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# Q2

Quarterly Market Review

Second Quarter 2016

# Quarterly Market Review

Second Quarter 2016

This report features world capital market performance and a timeline of events for the past 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 performance of globally diversified portfolios and features a quarterly topic.

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## Overview:

Market Summary

World Stock Market Performance

World Asset Classes

US Stocks

International Developed Stocks

Emerging Markets Stocks

Select Country Performance

Real Estate Investment Trusts (REITs)

Commodities







Fixed Income

Global Diversification

Quarterly Topic: GDP Growth and Equity Returns

# Market Summary

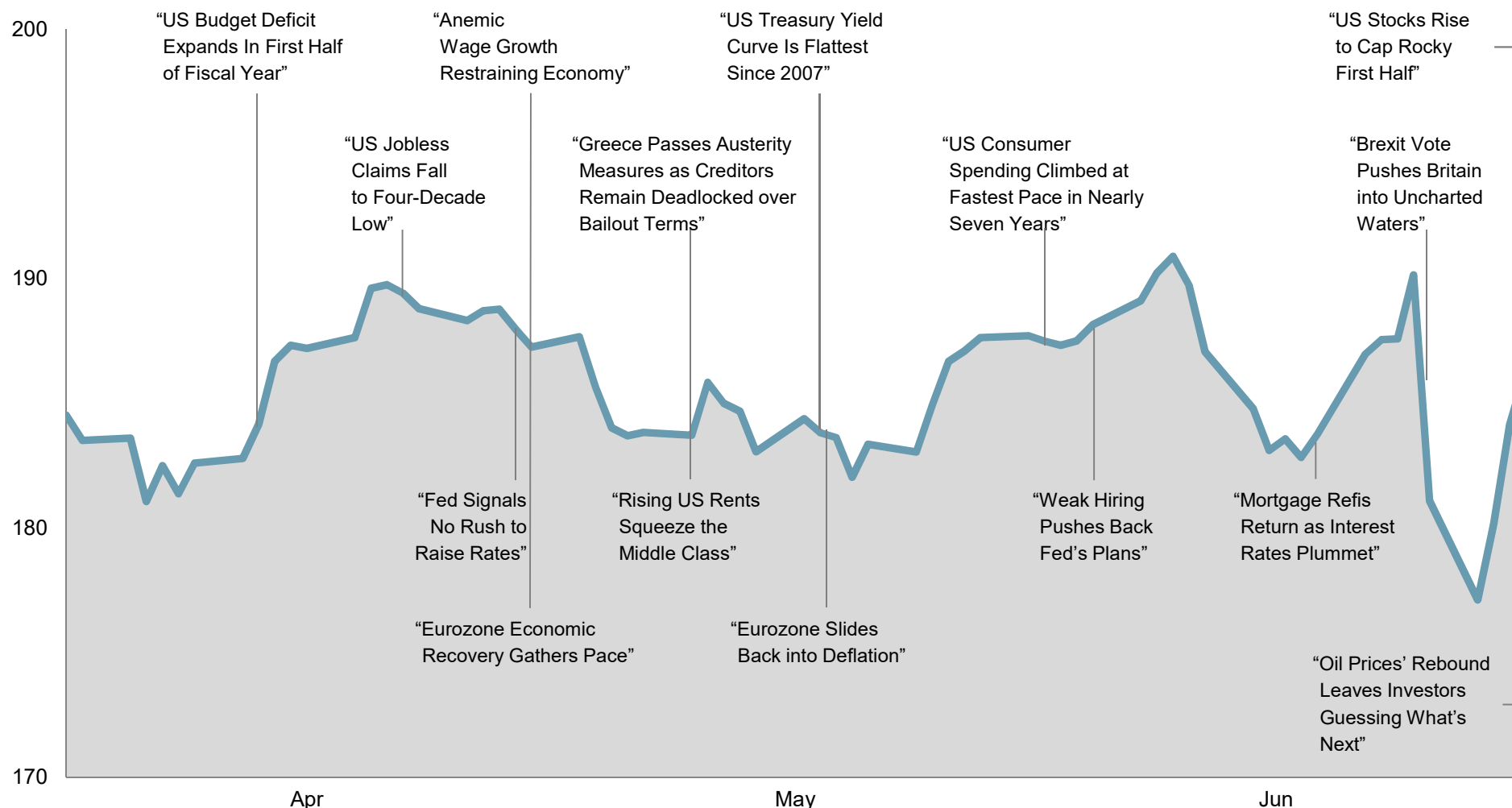
## Index Returns

	US Stock Market	International Developed Stocks	Emerging Markets Stocks	Global Real Estate	US Bond Market	Global Bond Market ex US
<b>2Q 2016</b>	<b>STOCKS</b>				<b>BONDS</b>	
	<b>2.63%</b> 	<b>-1.05%</b> 	<b>0.66%</b> 	<b>4.48%</b> 	<b>2.21%</b> 	<b>3.11%</b> 
<b>Since Jan. 2001</b>						
Avg. Quarterly Return	1.7%	1.3%	2.9%	2.9%	1.3%	1.2%
Best Quarter	16.8% <b>Q2 2009</b>	25.9% <b>Q2 2009</b>	34.7% <b>Q2 2009</b>	32.3% <b>Q3 2009</b>	4.6% <b>Q3 2001</b>	5.5% <b>Q4 2008</b>
Worst Quarter	-22.8% <b>Q4 2008</b>	-21.2% <b>Q4 2008</b>	-27.6% <b>Q4 2008</b>	-36.1% <b>Q4 2008</b>	-2.4% <b>Q2 2004</b>	-3.2% <b>Q2 2015</b>

**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), US Bond Market (Barclays US Aggregate Bond Index), and Global Bond ex US Market (Citigroup WGBI ex USA 1–30 Years [Hedged to USD]). The S&P data are 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 2016, all rights reserved. Barclays data provided by Barclays Bank PLC. Citigroup bond indices © 2016 by Citigroup.

