



Robasciotti & Philipson

COMPREHENSIVE WEALTH MANAGEMENT

Q4

Quarterly Market Review

Fourth Quarter 2018



Quarterly Market Review

Fourth Quarter 2018

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: Why Should You Diversify?



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
Q4 2018	STOCKS				BONDS	
	-14.30%	-12.78%	-7.47%	-5.79%	1.64%	1.89%

Since Jan. 2001						
Avg. Quarterly Return	1.8%	1.3%	2.8%	2.4%	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

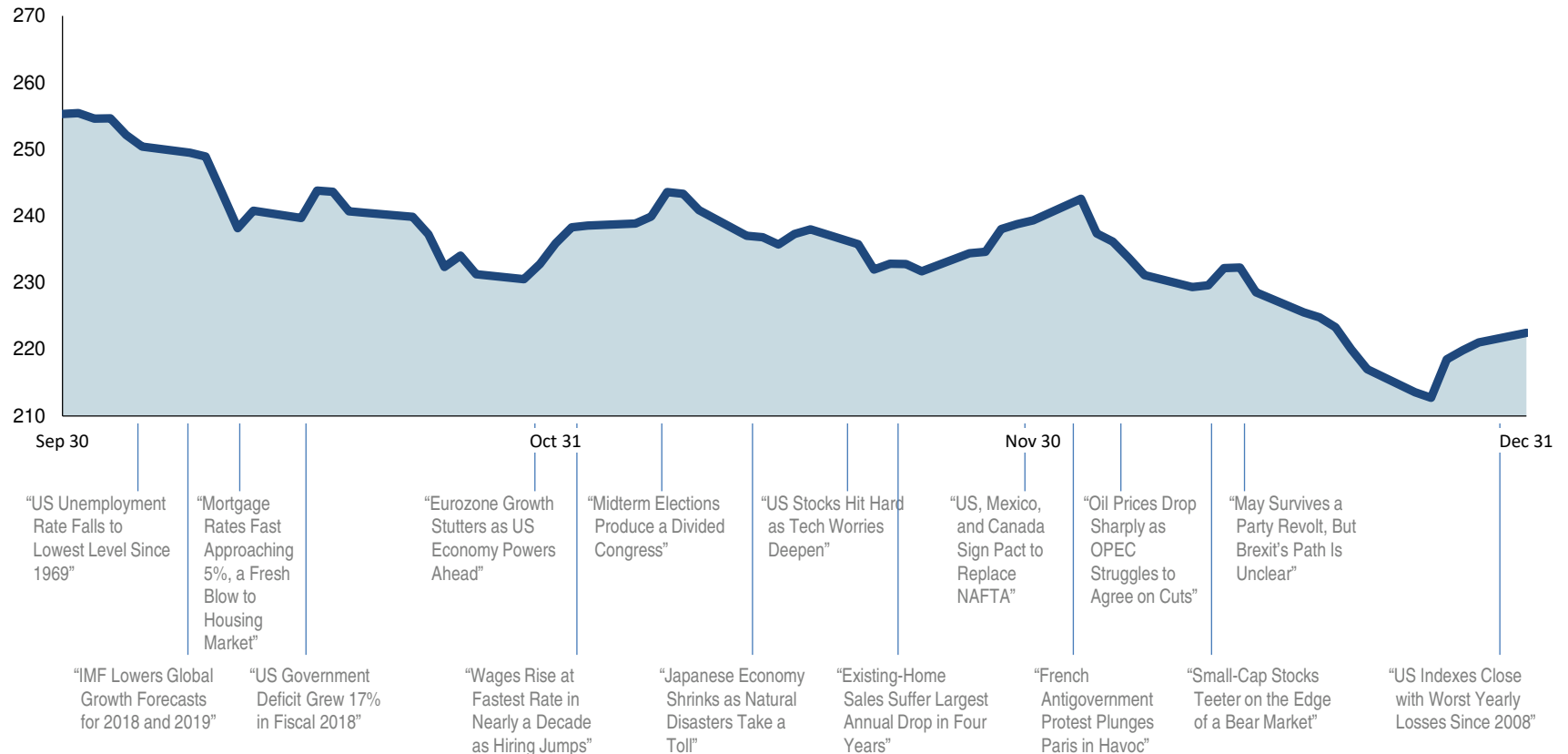
	US Stock Market	International Developed Stocks	Emerging Markets Stocks	Global Real Estate	US Bond Market	Global Bond Market ex US
1 Year	STOCKS				BONDS	
	-5.24%	-14.09%	-14.58%	-5.90%	0.01%	3.17%
5 Years						
	7.91%	0.34%	1.65%	5.28%	2.52%	4.11%
10 Years						
	13.18%	6.24%	8.02%	10.05%	3.48%	3.98%

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World Stock Market Performance

MSCI All Country World Index with selected headlines from Q4 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.

