

Q1

Quarterly Market Review

First Quarter 2019

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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 impact of globally diversified portfolios and features a quarterly topic.

Overview:

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







Global Fixed Income

Impact of Diversification

Quarterly Topic: Déjà Vu All Over Again

Quarterly Market Summary



















Index Returns

	US Stock Market	International Developed Stocks	Emerging Markets Stocks	Global Real Estate		US Bond Market	Global Bond Market ex US
Q1 2019	STOCKS					BONDS	
	14.04% 	10.45% 	9.92% 	14.07% 		2.94% 	2.96% 
Since Jan. 2001							
Avg. Quarterly Return	2.0%	1.4%	2.9%	2.6%		1.1%	1.1%
Best Quarter	16.8%	25.9%	34.7%	32.3%		4.6%	4.6%
	2009 Q2	2009 Q2	2009 Q2	2009 Q3		2001 Q3	2008 Q4
Worst Quarter	-22.8%	-21.2%	-27.6%	-36.1%		-3.0%	-2.7%
	2008 Q4	2008 Q4	2008 Q4	2008 Q4		2016 Q4	2015 Q2

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 © 2019 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 2019, all rights reserved. Bloomberg Barclays data provided by Bloomberg.

Long-Term Market Summary

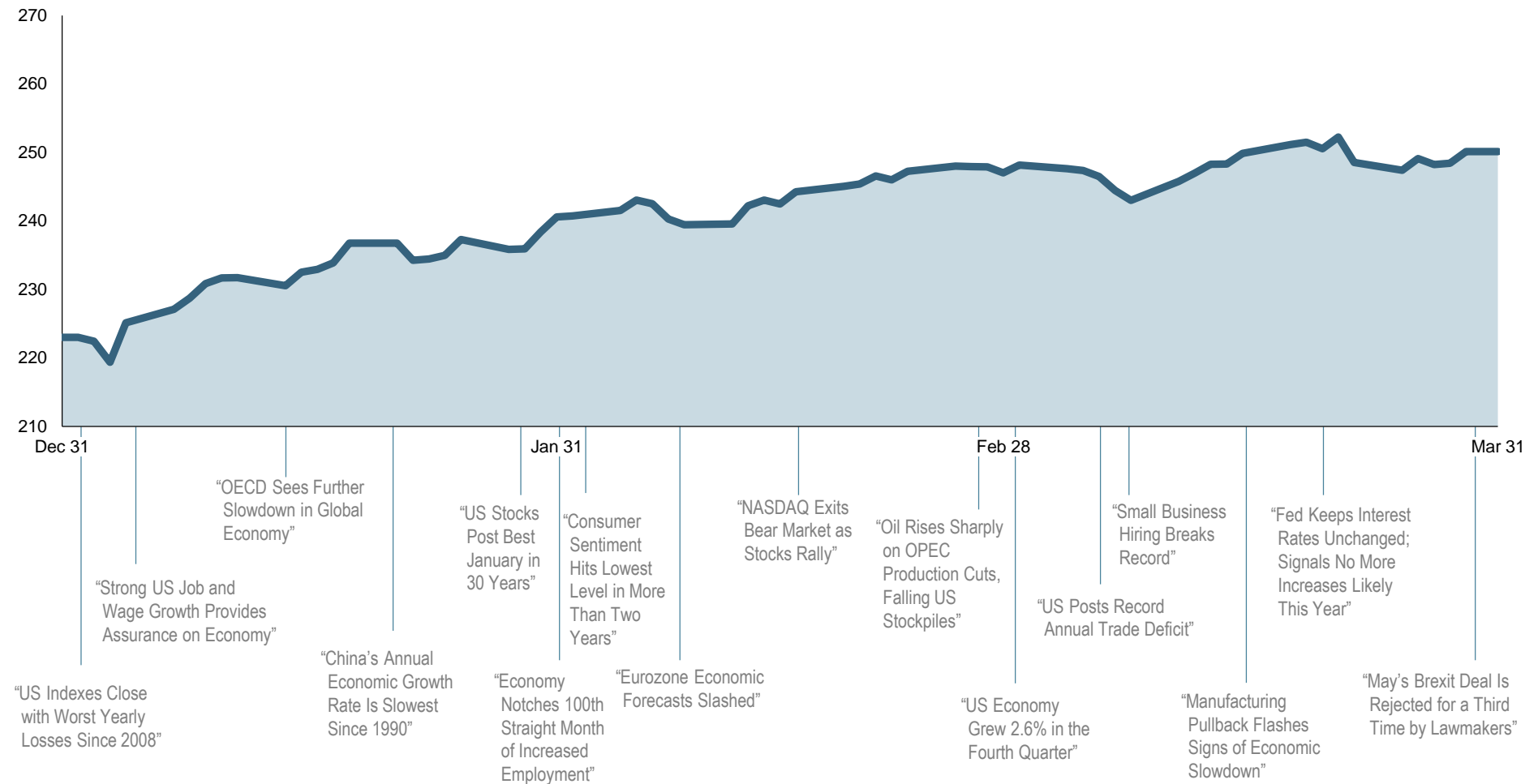
Index Returns

	US Stock Market	International Developed Stocks	Emerging Markets Stocks	Global Real Estate	US Bond Market	Global Bond Market ex US
1 Year	STOCKS				BONDS	
	8.77%	-3.14%	-7.41%	13.93%	4.48%	5.23%
						
5 Years						
	10.36%	2.20%	3.68%	6.63%	2.74%	4.27%
						
10 Years						
	16.00%	8.82%	8.94%	14.84%	3.77%	4.29%
						

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World Stock Market Performance