# World Stock Market Performance

MSCI All Country World Index with selected headlines from Q2 2016



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.

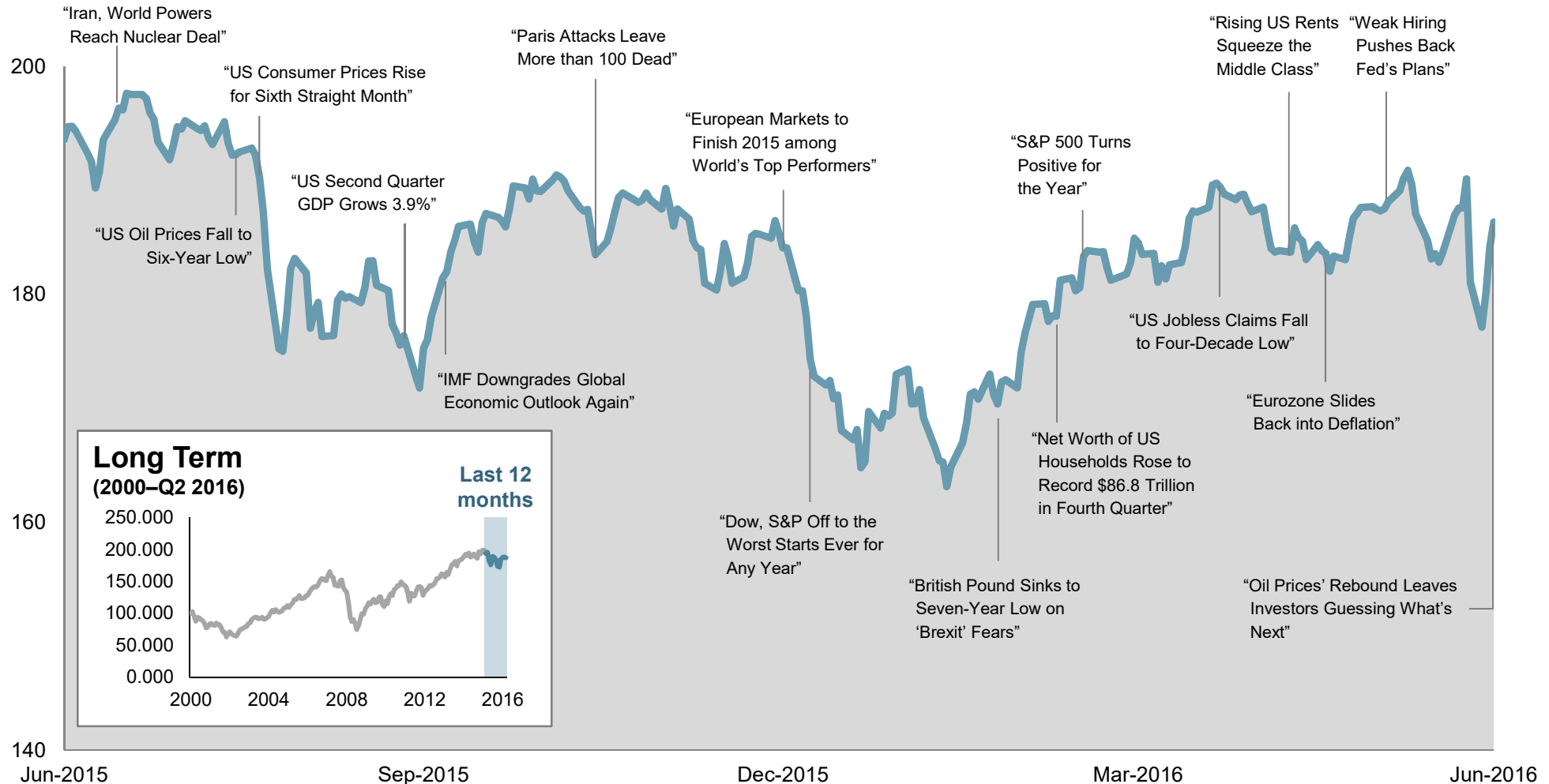
Graph Source: MSCI ACWI Index. MSCI data © MSCI 2016, all rights reserved.

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 2015–Q2 2016)



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. MSCI data © MSCI 2016, all rights reserved.