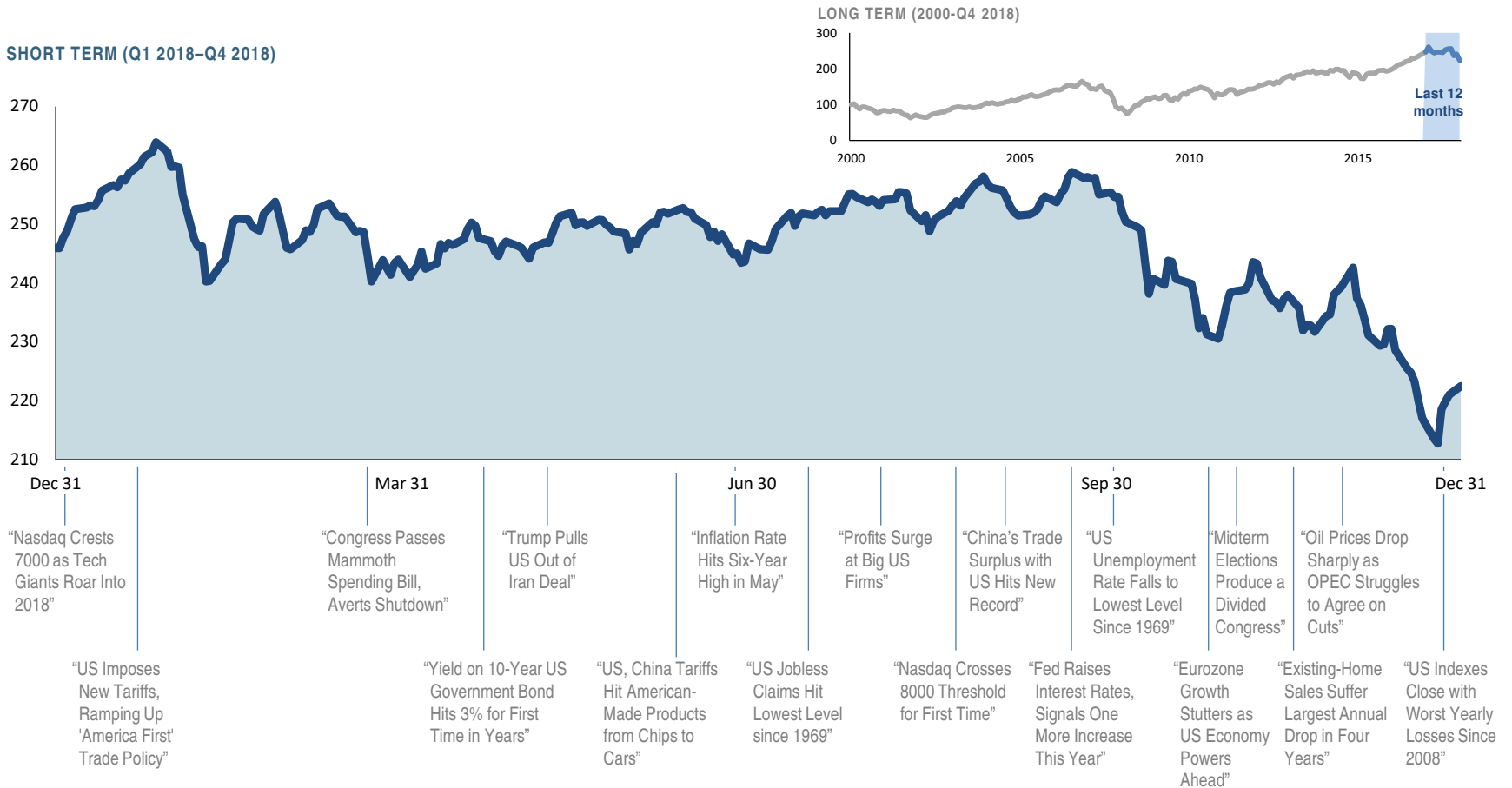
Graph Source: MSCI ACWI Index [net div.]. MSCI data © MSCI 2019, all rights reserved.

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.

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.