MSCI All Country World Index with selected headlines from Q1 2019



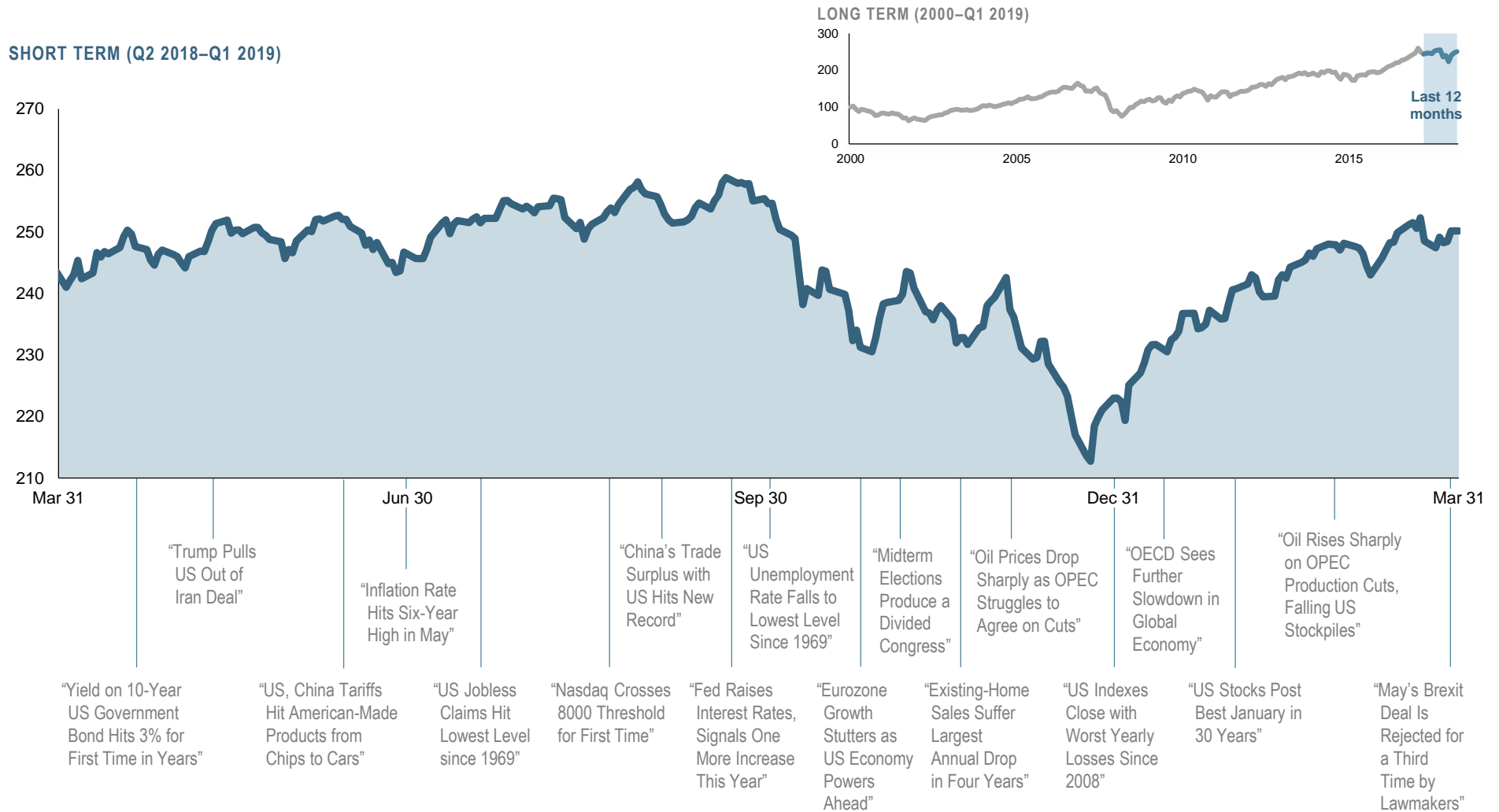
These headlines are not offered to explain market returns. Instead, they serve as a reminder that investors should view daily events from a long-term perspective and avoid making investment decisions based solely on the news.

Graph Source: MSCI ACWI Index [net div.]. MSCI data © MSCI 2019, 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



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 2019, all rights reserved.

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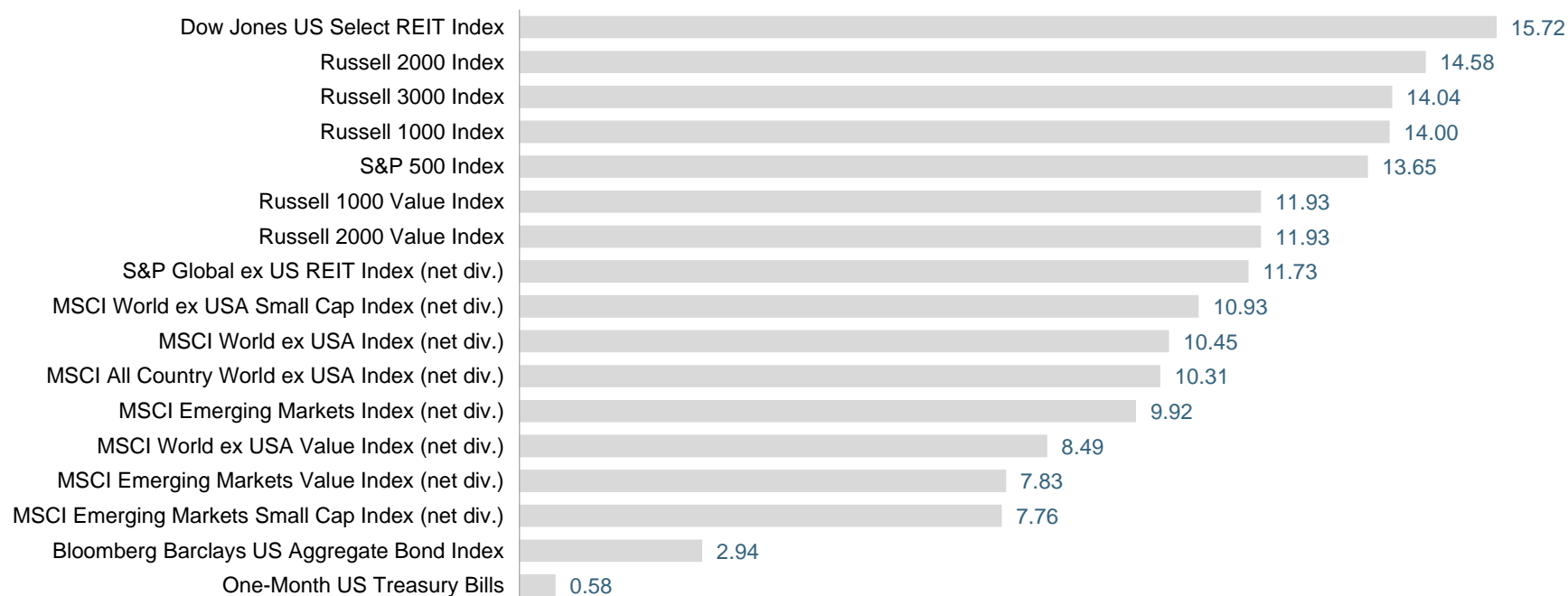
World Asset Classes

First Quarter 2019 Index Returns (%)

Equity markets posted positive returns around the globe in the first quarter. Looking at broad market indices, US equities outperformed non-US developed and emerging markets.

