div.]. MSCI data © MSCI 2018, all rights reserved.

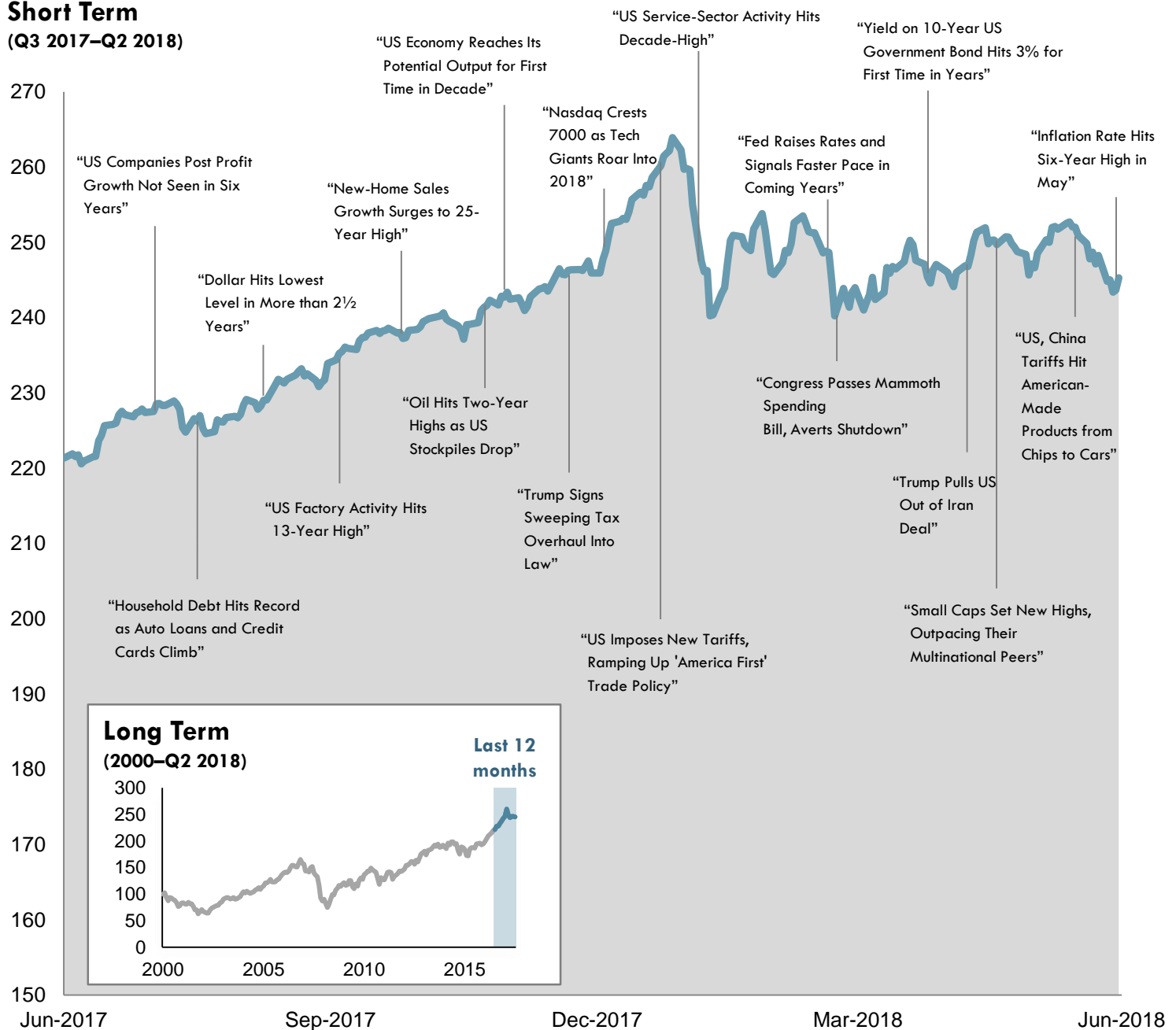
It is not possible to invest directly in an index. Performance does not reflect the expenses associated with management of an actual portfolio. **Past performance is not a guarantee of future results.**



# World Stock Market Performance

MSCI All Country World Index with selected headlines from past 12 months

## Short Term (Q3 2017–Q2 2018)



These headlines are not offered to explain market returns. Instead, they serve as a reminder that investors should view daily events from a long-term perspective and avoid making investment decisions based solely on the news.

Graph Source: MSCI ACWI Index [net div.]. MSCI data © MSCI 2018, all rights reserved.

It is not possible to invest directly in an index. Performance does not reflect the expenses associated with management of an actual portfolio. **Past performance is not a guarantee of future results.**