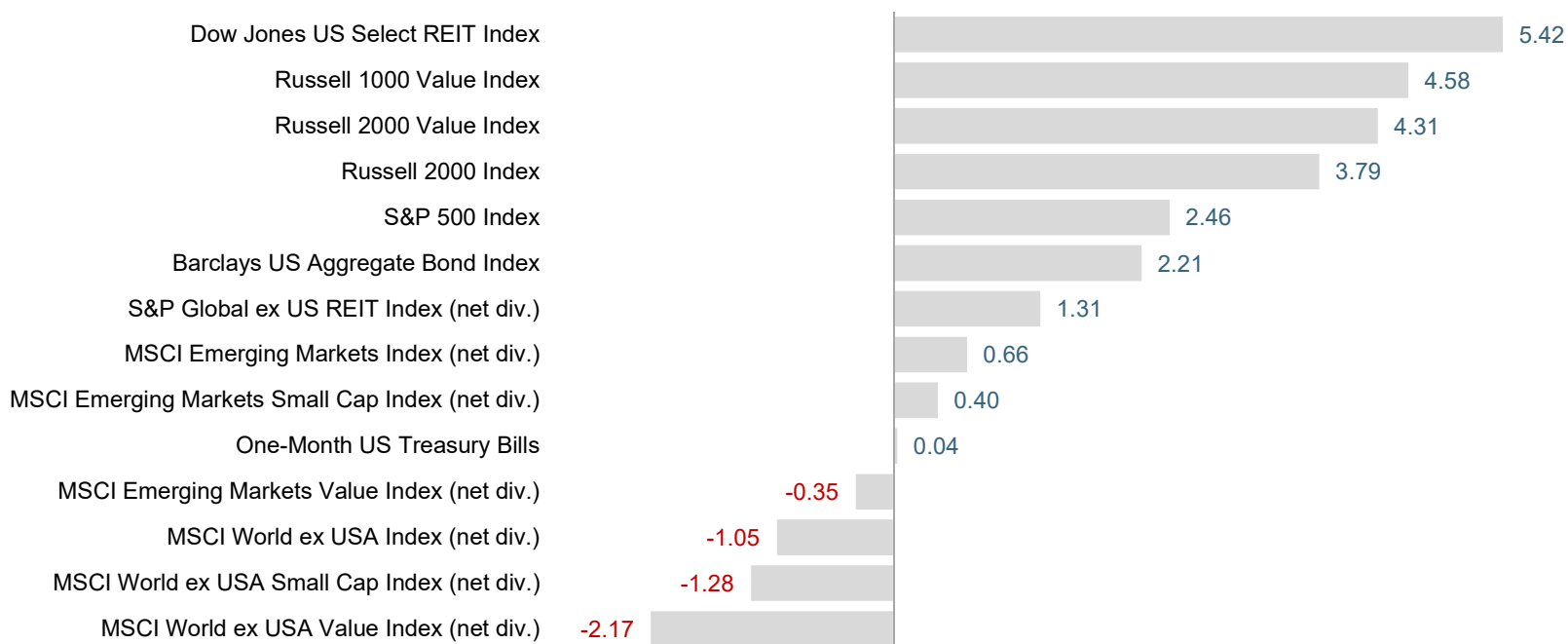
It is not possible to invest directly in an index. Performance does not reflect the expenses associated with management of an actual portfolio. **Past performance is not a guarantee of future results.**

# World Asset Classes

## Second Quarter 2016 Index Returns (%)

Looking at broad market indices, the US outperformed developed markets outside the US and emerging markets. US REITs recorded the highest returns, outperforming the broad equity market.

The value effect was positive in the US but negative in developed and emerging markets. Small caps outperformed large caps in the US but slightly underperformed in the developed and emerging markets.



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## US Stocks

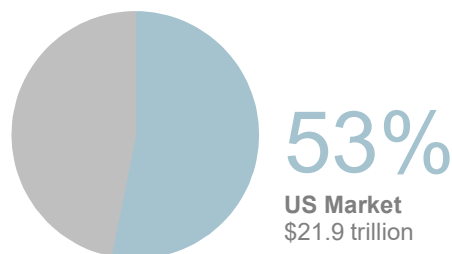
### Second Quarter 2016 Index Returns

The broad US equity market recorded positive absolute performance for the quarter.

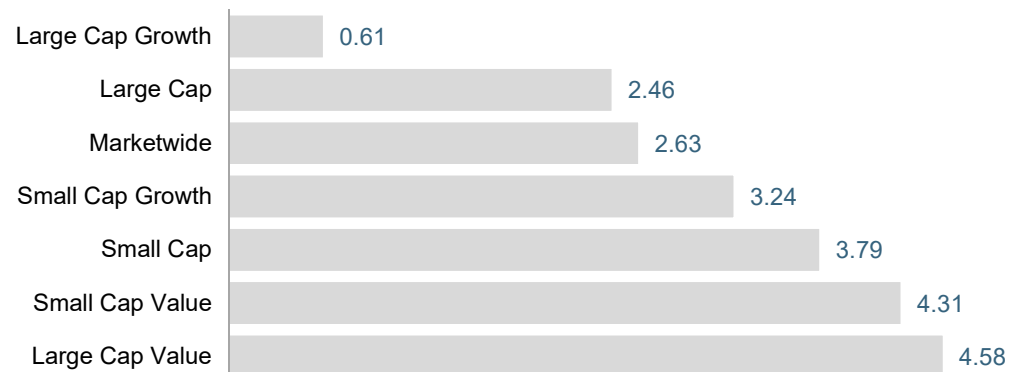
Value indices outperformed growth indices across all size ranges.

Small caps outperformed large caps.