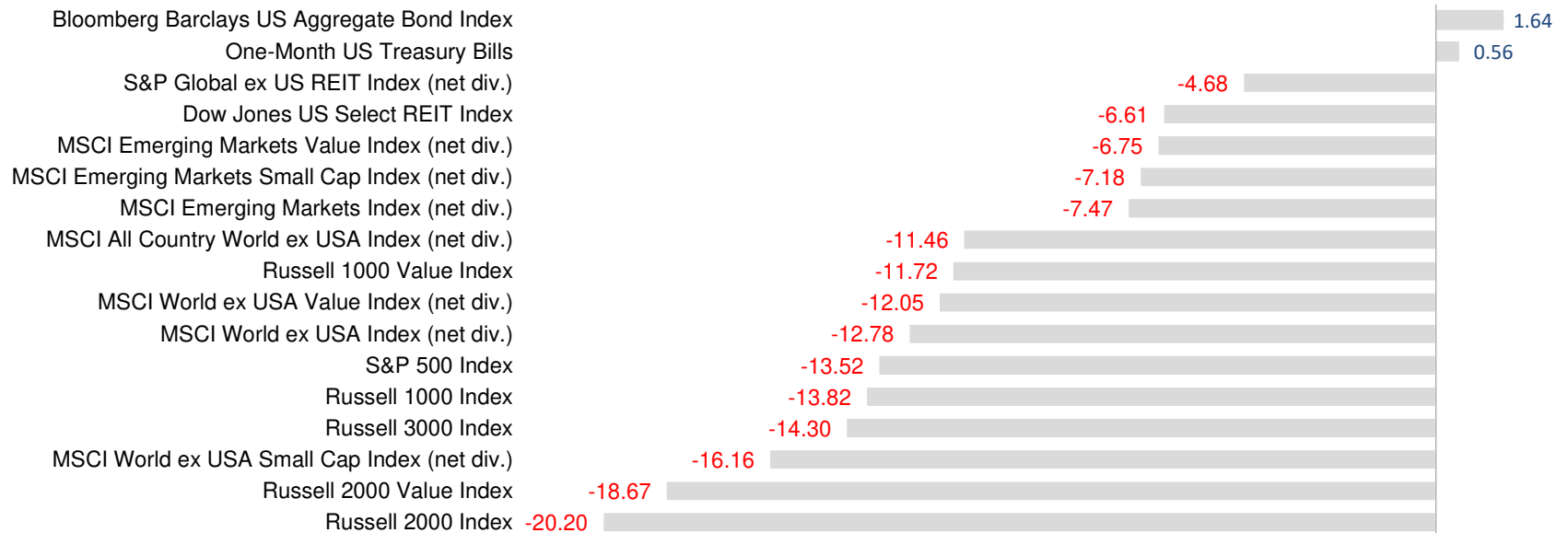
World Asset Classes

Fourth Quarter 2018 Index Returns (%)

Equity markets around the world posted negative returns for the quarter. Looking at broad market indices, emerging markets outperformed developed markets, including the US.

Value stocks were positive vs. growth stocks in all markets, including the US. Small caps underperformed large caps in the US and non-US developed markets but outperformed in emerging markets.

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



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US Stocks

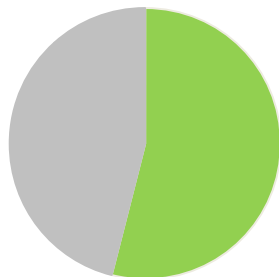
Fourth Quarter 2018 Index Returns

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

Value outperformed growth in the US across large and small cap stocks.

Small caps underperformed large caps in the US.

World Market Capitalization—US



54%
US Market
 \$25.1 trillion

Ranked Returns for the Quarter (%)



Period Returns (%)

* Annualized

Asset Class	1 Year	3 Years*	5 Years*	10 Years*
Large Growth	-1.51	11.15	10.40	15.29
Large Cap	-4.78	9.09	8.21	13.28
Marketwide	-5.24	8.97	7.91	13.18
Large Value	-8.27	6.95	5.95	11.18
Small Growth	-9.31	7.24	5.13	13.52
Small Cap	-11.01	7.36	4.41	11.97
Small Value	-12.86	7.37	3.61	10.40

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

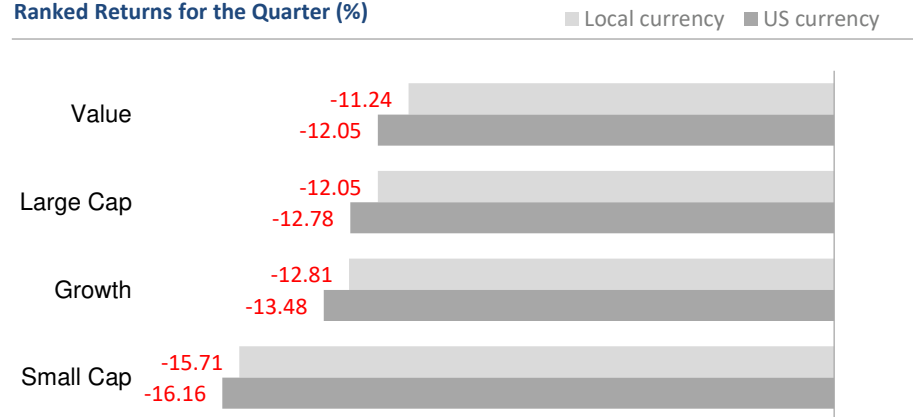
Fourth Quarter 2018 Index Returns

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

Value outperformed growth across large and small cap stocks.

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

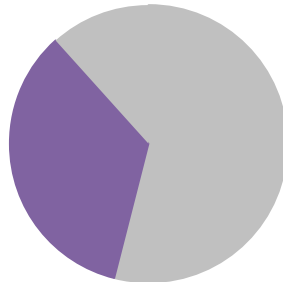
Ranked Returns for the Quarter (%)



World Market Capitalization—International Developed

34%

**International
Developed Market**
\$16.0 trillion



Period Returns (%)

Asset Class	* Annualized			
	1 Year	3 Years*	5 Years*	10 Years*
Growth	-13.14	2.84	1.36	6.74
Large Cap	-14.09	3.11	0.34	6.24
Value	-15.06	3.36	-0.73	5.69
Small Cap	-18.07	3.85	2.25	10.06

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 2019, 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

Fourth Quarter 2018 Index Returns

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

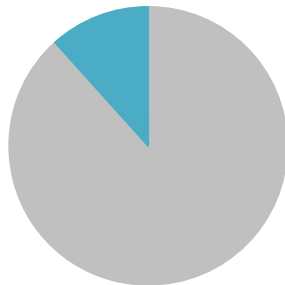
Value outperformed growth across large and small cap stocks.

Small caps outperformed large caps.