Small caps outperformed large caps in the US and non-US developed markets but underperformed in emerging markets. Value stocks generally underperformed growth stocks in all regions.

REIT indices outperformed equity market indices in both the US and non-US developed markets.



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US Stocks

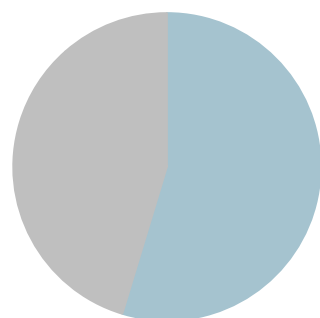
First Quarter 2019 Index Returns

US equities outperformed both non-US developed and emerging markets.

Small caps outperformed large caps in the US.

Value underperformed growth across large and small cap stocks.

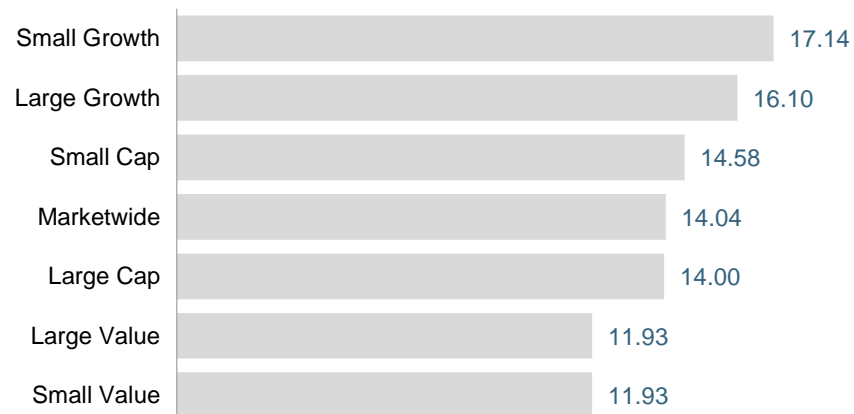
World Market Capitalization—US



55%

US Market
\$28.3 trillion

Ranked Returns for the Quarter (%)



Period Returns (%)

* Annualized

Asset Class	1 Year	3 Years*	5 Years*	10 Years*
Large Growth	12.75	16.53	13.50	17.52
Large Cap	9.30	13.52	10.63	16.05
Large Value	5.67	10.45	7.72	14.52
Small Growth	3.85	14.87	8.41	16.52
Small Cap	2.05	12.92	7.05	15.36
Small Value	0.17	10.86	5.59	14.12
Marketwide	8.77	13.48	10.36	16.00

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 the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. MSCI data © MSCI 2019, all rights reserved.

International Developed Stocks

First Quarter 2019 Index Returns

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

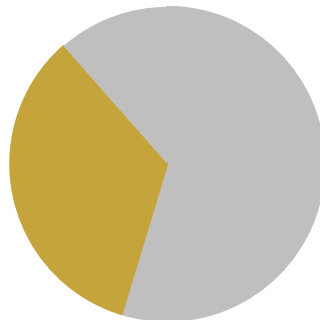
Small caps outperformed large caps in non-US developed markets.

Value underperformed growth across large and small cap stocks.

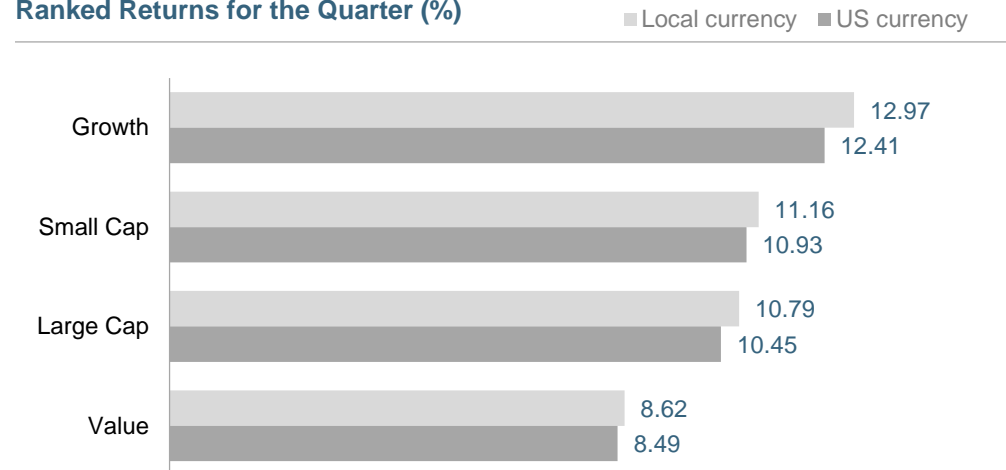
World Market Capitalization—International Developed

34%

International Developed Market
\$17.5 trillion



Ranked Returns for the Quarter (%)



Period Returns (%)

Asset Class	* Annualized			
	1 Year	3 Years*	5 Years*	10 Years*
Growth	-0.82	7.42	3.67	9.35
Large Cap	-3.14	7.29	2.20	8.82
Value	-5.46	7.13	0.68	8.25
Small Cap	-8.66	7.28	3.69	12.25

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Emerging Markets Stocks

First Quarter 2019 Index Returns

In US dollar terms, emerging markets underperformed developed markets, including the US.

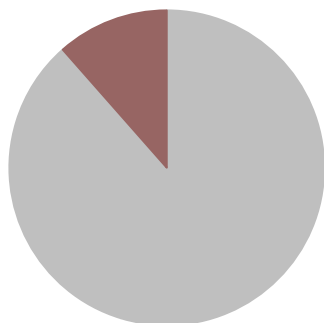
Value outperformed growth across small cap stocks but underperformed in large caps.

Small caps underperformed large caps.