### World Market Capitalization—US



### Ranked Returns for the Quarter (%)



### Period Returns (%)

\* Annualized

Asset Class	YTD	1 Year	3 Years*	5 Years*	10 Years*
Marketwide	3.62	2.14	11.13	11.60	7.40
Large Cap	3.84	3.99	11.66	12.10	7.42
Large Cap Value	6.30	2.86	9.87	11.35	6.13
Large Cap Growth	1.36	3.02	13.07	12.35	8.78
Small Cap	2.22	-6.73	7.09	8.35	6.20
Small Cap Value	6.08	-2.58	6.36	8.15	5.15
Small Cap Growth	-1.59	-10.75	7.74	8.51	7.15

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 (S&P 500 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 the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. The S&P data are provided by Standard & Poor's Index Services Group.

# International Developed Stocks

## Second Quarter 2016 Index Returns

In US dollar terms, developed markets outside the US lagged both the US equity market and emerging markets indices during the quarter.

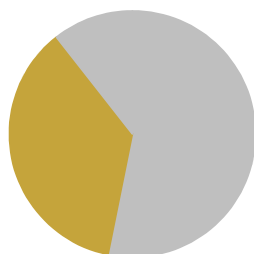
Small caps slightly underperformed large caps in non-US developed markets.

The value effect was negative in non-US developed markets using broad market indices across all size ranges.

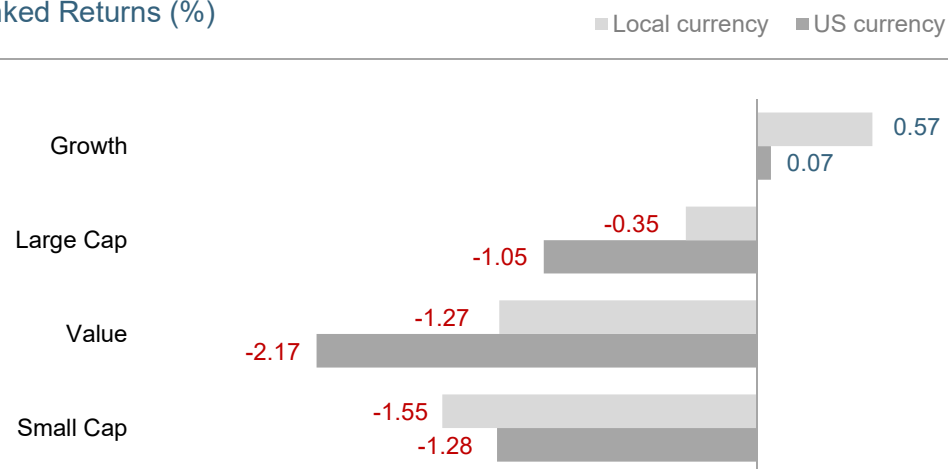
### World Market Capitalization—International Developed

**36%**

International  
Developed  
Market  
\$14.9 trillion



### Ranked Returns (%)



### Period Returns (%)

Asset Class	YTD	1 Year	3 Years*	5 Years*	10 Years*
Large Cap	-2.98	-9.84	1.88	1.23	1.63
Small Cap	-0.69	-3.35	6.34	3.61	3.33
Value	-4.68	-14.35	-0.24	-0.17	0.43
Growth	-1.29	-5.25	3.94	2.58	2.75

\* Annualized

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). 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 2016, all rights reserved.



# Emerging Markets Stocks

## Second Quarter 2016 Index Returns

In US dollar terms, emerging markets indices underperformed the US but outperformed developed markets outside the US.

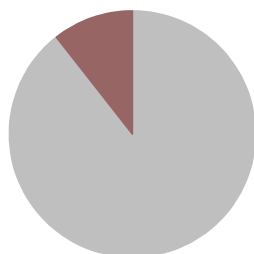
The value effect was negative in emerging markets using broad market indices. Large cap value indices underperformed large cap growth indices. The opposite was true among small caps: Small cap value indices outperformed small cap growth indices.

Small cap indices slightly underperformed large cap indices in emerging markets.

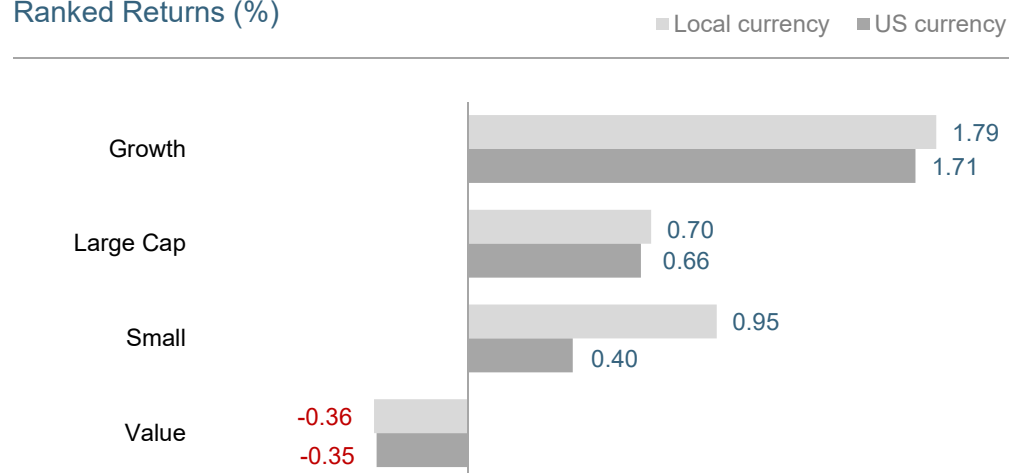
### World Market Capitalization—Emerging Markets