World Market Capitalization—Emerging Markets

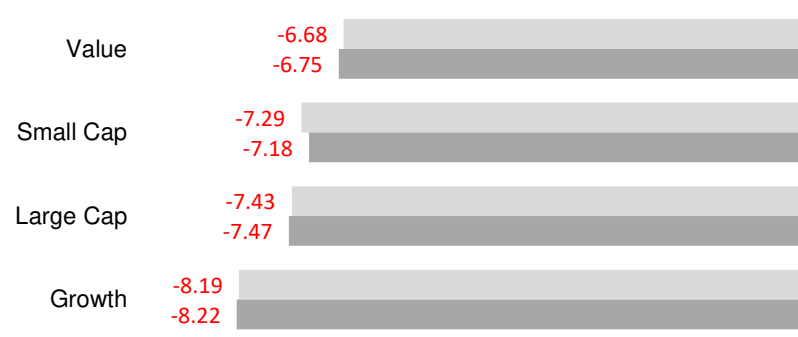
12%

Emerging Markets
\$5.4 trillion



Ranked Returns for the Quarter (%)

■ Local currency ■ US currency



Period Returns (%)

* Annualized

Asset Class	1 Year	3 Years*	5 Years*	10 Years*
Value	-10.74	9.52	0.51	6.99
Large Cap	-14.58	9.25	1.65	8.02
Growth	-18.26	8.89	2.67	8.97
Small Cap	-18.59	3.68	0.95	9.87

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 2019, all rights reserved. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes.

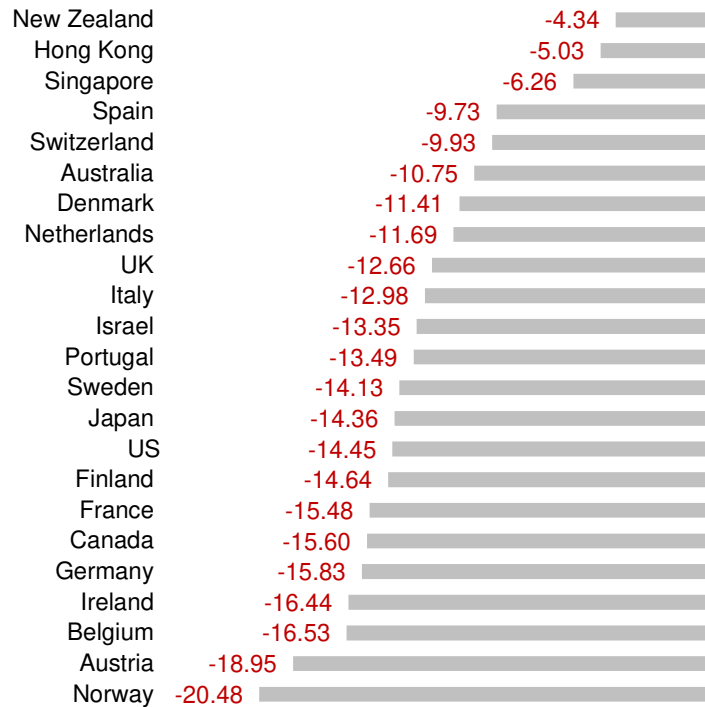


Select Country Performance

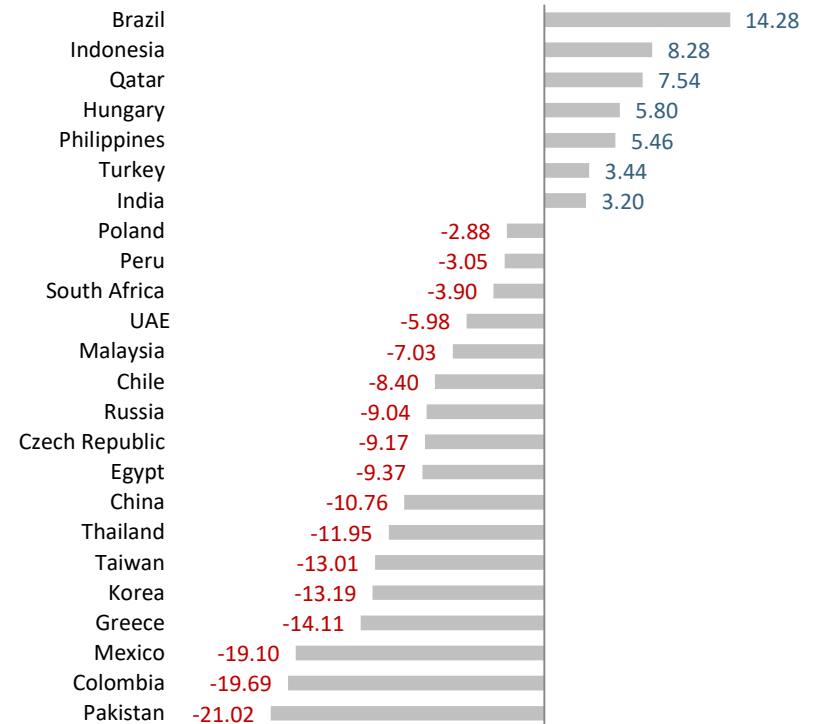
Fourth Quarter 2018 Index Returns

In US dollar terms, New Zealand and Hong Kong recorded the highest country performance in developed markets, while Austria and Norway posted the lowest returns for the quarter. In emerging markets, Brazil and Indonesia recorded the highest country performance, while Columbia and Pakistan 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.