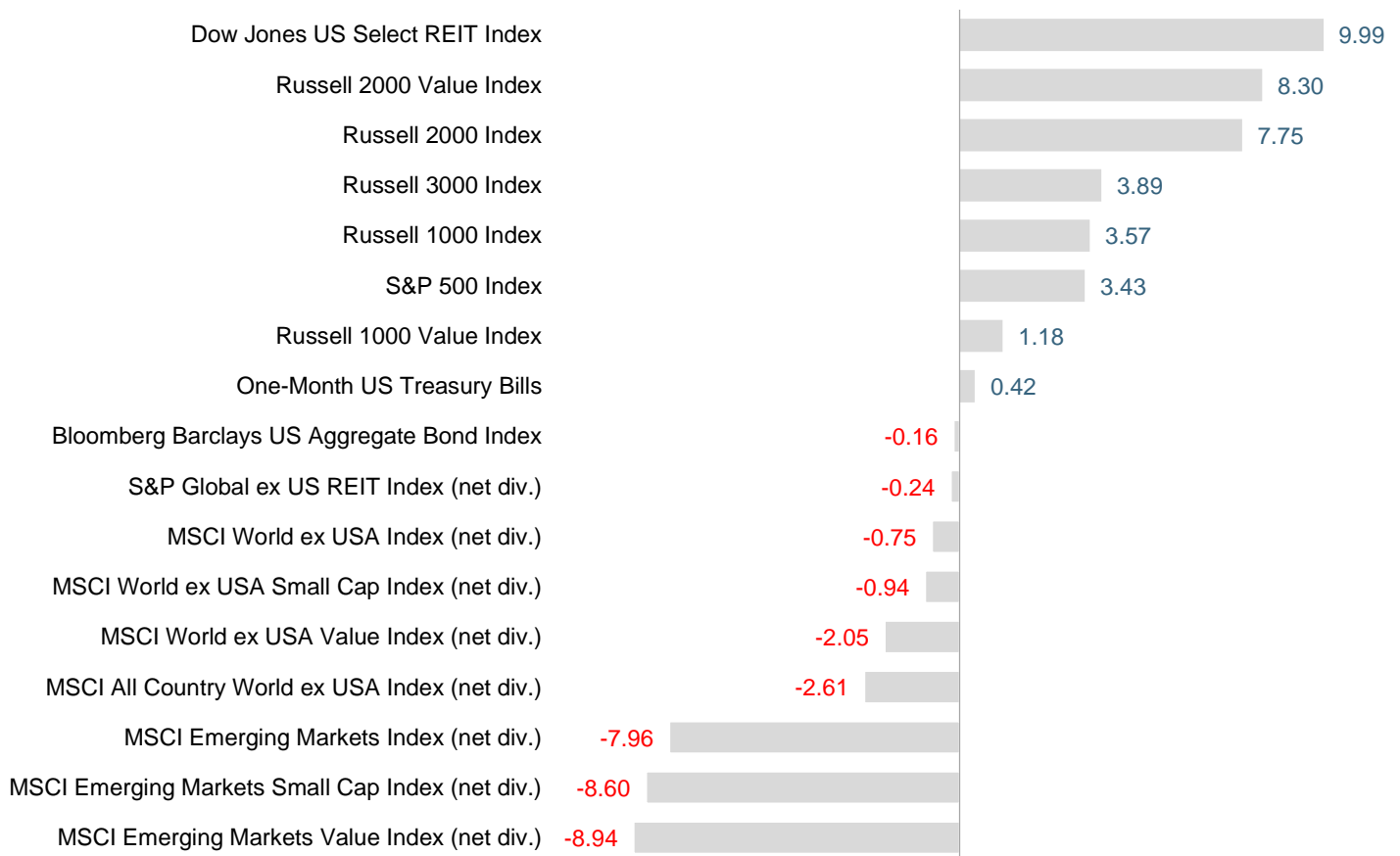


# World Asset Classes

## Second Quarter 2018 Index Returns (%)

Looking at broad market indices, the US outperformed non-US developed and emerging markets during the second quarter.

Small caps outperformed large caps in the US but underperformed in both non-US developed and emerging markets. The value effect was negative in the US as well as markets outside the US.



Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. The S&P data is provided by Standard & Poor's Index Services Group. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. MSCI data © MSCI 2018, all rights reserved. Dow Jones data © 2018 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved. S&P data © 2018 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved. Bloomberg Barclays data provided by Bloomberg. Treasury bills © Stocks, Bonds, Bills, and Inflation Yearbook™, Ibbotson Associates, Chicago (annually updated work by Roger G. Ibbotson and Rex A. Sinquefeld).



# US Stocks

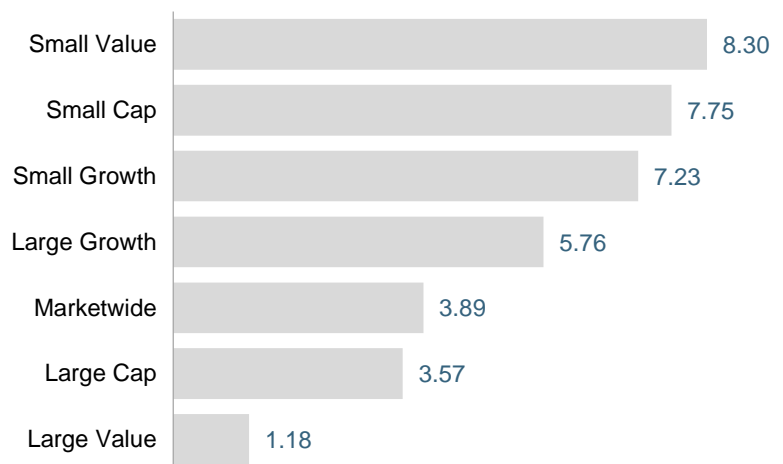
## Second Quarter 2018 Index Returns

The US equity market posted a positive return, outperforming both non-US developed and emerging markets in the second quarter.

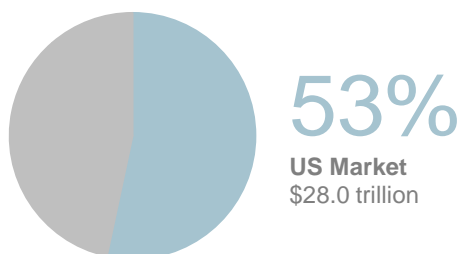
Large cap value stocks underperformed large cap growth stocks in the US; however, small cap value stocks outperformed small cap growth.

There was a positive size premium, as small cap stocks generally outperformed large cap stocks in the US.

### Ranked Returns for the Quarter (%)



### World Market Capitalization—US



### Period Returns (%)

\* Annualized

Asset Class	QTR	1 Year	3 Years*	5 Years*	10 Years*
Small Value	8.30	13.10	11.22	11.18	9.88
Small Cap	7.75	17.57	10.96	12.46	10.60
Small Growth	7.23	21.86	10.60	13.65	11.24
Large Growth	5.76	22.51	14.98	16.36	11.83
Marketwide	3.89	14.78	11.58	13.29	10.23
Large Cap	3.57	14.54	11.64	13.37	10.20
Large Value	1.18	6.77	8.26	10.34	8.49

**Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio.** Market segment (index representation) as follows: Marketwide (Russell 3000 Index), Large Cap (Russell 1000 Index), Large Cap Value (Russell 1000 Value Index), Large Cap Growth (Russell 1000 Growth Index), Small Cap (Russell 2000 Index), Small Cap Value (Russell 2000 Value Index), and Small Cap Growth (Russell 2000 Growth Index). World Market Cap represented by Russell 3000 Index, MSCI World ex USA IMI Index, and MSCI Emerging Markets IMI Index. Russell 3000 Index is used as the proxy for the US market. Frank Russell Company is source and owner of trademarks, service marks, and copyrights related to Russell Indexes. MSCI data © MSCI 2018, all rights reserved.