**11%**

Emerging Markets  
\$4.4 trillion



### Ranked Returns (%)



### Period Returns (%)

Asset Class	YTD	* Annualized			
		1 Year	3 Years*	5 Years*	10 Years*
Large Cap	6.41	-12.05	-1.56	-3.78	3.54
Small Cap	1.38	-12.76	-0.01	-2.29	5.98
Value	7.41	-14.41	-3.30	-5.53	3.29
Growth	5.43	-9.83	0.08	-2.11	3.71

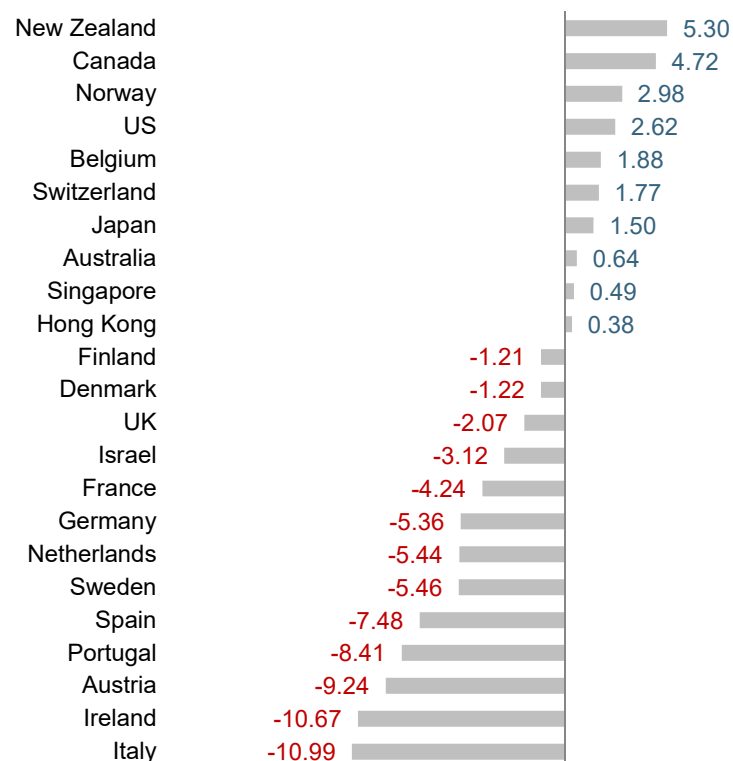
Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: Large Cap (MSCI Emerging Markets Index), Small 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 2016, all rights reserved.

# Select Country Performance

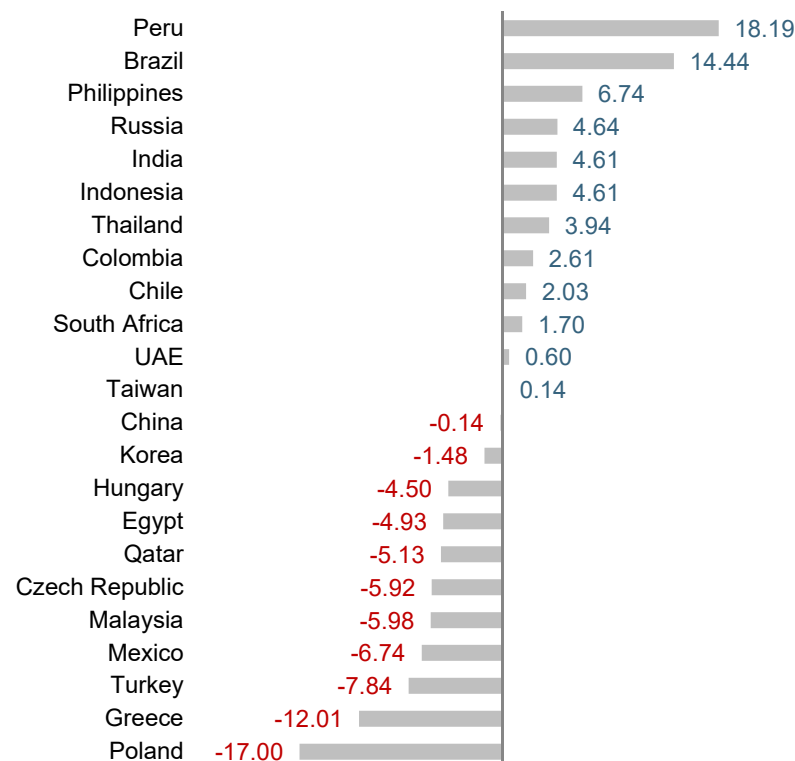
## Second Quarter 2016 Index Returns

New Zealand recorded the highest country performance in developed markets, while Italy and Ireland posted the lowest performance for the quarter. In emerging markets, Peru and Brazil again posted the highest country returns, while Poland and Greece recorded the lowest performance.