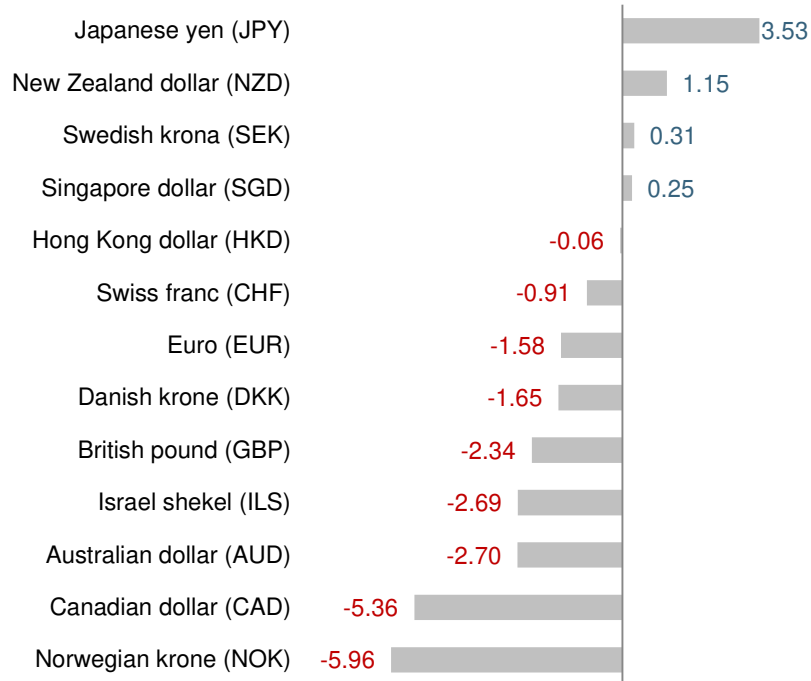


Select Currency Performance vs. US Dollar

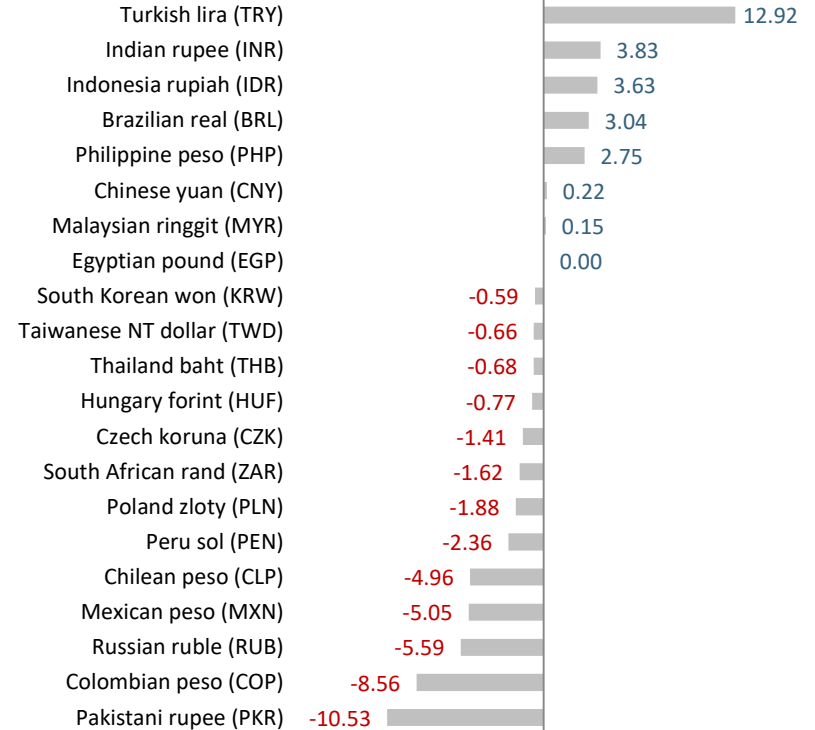
Fourth Quarter 2018

In developed markets, currencies mostly depreciated vs. the US dollar with a few exceptions, including the Japanese yen, which appreciated over 3.5%. In emerging markets, currencies were mixed against the US dollar, ranging from +12% to -10%.

Ranked Developed Markets (%)



Ranked Emerging Markets (%)



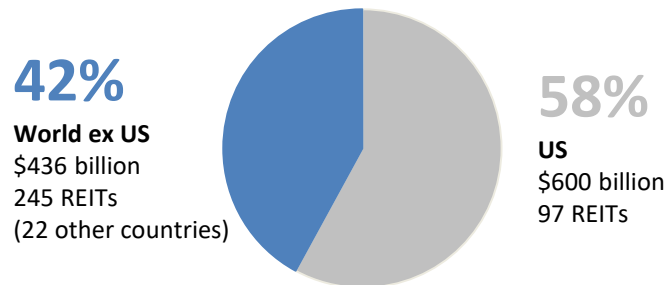


Real Estate Investment Trusts (REITs)

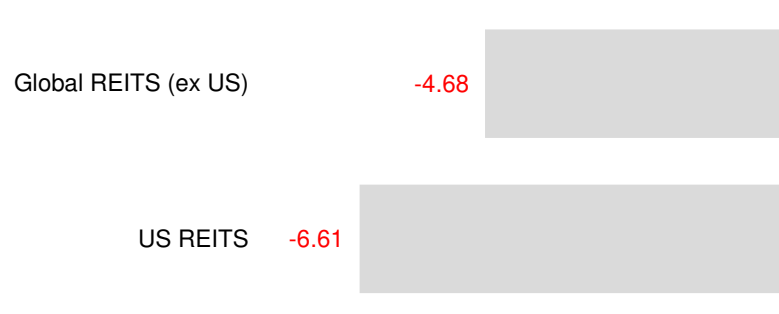
Fourth Quarter 2018 Index Returns

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

Total Value of REIT Stocks



Ranked Returns for the Quarter (%)