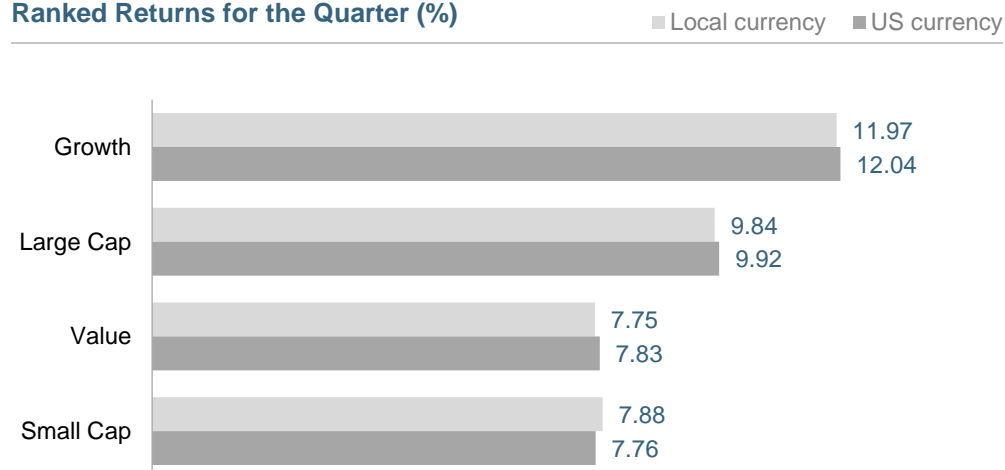
World Market Capitalization—Emerging Markets

11%

Emerging Markets
\$6.0 trillion



Ranked Returns for the Quarter (%)



Period Returns (%)

* Annualized

Asset Class	1 Year	3 Years*	5 Years*	10 Years*
Value	-5.27	9.54	2.21	7.83
Large Cap	-7.41	10.68	3.68	8.94
Growth	-9.52	11.75	5.04	9.98
Small Cap	-12.42	5.95	1.76	10.37

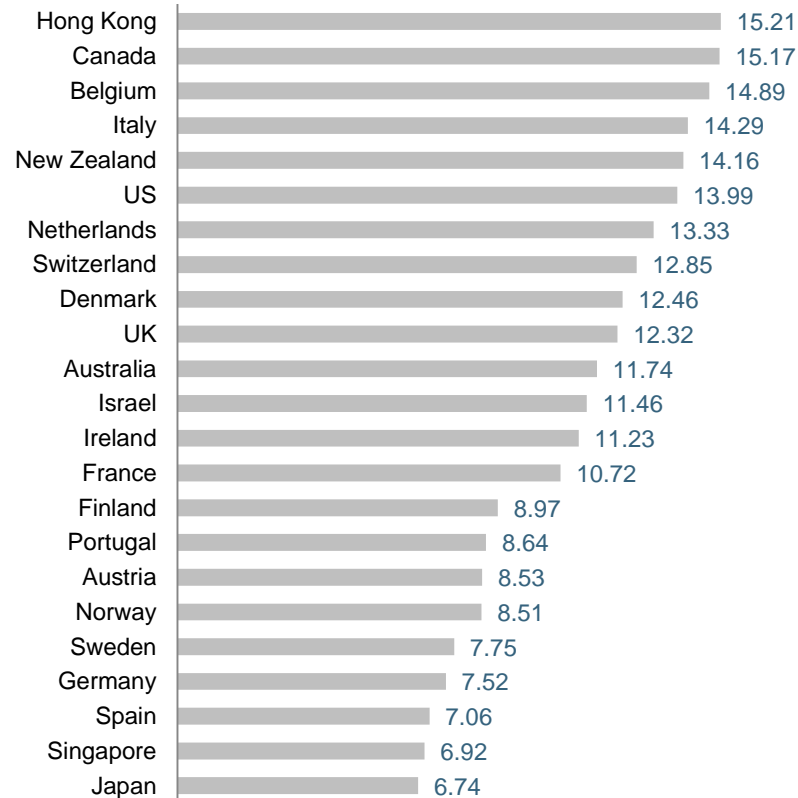
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Select Country Performance

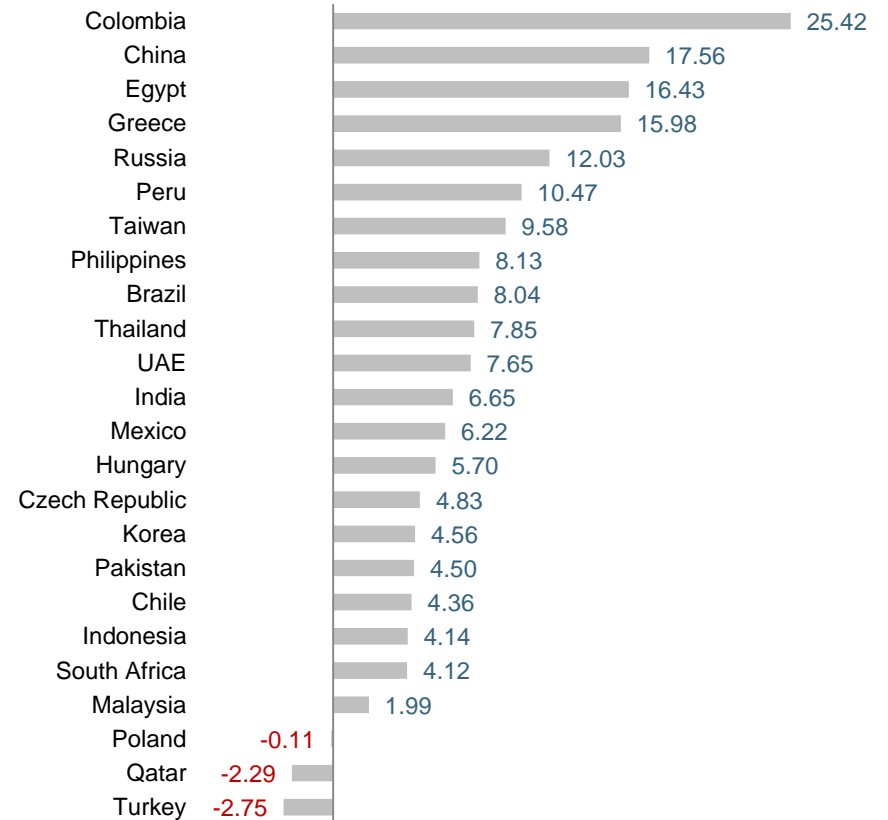
First Quarter 2019 Index Returns

In US dollar terms, Hong Kong and Canada recorded the highest country performance in developed markets, while Japan and Singapore posted the lowest returns for the quarter. In emerging markets, Columbia and China recorded the highest country performance, while Turkey and Qatar posted the lowest performance.