### Ranked Developed Markets Returns (%)



### Ranked Emerging Markets Returns (%)



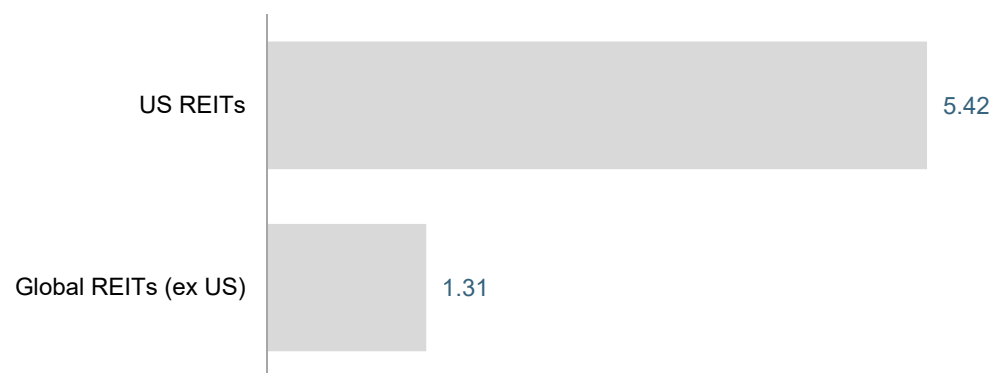
Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Country performance based on respective indices in the MSCI World ex US IMI Index (for developed markets), Russell 3000 Index (for US), and MSCI Emerging Markets IMI Index. All returns in USD and net of withholding tax on dividends. MSCI data © MSCI 2016, all rights reserved. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. UAE and Qatar have been reclassified as emerging markets by MSCI, effective May 2014.

# Real Estate Investment Trusts (REITs)

## Second Quarter 2016 Index Returns

US REITs had very strong positive returns for the quarter, outperforming the broad equity market. REITs in developed markets recorded positive returns, also outperforming broad developed equity markets indices.

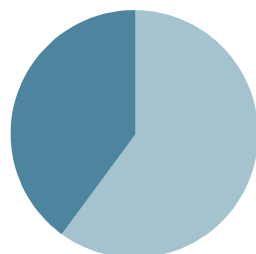
### Ranked Returns (%)



### Total Value of REIT Stocks

**40%**

**World ex US**  
 \$437 billion  
 246 REITs  
 (22 other countries)



**60%**

**US**  
 \$662 billion  
 99 REITs

### Period Returns (%)

\* Annualized

Asset Class	YTD	1 Year	3 Years*	5 Years*	10 Years*
US REITs	10.82	22.85	13.55	12.30	6.86
Global REITs (ex US)	10.02	7.25	6.96	5.91	3.31

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 US Select REIT Index data provided by Dow Jones ©. S&P Global ex US REIT Index data provided by Standard and Poor's Index Services Group © 2016.

## Commodities

### Second Quarter 2016 Index Returns

Commodities were broadly positive during the quarter. The Bloomberg Commodity Index Total Return gained 12.78%. Energy turned positive with natural gas gaining 30.88%, Brent crude oil 19.51%, and WTI crude oil 18.64%.

The Softs complex was also positive with sugar gaining 29.84%, coffee 10.90%, and cotton 10.29%.

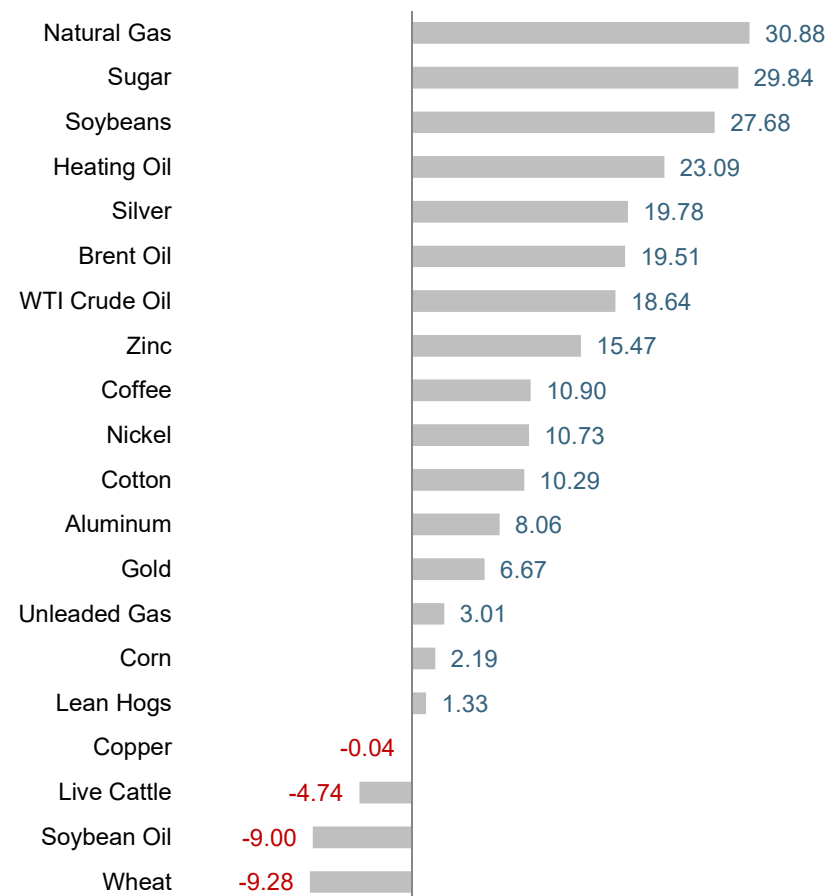
Grains were mixed: Soybeans returned 27.68%, yet Kansas wheat and Chicago wheat declined 16.26% and 9.28%, respectively.