Period Returns (%)

* Annualized

Asset Class	1 Year	3 Years*	5 Years*	10 Years*
US REITs	-4.22	1.97	7.89	12.05
Global REITs	-7.42	3.35	3.39	8.94

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



Commodities

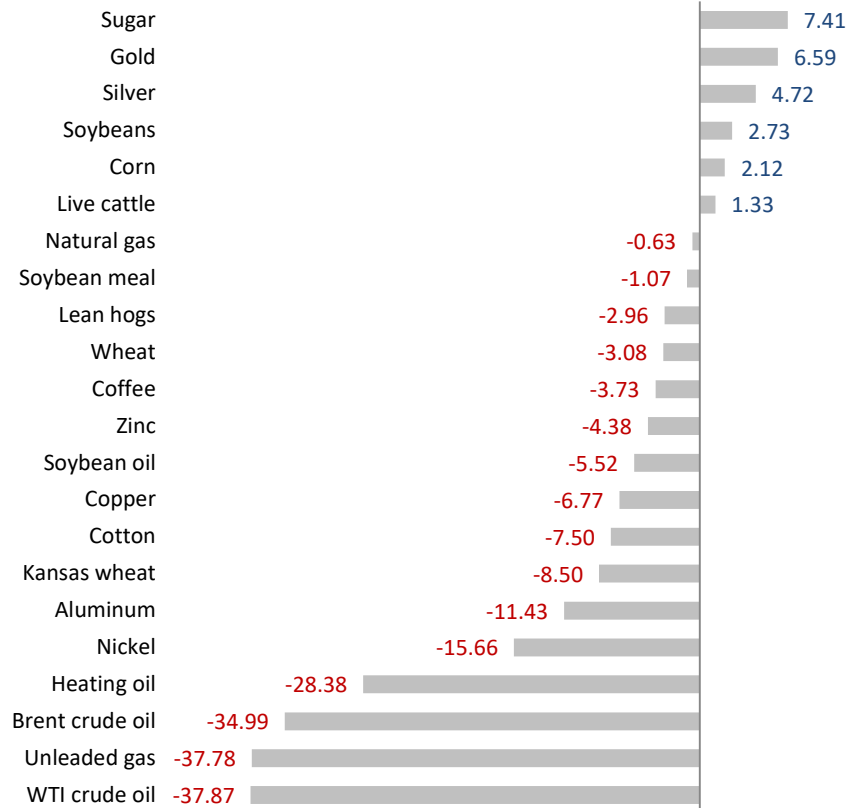
Fourth Quarter 2018 Index Returns

The Bloomberg Commodity Index Total Return declined 9.41% during the fourth quarter of 2018, bringing the total annual return to -11.25%.

Sugar led quarterly performance with a gain of 7.41%. Energy was the worst-performing complex, with WTI crude oil and unleaded gas declining by 37.87% and 37.78%, respectively.

Asset Class	* Annualized				
	QTR	1 Year	3 Years*	5 Years*	10 Years*
Commodities	-9.41	-11.25	0.30	-8.80	-3.78

Ranked Returns for Individual Commodities (%)



Past performance is not a guarantee of future results. Index is not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Commodities returns represent the return of the Bloomberg Commodity Total Return Index. Individual commodities are sub-index values of the Bloomberg Commodity Total Return Index. Data provided by Bloomberg.

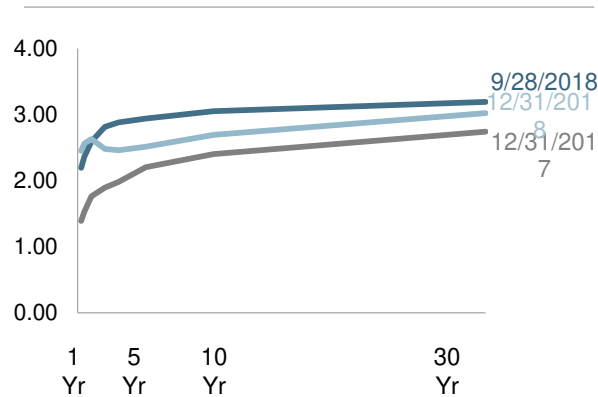


Fixed Income

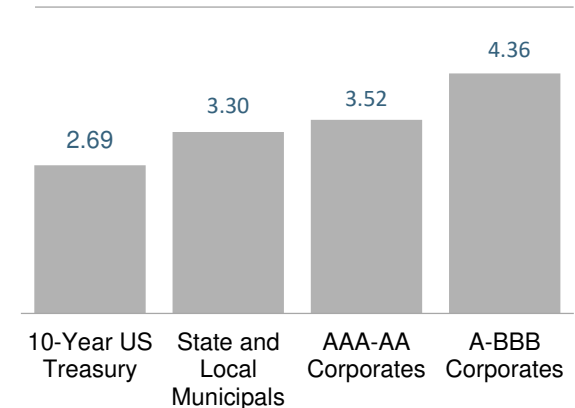
Fourth Quarter 2018 Index Returns

- Interest rate changes across the US fixed income market were mixed during the fourth quarter of 2018. The yield on the 5-year Treasury note declined 43 basis points (bps), ending the quarter at 2.51%. The yield on the 10-year Treasury note decreased 36 bps to 2.69%. The 30-year Treasury bond yield decreased 17 bps to finish at 3.02%. For 2018, yields on the 10-year Treasury and 30-year Treasury increased 29 bps and 28 bps, respectively.
- In terms of total returns, short-term corporate bonds increased 0.78% during the quarter. Intermediate-term corporate bonds had a total return of 0.58%.
- Total returns for short-term municipal bonds were 1.10% for the quarter. Intermediate-term municipal bonds returned 2.00%.