# International Developed Stocks

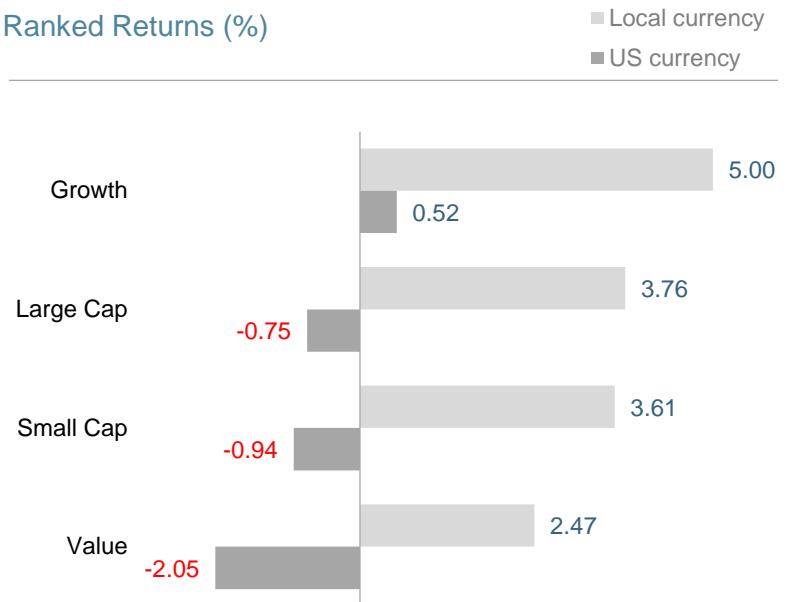
## Second Quarter 2018 Index Returns

In US dollar terms, developed markets outside the US underperformed the US but outperformed emerging markets during the second quarter.

Value underperformed growth in non-US developed markets across large and small cap stocks.

Small caps underperformed large caps in non-US developed markets.

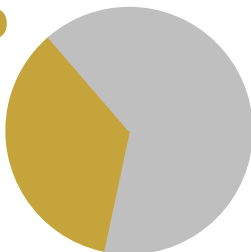
### Ranked Returns (%)



### World Market Capitalization—International Developed

35%

International  
Developed  
Market  
\$18.5 trillion



### Period Returns (%)

\* Annualized

Asset Class	QTR	1 Year	3 Years*	5 Years*	10 Years*
Growth	0.52	9.26	5.95	7.11	2.92
Large Cap	-0.75	7.04	4.87	6.23	2.63
Small Cap	-0.94	11.87	9.45	10.28	6.09
Value	-2.05	4.80	3.70	5.27	2.29

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: Large Cap (MSCI World ex USA Index), Small Cap (MSCI World ex USA Small Cap Index), Value (MSCI World ex USA Value Index), and Growth (MSCI World ex USA Growth Index). All index returns are net of withholding tax on dividends. World Market Cap represented by Russell 3000 Index, MSCI World ex USA IMI Index, and MSCI Emerging Markets IMI Index. MSCI World ex USA IMI Index is used as the proxy for the International Developed market. MSCI data © MSCI 2018, all rights reserved. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes.



# Emerging Markets Stocks

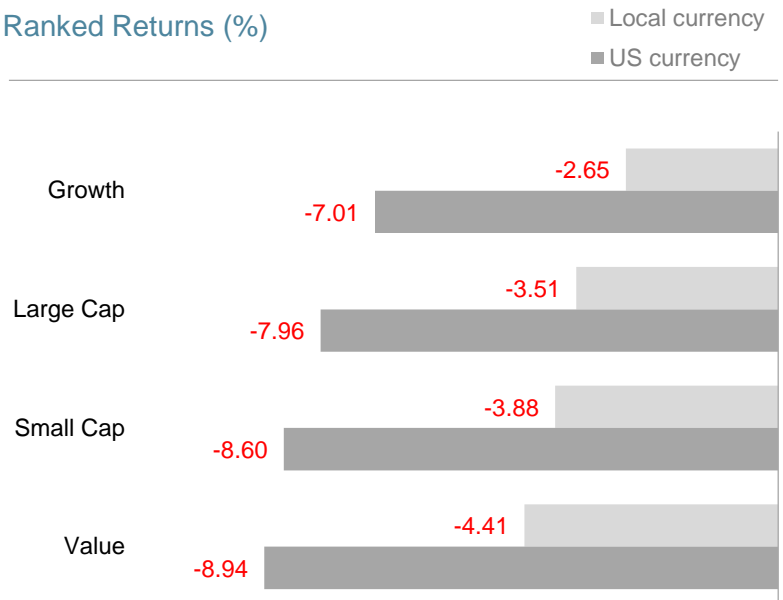
## Second Quarter 2018 Index Returns

In US dollar terms, emerging markets posted negative returns in the second quarter, underperforming developed markets including the US.

The value effect was negative in large caps; however, value and growth stocks had similar performance among small cap stocks within emerging markets.

Small caps underperformed large caps in emerging markets.

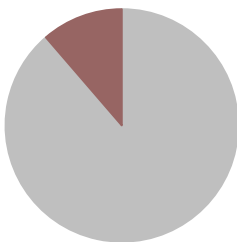
### Ranked Returns (%)



### World Market Capitalization—Emerging Markets

11%

Emerging Markets  
\$5.9 trillion



### Period Returns (%)

\* Annualized

Asset Class	QTR	1 Year	3 Years*	5 Years*	10 Years*
Growth	-7.01	11.92	8.34	7.16	3.28
Large Cap	-7.96	8.20	5.60	5.01	2.26
Small Cap	-8.60	5.64	2.55	4.32	4.44
Value	-8.94	4.28	2.76	2.77	1.14

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: Large Cap (MSCI Emerging Markets Index), Small Cap (MSCI Emerging Markets Small Cap Index), Value (MSCI Emerging Markets Value Index), and Growth (MSCI Emerging Markets Growth Index). All index returns are net of withholding tax on dividends. World Market Cap represented by Russell 3000 Index, MSCI World ex USA IMI Index, and MSCI Emerging Markets IMI Index. MSCI Emerging Markets IMI Index used as the proxy for the emerging market portion of the market. MSCI data © MSCI 2018, all rights reserved. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes.