Ranked Developed Markets Returns (%)



Ranked Emerging Markets Returns (%)



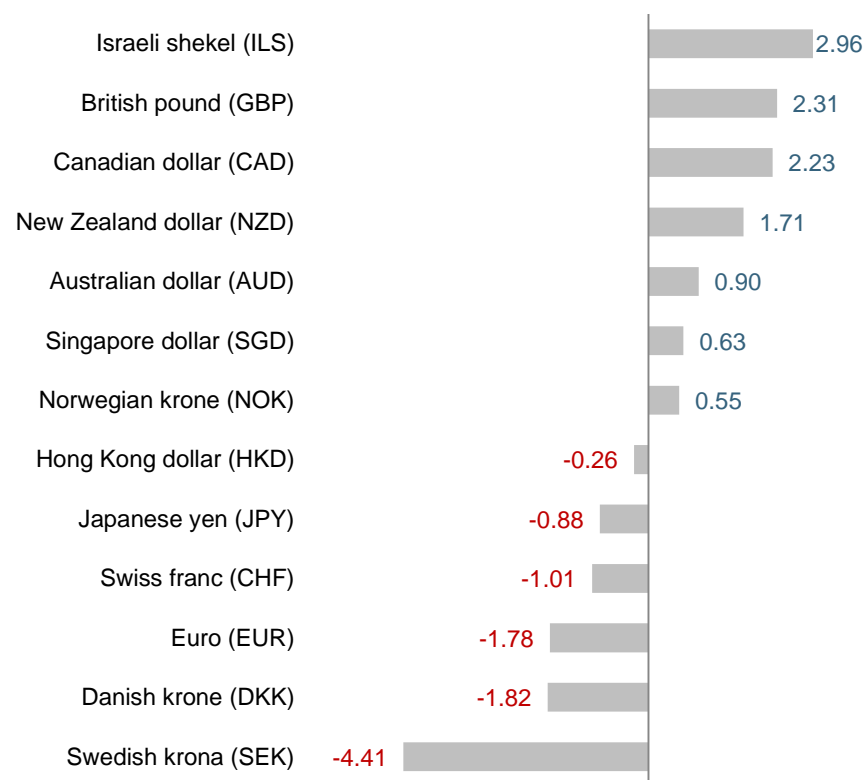
Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Country performance based on respective indices in the MSCI World ex US IMI Index (for developed markets), 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 2019, all rights reserved. UAE and Qatar have been reclassified as emerging markets by MSCI, effective May 2014.

Select Currency Performance vs. US Dollar

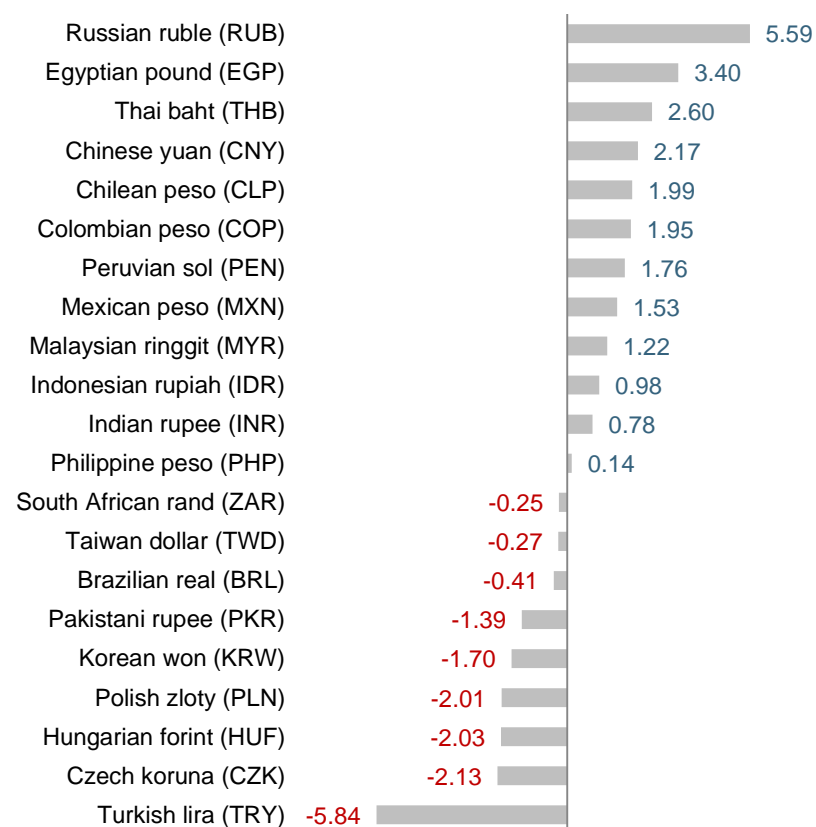
First Quarter 2019

Currencies were mixed against the US dollar in both developed and emerging markets.

Ranked Developed Markets (%)



Ranked Emerging Markets (%)



Real Estate Investment Trusts (REITs)

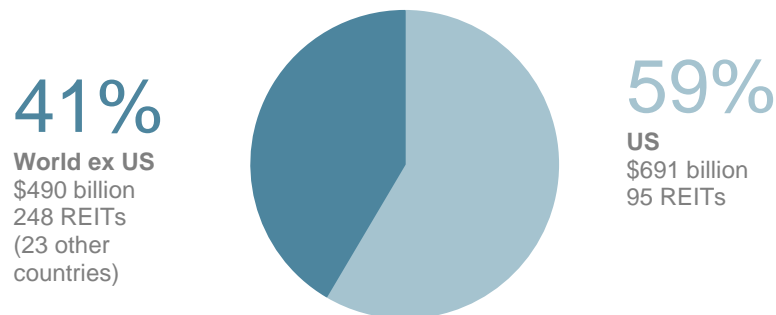
First Quarter 2019 Index Returns

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

Ranked Returns for the Quarter (%)



Total Value of REIT Stocks



Period Returns (%)

* Annualized

Asset Class	1 Year	3 Years*	5 Years*	10 Years*
US REITS	19.73	5.29	8.93	18.50
Global ex US REITS	4.75	4.34	5.03	12.18

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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 and S&P data © 2019 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved.