#### Period Returns (%)

\* Annualized

Asset Class	YTD	1 Year	3 Years*	5 Years*	10 Years*
Commodities	13.25	-13.32	-10.55	-10.82	-5.59

#### Ranked Returns for Individual Commodities (%)



## Fixed Income

### Second Quarter 2016 Index Returns

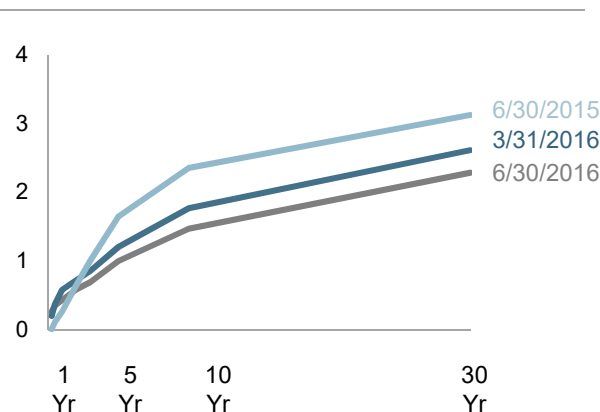
Interest rates across the US markets generally decreased during the quarter. The yield on the 5-year Treasury note fell 20 basis points (bps) to end at 1.01%. The yield on the 10-year T-note decreased 29 bps to 1.49%. The 30-year Treasury bond declined 31 bps to finish with a yield of 2.30%.

The 1-year T-bill ended the quarter yielding 0.45% and the 2-year T-note finished at 0.58%, for declines of 14 and 15 bps, respectively. The 3-month T-bill increased 5 bps to yield 0.26%, while the 6-month T-bill dipped 3 bps to 0.36%.

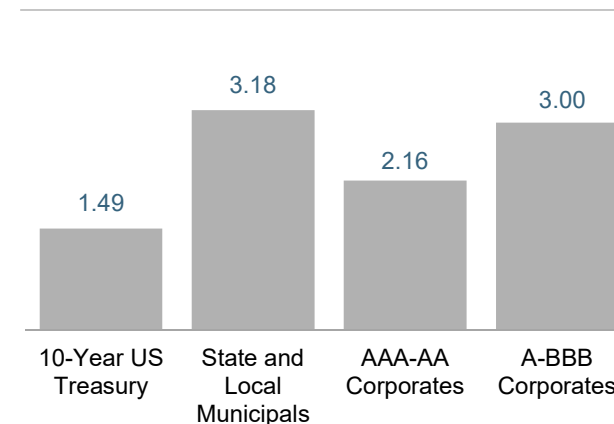
Short-term corporate bonds gained 1.05%. Intermediate-term corporates returned 2.24%, while long-term corporate bonds returned 6.64%.<sup>1</sup>

Short-term municipal bonds returned 0.66%, while intermediate-term municipal bonds gained 1.84%. Revenue bonds slightly outperformed general obligation bonds.<sup>2</sup>

#### US Treasury Yield Curve (%)



#### Bond Yields across Issuers (%)



#### Period Returns (%)

Asset Class	YTD	1 Year	3 Years*	5 Years*	10 Years*
BofA Merrill Lynch Three-Month US Treasury Bill Index	0.15	0.19	0.09	0.09	1.04
BofA Merrill Lynch 1-Year US Treasury Note Index	0.65	0.59	0.38	0.34	1.69
Citigroup WGBI 1-5 Years (hedged to USD)	1.86	2.36	1.82	1.84	2.98
Barclays Long US Government Bond Index	14.94	18.98	10.38	10.17	8.69
Barclays US Aggregate Bond Index	5.31	6.00	4.06	3.76	5.13
Barclays US Corporate High Yield Index	9.06	1.62	4.18	5.84	7.56
Barclays Municipal Bond Index	4.33	7.65	5.58	5.33	5.13
Barclays US TIPS Index	6.24	4.35	2.31	2.63	4.76

\* Annualized

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1. Barclays US Corporate Bond Index. 2. Barclays Municipal Bond Index. Yield curve data from Federal Reserve. State and local bonds are from the Bond Buyer Index, general obligation, 20 years to maturity, mixed quality. 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. Barclays data provided by Barclays Bank PLC. US long-term bonds, bills, inflation, and fixed income factor data © Stocks, Bonds, Bills, and Inflation (SBI) Yearbook™, Ibbotson Associates, Chicago (annually updated work by Roger G. Ibbotson and Rex A. Sinquefeld). Citigroup bond indices © 2016 by Citigroup. The BofA Merrill Lynch Indices are used with permission; © 2016 Merrill Lynch, Pierce, Fenner & Smith Incorporated; all rights reserved. Merrill Lynch, Pierce, Fenner & Smith Incorporated is a wholly owned subsidiary of Bank of America Corporation.