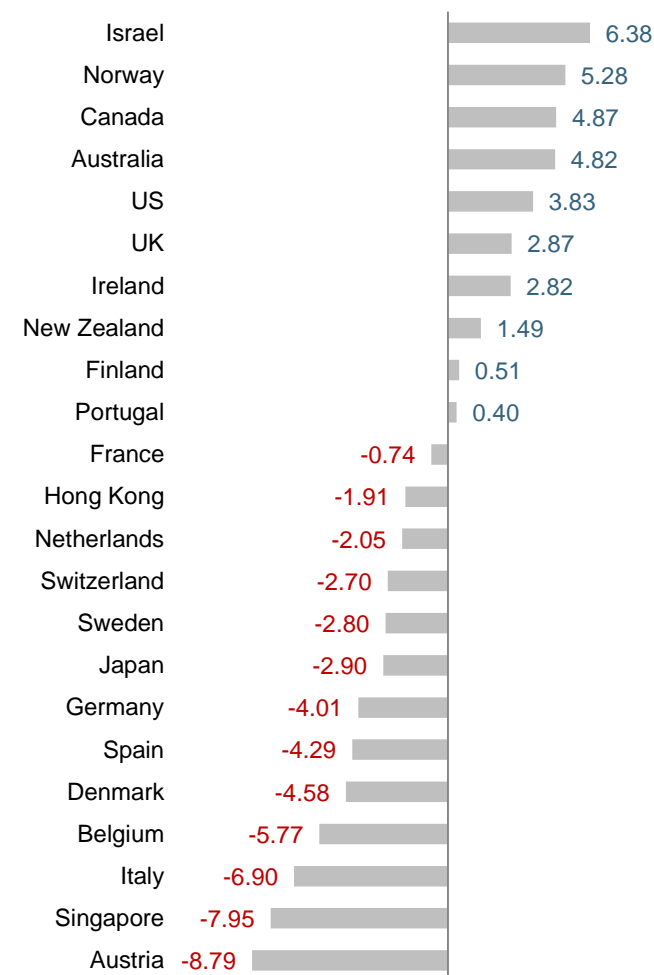


# Select Country Performance

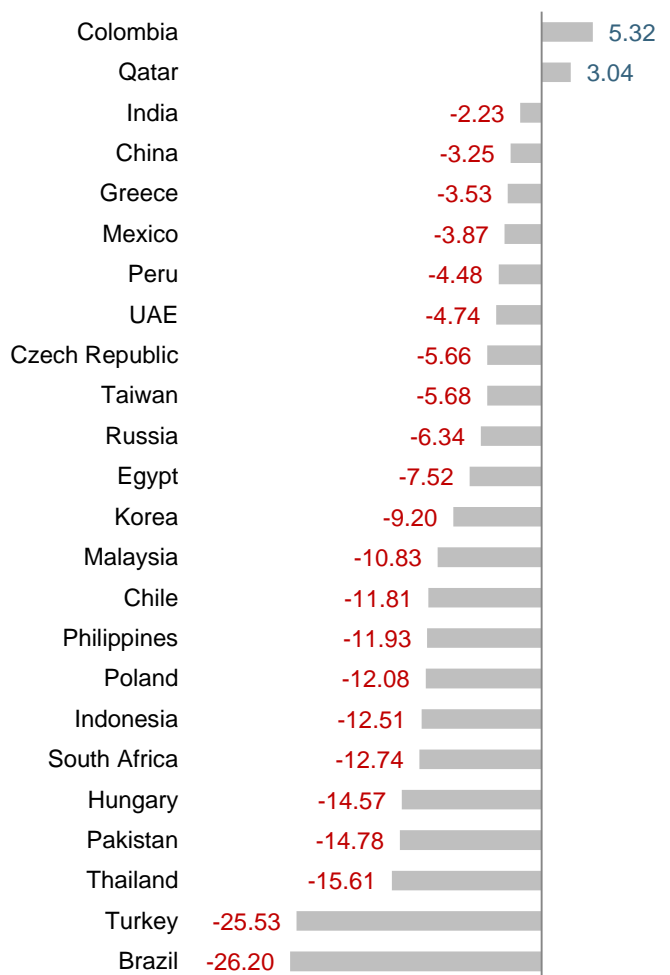
## Second Quarter 2018 Index Returns

In US dollar terms, Israel and Norway recorded the highest country performance in developed markets, while Austria and Singapore posted the lowest returns for the second quarter. Most emerging markets recorded negative absolute returns with the exception of Colombia and Qatar, which posted the highest country performance. Brazil and Turkey had the lowest performance in the emerging markets.

### Ranked Developed Markets Returns (%)



### Ranked Emerging Markets Returns (%)



Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated

with the management of an actual portfolio. Country performance based on respective indices in the MSCI World ex US IMI Index (for developed markets), MSCI USA IMI Index (for US), and MSCI Emerging Markets IMI Index. All returns in USD and net of withholding tax on dividends. MSCI data © MSCI 2018, all rights reserved. UAE and Qatar have been reclassified as emerging markets by MSCI, effective May 2014.