Commodities

First Quarter 2019 Index Returns

The Bloomberg Commodity Index Total Return returned 6.32% for the first quarter of 2019.

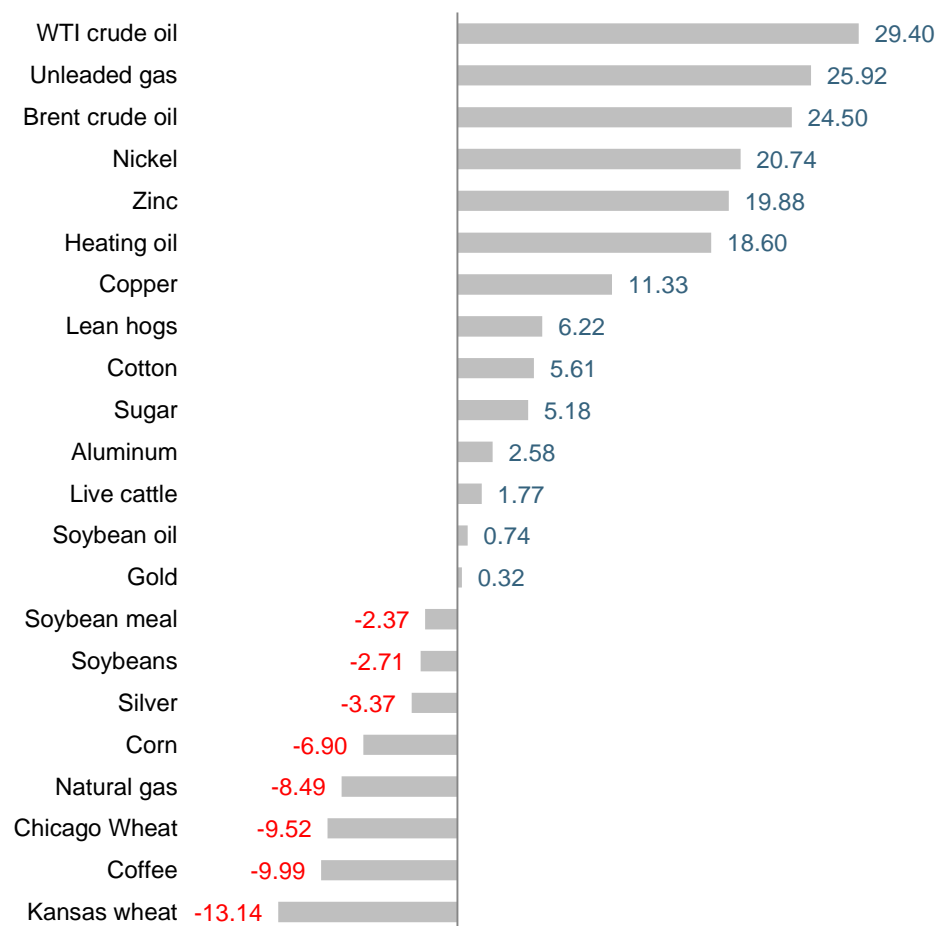
The energy complex led quarterly performance. Crude oil gained 29.40%, and unleaded gas added 25.92%.

Grains was the worst-performing complex. Wheat (Kansas) and wheat (Chicago) declined by 13.14% and 9.52%, respectively.

Period Returns (%) * Annualized

Asset Class	QTR	1 Year	3 Years*	5 Years*	10 Years*
Commodities	6.32	-5.25	2.22	-8.92	-2.56

Ranked Returns for Individual Commodities (%)



Fixed Income

First Quarter 2019 Index Returns

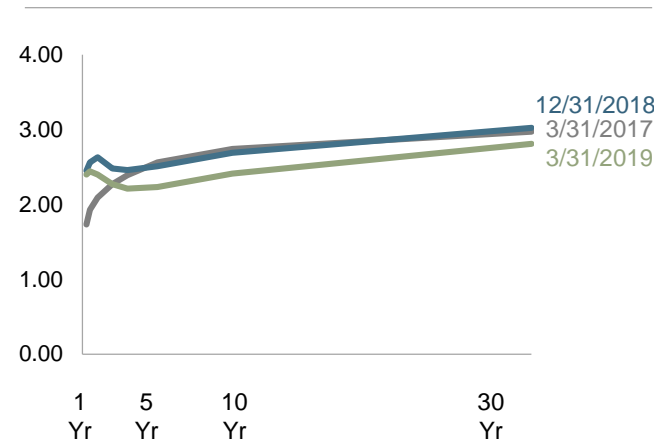
Interest rates decreased in the US Treasury fixed income market during the first quarter. The yield on the 5-year Treasury note declined 28 basis points (bps), ending at 2.23%. The yield on the 10-year Treasury note decreased 28 bps to 2.41%. The 30-year Treasury bond yield fell 21 bps to finish at 2.81%.

On the short end of the curve, the 1-month T-bill yield was relatively unchanged at 2.43%, while the 1-year T-bill yield dipped 23 bps to 2.40%. The 2-year Treasury note finished at 2.27% after a 21 bps decrease.

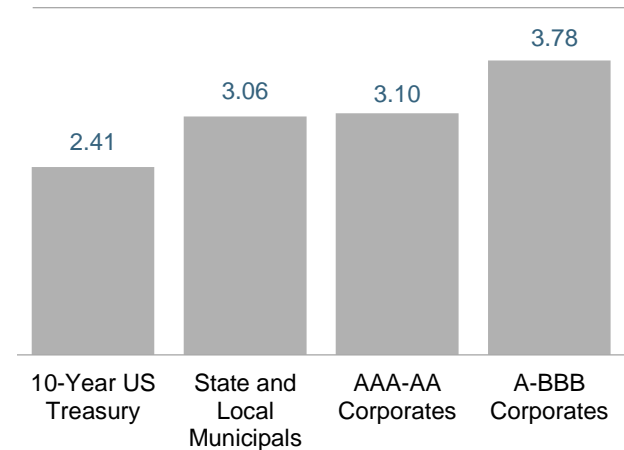
In terms of total returns, short-term corporate bonds gained 1.83%. Intermediate-term corporate bonds had a total return of 3.82%.

Total returns for short-term municipal bonds were 1.33%, while intermediate munis gained 2.78%. Revenue bonds outperformed general obligation bonds.