US Treasury Yield Curve (%)



Bond Yield across Issuers (%)



Period Returns (%)

Asset Class	QTR	1 Year	*Annualized		
			3 Years*	5 Years*	10 Years*
Bloomberg Barclays US Government Bond Index Long	4.16	-1.79	2.63	5.90	4.15
Bloomberg Barclays Municipal Bond Index	1.69	1.28	2.30	3.82	4.85
Bloomberg Barclays US Aggregate Bond Index	1.64	0.01	2.06	2.52	3.48
FTSE World Government Bond Index 1-5 Years (hedged to USD)	1.53	2.12	1.58	1.53	1.69
FTSE World Government Bond Index 1-5 Years	0.94	-0.76	1.56	-0.82	0.29
ICE BofAML 1-Year US Treasury Note Index	0.78	1.86	1.06	0.70	0.62
ICE BofAML US 3-Month Treasury Bill Index	0.56	1.87	1.02	0.63	0.37
Bloomberg Barclays US TIPS Index	-0.42	-1.26	2.11	1.69	3.64
Bloomberg Barclays US High Yield Corporate Bond Index	-4.53	-2.08	7.23	3.83	11.12

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 (SBBBI) 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

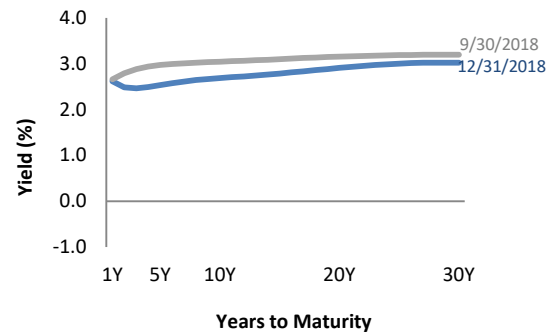
Fourth Quarter 2018 Yield Curves

- Interest rates in the global developed markets generally decreased during the quarter.
- Longer-term bonds generally outperformed shorter-term bonds in the global developed markets.
- For the year, longer-term bonds underperformed shorter-term bonds in the US but generally outperformed shorter-term bonds in the non-US developed markets.

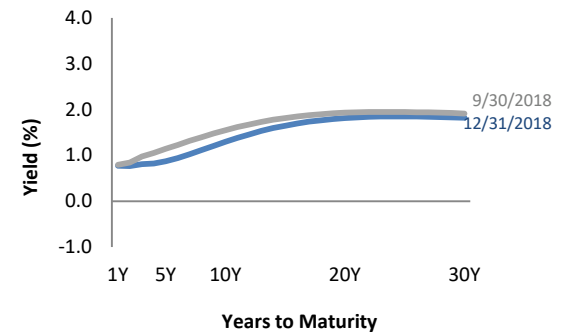
Changes in Yields (bps) since 9/30/2018

	1Y	5Y	10Y	20Y	30Y
US	-4.2	-44.0	-35.5	-24.4	-17.6
UK	-2.3	-26.9	-25.2	-11.6	-9.3
Germany	-15.2	-18.9	-21.8	-18.9	-19.6
Japan	-1.6	-9.3	-14.2	-14.6	-16.3

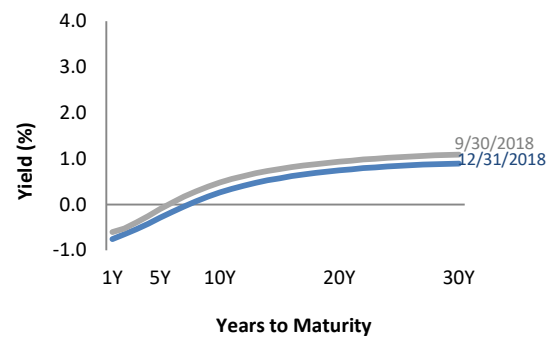
US



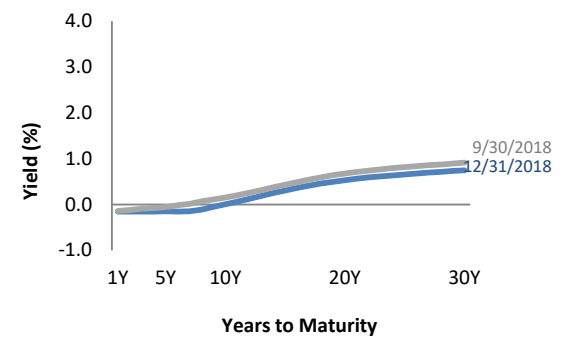
UK



Germany



Japan





Impact of Diversification

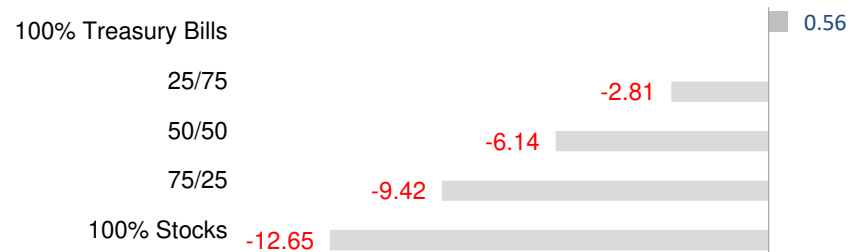
Fourth Quarter 2018 Index Returns

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.