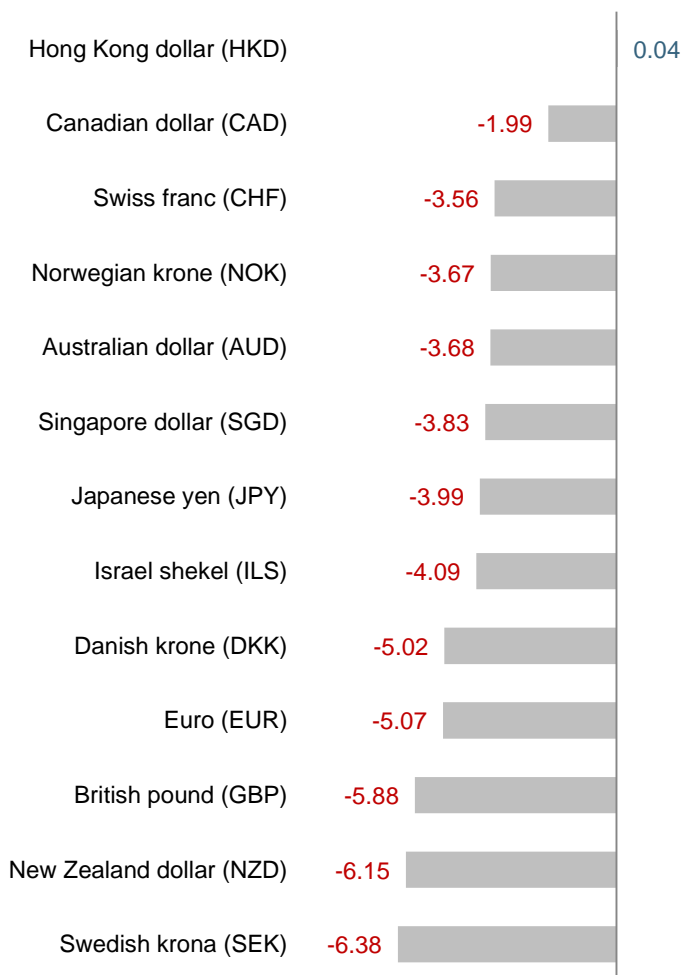


# Select Currency Performance vs. US Dollar

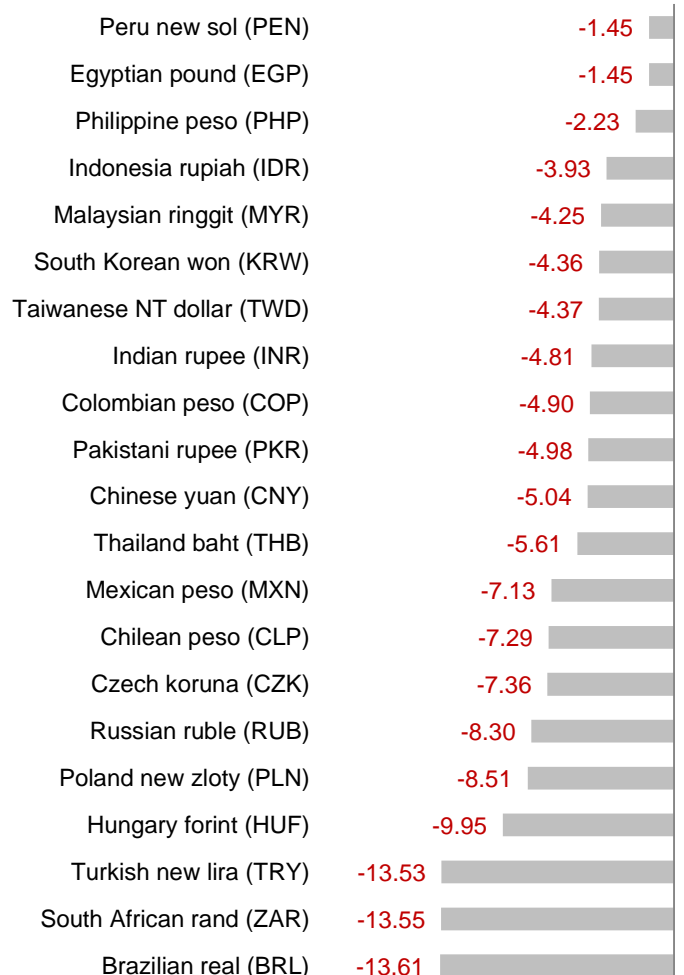
Second Quarter 2018

Almost all currencies depreciated vs. the US dollar. For example, in developed markets, the Japanese yen and the British pound depreciated almost 4% and 6%, respectively. In emerging markets, the currency effect was greater; the Brazilian real, Turkish lira, and South African rand all depreciated by over 13%.

## Ranked Developed Markets Returns (%)



## Ranked Emerging Markets Returns (%)



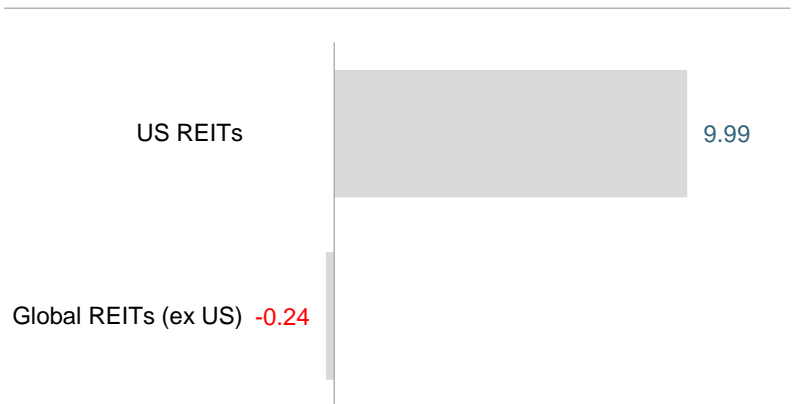


# Real Estate Investment Trusts (REITs)

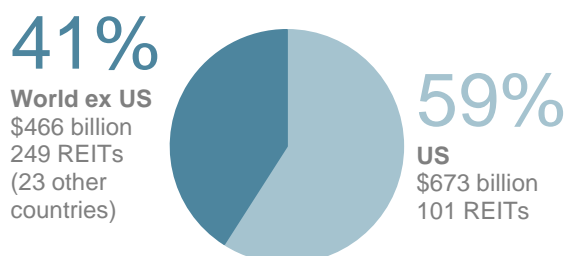
## Second Quarter 2018 Index Returns

US real estate investment trusts outperformed non-US REITs in US dollar terms.

### Ranked Returns (%)



### Total Value of REIT Stocks



### Period Returns (%)

\* Annualized

Asset Class	QTR	1 Year	3 Years*	5 Years*	10 Years*
US REITs	9.99	4.23	7.71	8.29	7.63
Global REITs (ex US)	-0.24	7.17	4.62	5.49	3.83

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Number of REIT stocks and total value based on the two indices. All index returns are net of withholding tax on dividends. Total value of REIT stocks represented by Dow Jones US Select REIT Index and the S&P Global ex US REIT Index. Dow Jones US Select REIT Index used as proxy for the US market, and S&P Global ex US REIT Index used as proxy for the World ex US market. Dow Jones data © 2018 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved. S&P data © 2018 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved.