US Treasury Yield Curve (%)



Bond Yield across Issuers (%)



Period Returns (%)

Asset Class	QTR	1 Year	3 Years*	5 Years*	10 Years*
Bloomberg Barclays Municipal Bond Index	2.90	5.38	2.71	3.73	4.72
Bloomberg Barclays US Aggregate Bond Index	2.94	4.48	2.03	2.74	3.77
Bloomberg Barclays US Government Bond Index Long	4.64	6.20	1.54	5.43	5.19
Bloomberg Barclays US High Yield Corporate Bond Index	7.26	5.93	8.56	4.68	11.26
Bloomberg Barclays US TIPS Index	3.19	2.70	1.70	1.94	3.41
FTSE World Government Bond Index 1-5 Years	0.34	-2.04	0.40	-0.95	0.71
FTSE World Government Bond Index 1-5 Years (hedged to USD)	1.16	3.13	1.59	1.65	1.73
ICE BofAML 1-Year US Treasury Note Index	0.82	2.44	1.21	0.85	0.70
ICE BofAML US 3-Month Treasury Bill Index	0.60	2.12	1.19	0.74	0.43

*Annualized

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 ICE BofAML 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 (SBBII) Yearbook™, Ibbotson Associates, Chicago (annually updated work by Roger G. Ibbotson and Rex A. Sinquefeld). FTSE fixed income indices © 2019 FTSE Fixed Income LLC, all rights reserved. ICE BofAML index data © 2019 ICE Data Indices, LLC. S&P data © 2019 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved.

Global Fixed Income

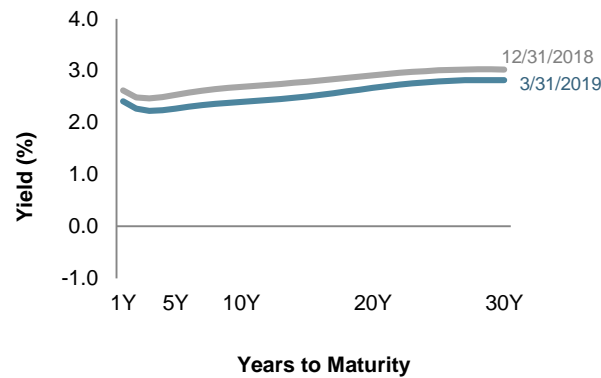
First Quarter 2019 Yield Curves

Interest rates in the global developed markets generally decreased during the quarter.

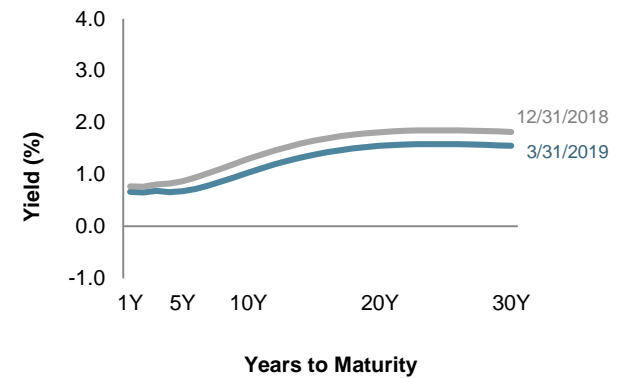
Longer-term bonds generally outperformed shorter-term bonds.

Nominal rates in Germany and Japan are negative out to approximately 10 years.

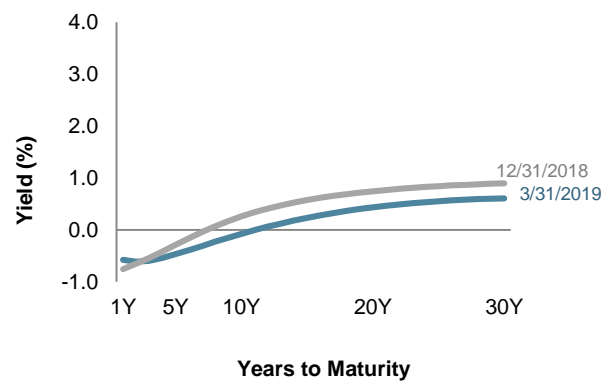
US



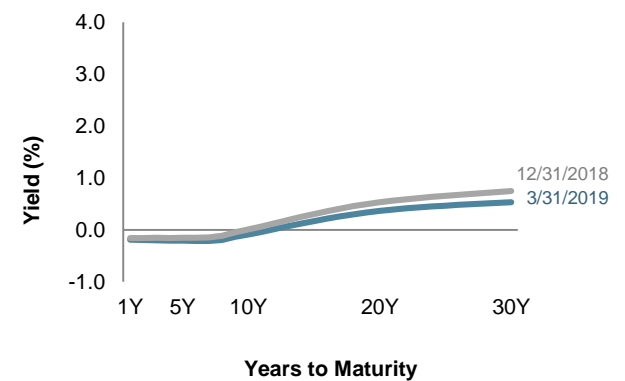
UK



Germany



Japan



Changes in Yields (bps) since 12/31/2018

	1Y	5Y	10Y	20Y	30Y
US	-20.7	-26.5	-29.1	-24.5	-20.4
UK	-10.2	-19.5	-26.4	-26.4	-27.0
Germany	17.9	-17.9	-33.6	-31.0	-29.0
Japan	-3.4	-5.6	-9.5	-16.8	-21.5

Impact of Diversification

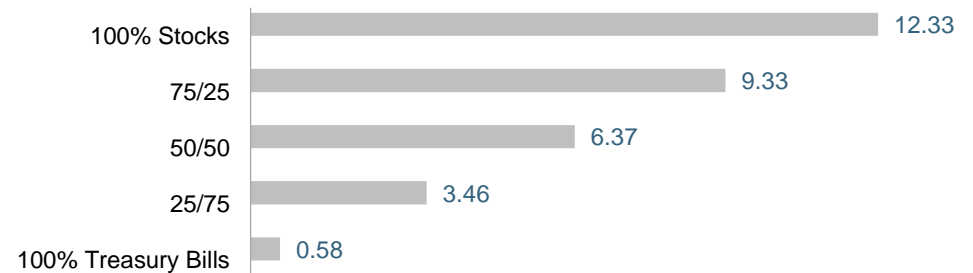
First Quarter 2019 Index Returns

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.