## Global Diversification

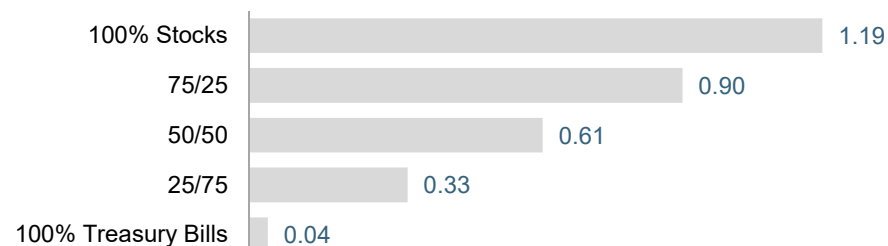
### Second Quarter 2016 Index Returns

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.

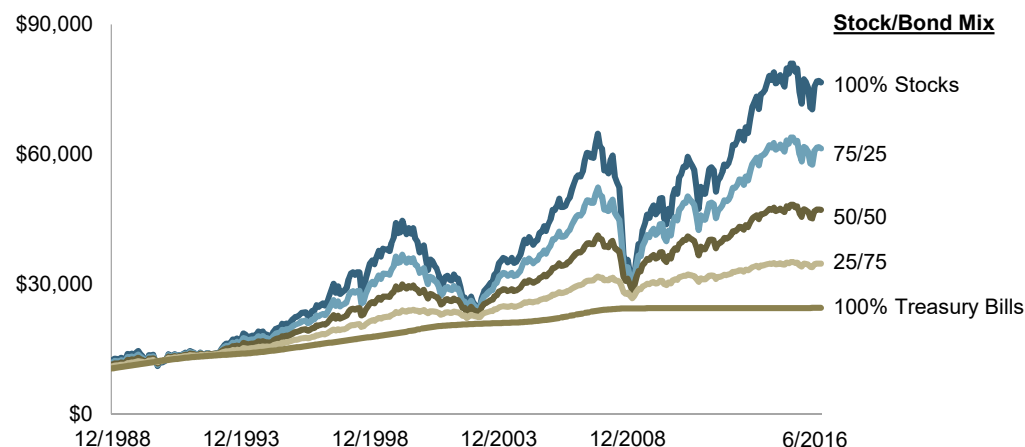
Period Returns (%) \* Annualized

Asset Class	YTD	1 Year	3 Years*	5 Years*	10 Years*
100% Stocks	1.58	-3.17	6.60	5.95	4.82
75/25	1.29	-2.16	5.06	4.62	4.12
50/50	0.95	-1.28	3.45	3.19	3.23
25/75	0.54	-0.52	1.78	1.66	2.16
100% Treasury Bills	0.09	0.10	0.04	0.04	0.91

### Ranked Returns (%)



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



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 2016, 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).

# GDP Growth and Equity Returns

Many investors look to gross domestic product (GDP) as an indicator of future equity returns

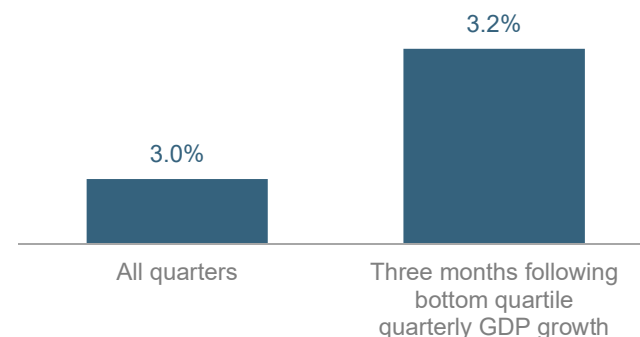
According to the advance GDP estimate released by the Bureau of Economic Analysis (BEA) on April 28, annualized real US GDP growth was 0.5% in the first quarter of 2016—below the historical average of 3.2%.<sup>1</sup> This might prompt some investors to ask whether below-average quarterly GDP growth has implications for their portfolios.

Market participants continually update their expectations about the future, including expectations about the future state of the economy. The current prices of the stocks and bonds held by investors therefore contain up-to-date information about expected GDP growth and a multitude of other considerations that inform aggregate market expectations. Accordingly, only new information that is not already incorporated in market prices should impact stock and bond returns.

Quarterly GDP estimates are released with a one-month lag and are frequently revised at a later point in time. Initial quarterly GDP estimates were revised for 54 of the 56 quarters from 2002 to 2015.<sup>2</sup> Thus, the final estimate for last quarter may end up being higher or lower than 0.5%.

Prices already reflect expected GDP growth prior to the official release of quarterly GDP estimates. The unexpected component (positive or negative) of a GDP growth estimate is quickly incorporated into prices when a new estimate is released. A relevant question for investors is whether a period of low quarterly GDP growth has information about short-term stock returns going forward.

## Quarterly S&P 500 Index Returns, 1948–2016



From 1948 to 2016, the average quarterly return for the S&P 500 Index was 3%. When quarterly GDP growth was in the lowest quartile of historical observations, the average S&P 500 return in the subsequent quarter was 3.2%, which is similar to the historical average for all quarters. This data suggests there is little evidence that low quarterly GDP growth is associated with short-term stock returns above or below returns in other periods.

Sources: S&P Dow Jones Indices, Bureau of Economic Analysis.  
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1. Source: Bureau of Economic Analysis.

2. 2002 to 2015 is the longest time period for which BEA provides data comparing initial to final estimates. The average difference between an initial and final estimate was 1% in absolute magnitude over this time period.

Adapted from "GDP Growth and Equity Returns," Issue Brief, May 2016. Dimensional Fund Advisors LP is an investment advisor registered with the Securities and Exchange Commission.

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