# Commodities

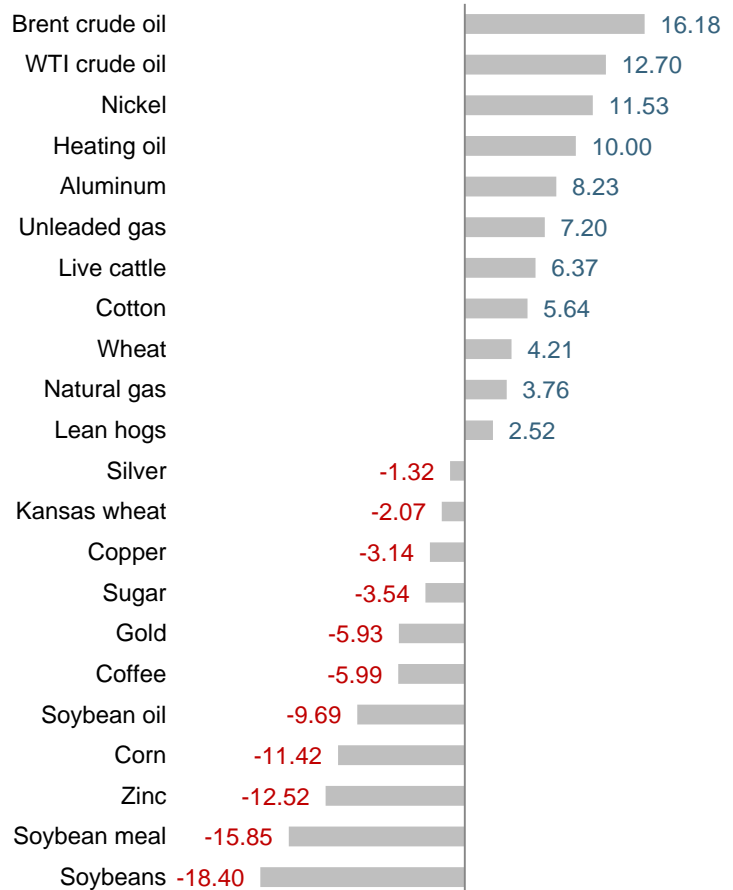
## Second Quarter 2018 Index Returns

The Bloomberg Commodity Index Total Return gained 0.40% during the second quarter.

The energy complex led performance with Brent oil returning 16.18% and WTI crude oil 12.70%.

Grains was the worst-performing complex; soybeans declined 18.40%, and soybean meal lost 15.85%.

### Ranked Returns for Individual Commodities (%)



### Period Returns (%)

\* Annualized

Asset Class	QTR	1 Year	3 Years*	5 Years*	10 Years*
Commodities	0.40	7.35	-4.54	-6.40	-9.04





# Fixed Income

## Second Quarter 2018 Index Returns

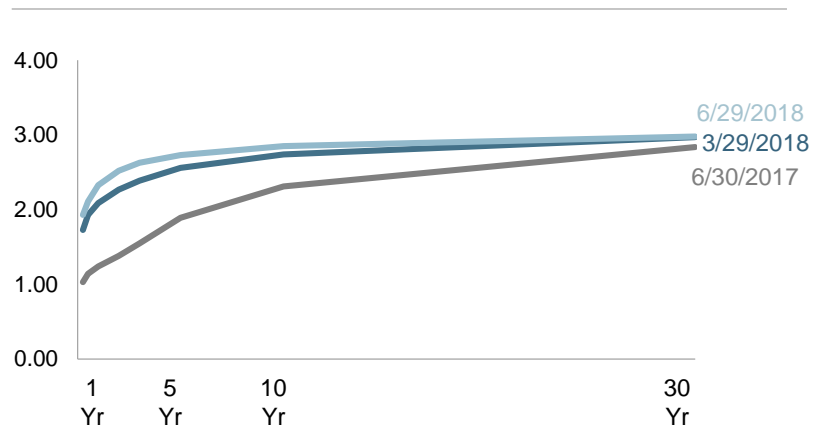
Interest rates increased in the US during the second quarter. The yield on the 5-year Treasury note rose 17 basis points (bps), ending at 2.73%. The yield on the 10-year T-note rose 11 bps to 2.85%. The 30-year Treasury bond yield climbed 1 bps to 2.98%.

The 1-month Treasury bill yield rose 14 bps to 1.77%, while the 1-year Treasury bill yield increased 24 bps to 2.33%. The 2-year Treasury note yield finished at 2.52% after increasing 25 bps.

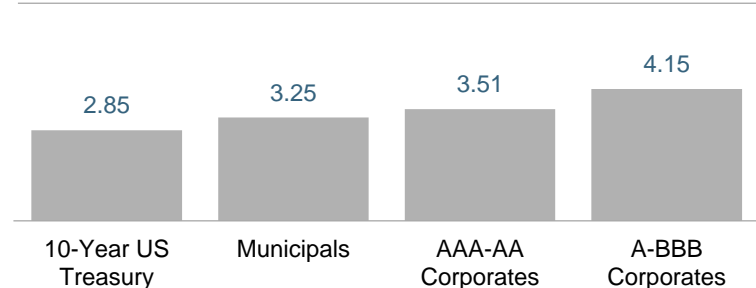
In terms of total return, short-term corporate bonds gained 0.29%, while intermediate-term corporate bonds declined 0.10%.

Short-term municipal bonds added 0.66%, while intermediate-term munis returned 0.81%. Revenue bonds performed in-line with general obligation bonds, returning 0.90% and 0.87%, respectively.