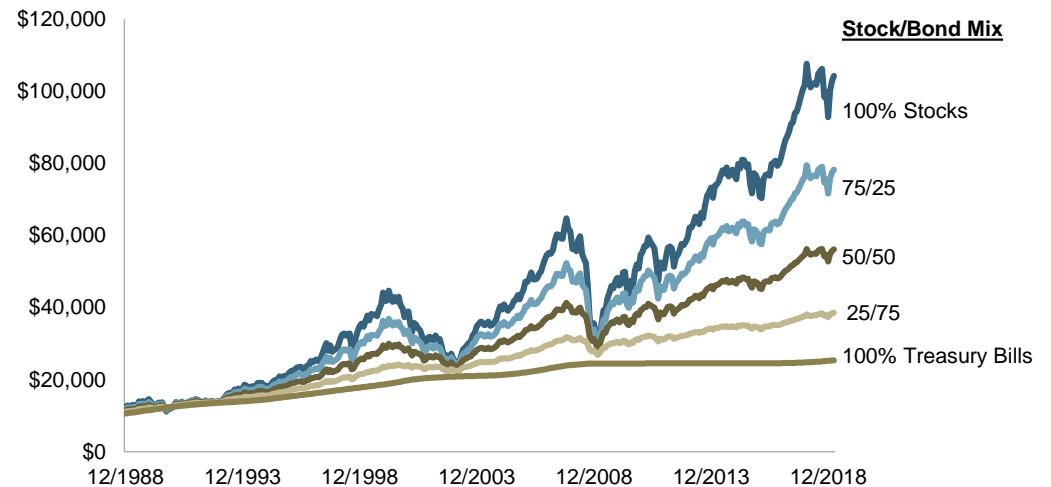
Period Returns (%)

Asset Class	* Annualized				
	1 Year	3 Years*	5 Years*	10 Years*	10-Year STDEV ¹
100% Stocks	3.16	11.27	7.03	12.58	13.92
75/25	3.07	8.75	5.53	9.60	10.44
50/50	2.85	6.21	3.97	6.57	6.95
25/75	2.51	3.67	2.35	3.49	3.48
100% Treasury Bills	2.05	1.11	0.68	0.37	0.18

Ranked Returns (%)



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 2019, 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).

Déjà Vu All Over Again

First Quarter 2019

Investment fads are nothing new. When selecting strategies for their portfolios, investors are often tempted to seek out the latest and greatest investment opportunities.

Over the years, these approaches have sought to capitalize on developments such as the perceived relative strength of particular geographic regions, technological changes in the economy, or the popularity of different natural resources. But long-term investors should be aware that letting short-term trends influence their investment approach may be counterproductive. As Nobel laureate Eugene Fama said, “There’s one robust new idea in finance that has investment implications maybe every 10 or 15 years, but there’s a marketing idea every week.”

WHAT’S HOT BECOMES WHAT’S NOT

Looking back at some investment fads over recent decades can illustrate how often trendy investment themes come and go. In the early 1990s, attention turned to the rising “Asian Tigers” of Hong Kong, Singapore, South Korea, and Taiwan. A decade later, much was written about the emergence of the “BRIC” countries of Brazil, Russia, India, and China and their new place in global markets. Similarly, funds targeting hot industries or trends have come into and fallen out of vogue. In the 1950s, the “Nifty Fifty” were all the rage. In the 1960s, “go-go” stocks and funds piqued investor interest. Later in the 20th century, growing belief in the emergence of a “new economy” led to the creation of funds poised to make the most of the rising importance of information technology and telecommunication services. During the 2000s, 130/30 funds, which used leverage to sell short certain stocks while going long others, became increasingly popular. In the wake of the 2008 financial crisis, “Black Swan” funds, “tail-risk-hedging” strategies, and “liquid alternatives” abounded. As investors reached for yield in a low interest-rate environment in the following years, other funds sprang up that claimed to offer increased income generation, and new strategies like unconstrained bond funds

proliferated. More recently, strategies focused on peer-to-peer lending, cryptocurrencies, and even cannabis cultivation and private space exploration have become more fashionable. In this environment, so-called “FAANG” stocks and concentrated exchange-traded funds with catchy ticker symbols have also garnered attention among investors.

THE FUND GRAVEYARD

Unsurprisingly, however, numerous funds across the investment landscape were launched over the years only to subsequently close and fade from investor memory. While economic, demographic, technological, and environmental trends shape the world we live in, public markets aggregate a vast amount of dispersed information and drive it into security prices. Any individual trying to outguess the market by constantly trading in and out of what’s hot is competing against the extraordinary collective wisdom of millions of buyers and sellers around the world.

With the benefit of hindsight, it is easy to point out the fortune one could have amassed by making the right call on a specific industry, region, or individual security over a specific period. While these anecdotes can be entertaining, there is a wealth of compelling evidence that highlights the futility of attempting to identify mispricing in advance and profit from it.

It is important to remember that many investing fads, and indeed, most mutual funds, do not stand the test of time. A large proportion of funds fail to survive over the longer term. Of the 1,622 fixed income mutual funds in existence at the beginning of 2004, only 55% still existed at the end of 2018. Similarly, among equity mutual funds, only 51% of the 2,786 funds available to US-based investors at the beginning of 2004 endured.

Déjà Vu All Over Again

(continued from page 18)

WHAT AM I REALLY GETTING?

When confronted with choices about whether to add additional types of assets or strategies to a portfolio, it may be helpful to ask the following questions:

1. What is this strategy claiming to provide that is not already in my portfolio?
2. If it is not in my portfolio, can I reasonably expect that including it or focusing on it will increase expected returns, reduce expected volatility, or help me achieve my investment goal?
3. Am I comfortable with the range of potential outcomes?

If investors are left with doubts after asking any of these questions, it may be wise to use caution before proceeding. Within equities, for example, a market portfolio offers the benefit of exposure to thousands of companies doing business around the world and broad diversification across industries, sectors, and countries. While there can be good reasons to deviate from a market portfolio, investors should understand the potential benefits and risks of doing so.

In addition, there is no shortage of things investors can do to help contribute to a better investment experience. Working closely with a financial advisor can help individual investors create a plan that fits their needs and risk tolerance. Pursuing a globally diversified approach; managing expenses, turnover, and taxes; and staying disciplined through market volatility can help improve investors' chances of achieving their long-term financial goals.

CONCLUSION

Fashionable investment approaches will come and go, but investors should remember that a long-term, disciplined investment approach based on robust research and implementation may be the most reliable path to success in the global capital markets.

Source: Dimensional Fund Advisors LP.

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