### US Treasury Yield Curve (%)



### Bond Yields across Issuers (%)



Asset Class	QTR	1 Year	3 Years*	5 Years*	10 Years*
Bloomberg Barclays US High Yield Corporate Bond Index	1.03	2.62	5.53	5.51	8.19
Bloomberg Barclays Municipal Bond Index	0.87	1.56	2.85	3.53	4.43
Bloomberg Barclays US TIPS Index	0.77	2.11	1.93	1.68	3.03
ICE BofAML 3-Month US Treasury Bill Index	0.45	1.36	0.68	0.42	0.35
ICE BofAML 1-Year US Treasury Note Index	0.40	0.92	0.64	0.49	0.77
Bloomberg Barclays US Government Bond Index Long	0.26	-0.13	3.40	4.56	6.02
FTSE World Government Bond Index 1-5 Years (hedged to USD)	0.24	0.89	1.18	1.33	2.08
Bloomberg Barclays US Aggregate Bond Index	-0.16	-0.40	1.72	2.27	3.72
FTSE World Government Bond Index 1-5 Years	-2.66	0.73	1.19	-0.58	0.63

One basis point equals 0.01%. Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Yield curve data from Federal Reserve. State and local bonds are from the S&P National AMT-Free Municipal Bond Index. AAA-AA Corporates represent the Bank of America Merrill Lynch US Corporates, AA-AAA rated. A-BBB Corporates represent the Bank of America Merrill Lynch US Corporates, BBB-A rated. Bloomberg Barclays data provided by Bloomberg. US long-term bonds, bills, inflation, and fixed income factor data © Stocks, Bonds, Bills, and Inflation (SBBBI) Yearbook™, Ibbotson Associates, Chicago (annually updated work by Roger G. Ibbotson and Rex A. Sinquefeld). FTSE fixed income indices © 2018 FTSE Fixed Income LLC, all rights reserved. ICE BofAML index data © 2018 ICE Data Indices, LLC.



# Impact of Diversification

## Second Quarter 2018 Index Returns

These portfolios illustrate the performance of different global stock/bond mixes and highlight the benefits of diversification. Mixes with larger allocations to stocks are considered riskier but have higher expected returns over time.

### Ranked Returns (%)

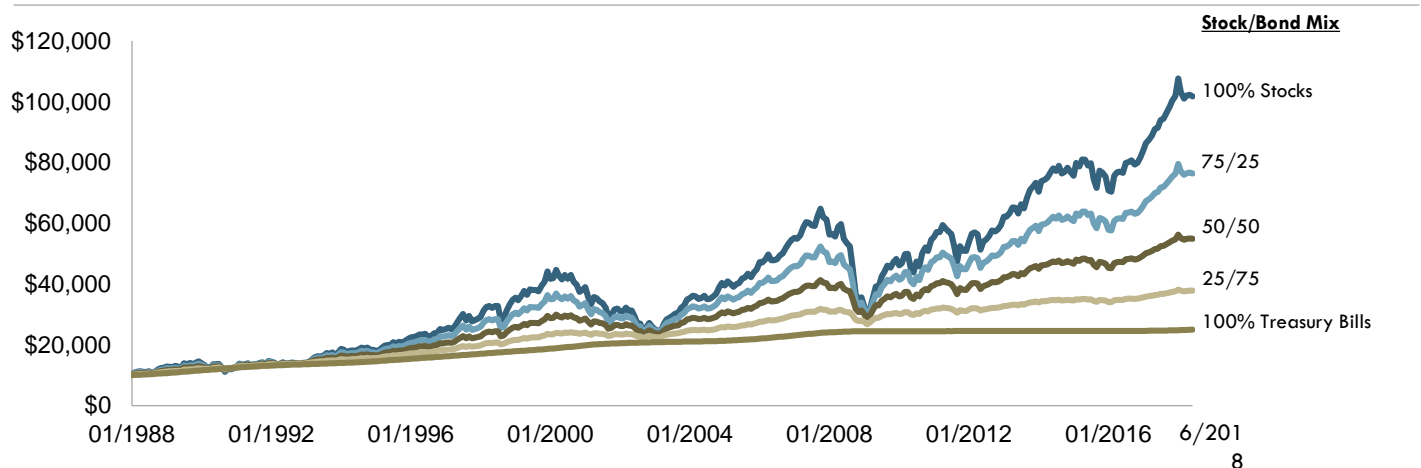


### Period Returns (%)

\* Annualized

Asset Class	QTR	1 Year	3 Years*	5 Years*	10 Years*	10-Year STDEV <sup>1</sup>
100% Stocks	0.72	11.31	8.78	10.00	6.37	16.41
75/25	0.64	8.79	6.79	7.61	5.09	12.30
50/50	0.57	6.27	4.75	5.21	3.64	8.19
25/75	0.50	3.77	2.69	2.79	2.03	4.09
100% Treasury Bills	0.42	1.27	0.59	0.36	0.27	0.13

## Growth of Wealth: The Relationship between Risk and Return



1. STDEV (standard deviation) is a measure of the variation or dispersion of a set of data points. Standard deviations are often used to quantify the historical return volatility of a security or portfolio.

Diversification does not eliminate the risk of market loss. **Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect expenses associated with the management of an actual portfolio.** Asset allocations and the hypothetical index portfolio returns are for illustrative purposes only and do not represent actual performance. Global Stocks represented by MSCI All Country World Index (gross div.) and Treasury Bills represented by US One-Month Treasury Bills. Globally diversified allocations rebalanced monthly, no withdrawals. Data © MSCI 2018, all rights reserved. Treasury bills © Stocks, Bonds, Bills, and Inflation Yearbook™, Ibbotson Associates, Chicago (annually updated work by Roger G. Ibbotson and Rex A. Sinquefeld).

## Important Risk Disclosures

The fast price swings in commodities and currencies will result in significant volatility in an investor's holdings. Currency Risk -because the security invests in stocks denominated in foreign currencies, changes in currency exchange rates may negatively impact the securities return. The values of the foreign currencies may be subject to a high degree of fluctuation due to changes in interest rates, the TS-8 effects of monetary policies issued by the United States, foreign governments, central banks or supranational entities, the imposition of currency controls or other national or global political or economic developments. International and emerging market investing involves special risks such as currency fluctuation and political instability and may not be suitable for all investors. Investing in Real Estate Investment Trusts (REITs) involves special risks such as potential illiquidity and may not be suitable for all investors. There is no assurance that the investment objectives of this program will be attained. Small Cap stocks may be subject to a higher degree of risk than more established companies' securities. The illiquidity of the Small Cap market may adversely affect the value of these investments. Value investments can perform differently from the market as a whole. They can remain undervalued by the market for long periods of time. Municipal bonds are subject to availability, price, and to market and interest rate risk if sold prior to maturity. Bond values will decline as interest rate rise. Interest income may be subject to the alternative minimum tax. Federally tax-free but other state and local taxes may apply. Government bonds and Treasury Bills are guaranteed by the U.S. government as to the timely payment of principal and interest and, if held to maturity, offer a fixed rate of return and fixed principal value. Bonds are subject to market and interest rate risk if sold prior to maturity. Bond values will decline as interest rates rise and bonds are subject to availability and change in price. Credit Quality is one of the principal criteria for judging the investment quality of a bond or bond mutual fund. As the term implies, credit quality informs investors of a bond or bond portfolio's credit worthiness, or risk of default. There is no guarantee that a diversified portfolio will enhance overall returns or outperform a non-diversified portfolio. Diversification does not ensure against market risk. This market information has been prepared by Dimensional Fund Advisors (DFA). DFA is not affiliated with LPL Financial.

## Index Definition:

An index is a statistical measure that shows changes in the economy or financial markets and serves as a benchmark against which economic and financial performance is measured. Indices are not available for direct investment; its performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is no guarantee of future results.

### Bank of America Merrill Lynch US Corporate Bond Index

Tracks the performance of US dollar denominated investment grade rated corporate debt publicly issued in the US domestic market.

### Bloomberg Barclays U.S. Aggregate Bond Index

The Bloomberg Barclays U.S. Aggregate Bond Index is an index of the U.S. investment-grade fixed-rate bond market, including both government and corporate bonds.

### Bloomberg Barclays U.S. Corporate High-Yield Bond Index

The Bloomberg Barclays U.S. Corporate High-Yield Bond Index is an unmanaged market value weighted index composed of fixed-rate, publicly issued, non-investment grade debt.

### Citi World Government Bond Index (WGBI) ex US

Measures the performance of fixed-rate, local currency, investment-grade sovereign bonds, not including those of the United States.

### Dow Jones US Select REIT Index

Is comprised of all publicly traded real estate investment trusts in the Dow Jones U.S. stock universe (i.e. real estate investment trusts (REITs) and real estate operating companies (REOCs) traded in the U.S.). The indexes are designed to serve as proxies for direct real estate investment, in part by excluding companies whose performance may be driven by factors other than the value of real estate. Date of introduction Total Return: January 30, 1987; Price Return: December 31, 1998

### The MSCI ACWI (All Country World Index)

The MSCI ACWI (All Country World Index) Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. The MSCI All Country World Index includes 48 markets. The index has been calculated since 1995

### MSCI ACWI Ex USA Growth Index

The MSCI ACWI ex USA Growth Index captures large and mid cap securities exhibiting overall growth style characteristics across 22 Developed Markets (DM) countries and 23 Emerging Markets (EM) countries. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend.

### MSCI World Ex USA Index

Captures large and mid cap representation across 22 of 23 Developed Markets (DM) countries--excluding the United States. With 1,024 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

### MSCI World Ex USA Value Index

Captures large and mid cap securities exhibiting overall value style characteristics across 22 of 23 Developed Markets countries. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield.

### MSCI World Ex USA Small Cap Index

Captures small cap representation across 22 of 23 Developed Markets (DM) countries (excluding the United States). With 2,454 constituents, the index covers approximately 14% of the free float-adjusted market capitalization in each country.

### MSCI US Broad Market Index

The MSCI US Broad Market Index captures broad US equity coverage. The index includes 3,204 constituents across large, mid, small and micro capitalizations, representing about 99% of the US equity universe.

### MSCI Emerging Markets Index

The MSCI Emerging Markets Index has a base date of December 31, 1987. It is a free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets.

### MSCI Emerging Markets Growth Index

Captures large and mid cap securities exhibiting overall growth style characteristics across 23 Emerging Markets (EM) countries. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend.

### MSCI Emerging Markets Value Index

Captures large and mid cap securities exhibiting overall value style characteristics across 23 Emerging Markets (EM) countries. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield.

### MSCI Emerging Markets Small Cap Index

Includes small cap representation across 23 Emerging Markets countries. With 1,840 constituents, the index covers approximately 14% of the free float-adjusted market capitalization in each country.

### Russell 1000 Index

The Russell 1000 Index consists of the 1,000 largest securities in the Russell 3000 Index, which represents approximately 90% of the total market capitalization of the Russell 3000 Index. It is a large-cap, market-oriented index and is highly correlated with the S&P 500 Index.

### Russell 1000 Value Index

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. . The index is a subset of the much larger Russell 3000 Index It is reconstituted annually.

#### Russell 2000 Index

The Russell 2000 Index measures the performance of the small-cap segment of the U.S. equity universe. The Russell 2000 Index is a subset of the Russell 3000® Index representing approximately 10% of the total market capitalization of that index. It includes approximately 2000 of the smallest securities based on a combination of their market cap and current index membership. It is reconstituted annually and was launched in 1984.

#### Russell 2000 Growth Index

Measures the performance of those Russell 2000 companies with higher price-to book ratios and higher forecasted growth values.

#### Russell 2000 Value Index

Measures the performance of those Russell 2000 companies with lower price-to book ratios and lower forecasted growth values.

#### Russell 3000 Index

The Russell 3000 Index measures the performance of the largest 3000 U.S. companies representing approximately 98% of the investable U.S. equity market. The U.S.-based requirement disqualifies many large international firms from inclusion into the index. It is reconstituted annually and was started in 1984. The Russell indices are owned and maintained by Russell Investments.

#### Standard & Poor's 500 Index

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

#### S&P Global REIT Index

The index consists of all real estate investment trusts in both developed and emerging markets. S&P Global REIT ex-US Index The index consists of all real estate investment trusts in both developed and emerging markets, not including the United States.

#### S&P National AMT-Free Municipal Bond Index

The S&P National AMT-Free Municipal Bond Index is a broad, comprehensive, market value-weighted index designed to measure the performance of the investment-grade tax-exempt U.S. municipal bond market.