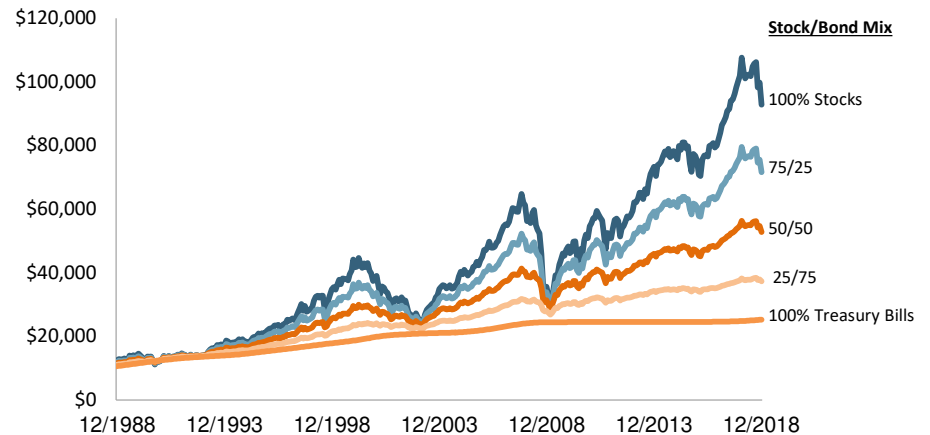
Period Returns (%)

Asset Class	* Annualized				
	1 Year	3 Years*	5 Years*	10 Years*	10-Year STDEV ¹
100% Treasury Bills	1.81	0.93	0.57	0.32	0.16
25/75	-0.82	2.57	1.73	2.88	3.65
50/50	-3.49	4.16	2.82	5.36	7.32
75/25	-6.19	5.70	3.86	7.75	10.98
100% Stocks	-8.93	7.18	4.82	10.05	14.65

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).



Why Should You Diversify?

Fourth Quarter 2018

As 2019 approaches, and with US stocks outperforming non-US stocks in recent years, some investors have again turned their attention towards the role that global diversification plays in their portfolios.

For the five-year period ending October 31, 2018, the S&P 500 Index had an annualized return of 11.34% while the MSCI World ex USA Index returned 1.86%, and the MSCI Emerging Markets Index returned 0.78%. As US stocks have outperformed international and emerging markets stocks over the last several years, some investors might be reconsidering the benefits of investing outside the US.

While there are many reasons why a US-based investor may prefer a degree of home bias in their equity allocation, using return differences over a relatively short period as the sole input into this decision may result in missing opportunities that the global markets offer. While international and emerging markets stocks have delivered disappointing returns relative to the US over the last few years, it is important to remember that:

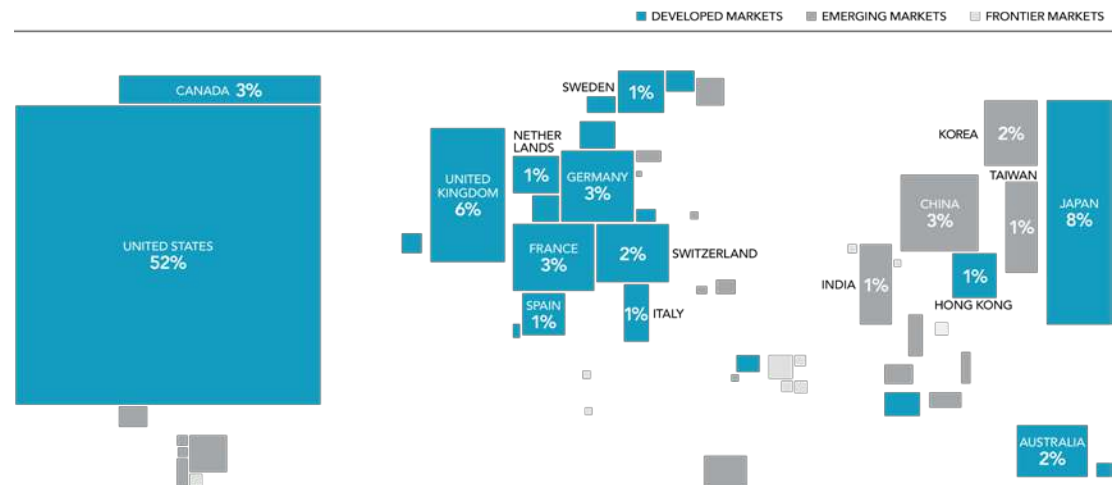
- Non-US stocks help provide valuable diversification benefits.
- Recent performance is not a reliable indicator of future returns.

THERE'S A WORLD OF OPPORTUNITY IN EQUITIES

The global equity market is large and represents a world of investment opportunities. As shown in **Exhibit 1**, nearly half of the investment opportunities in global equity markets lie outside

the US. Non-US stocks, including developed and emerging markets, account for 48% of world market capitalization¹ and represent thousands of companies in countries all over the world. A portfolio investing solely within the US would not be exposed to the performance of those markets.

Exhibit 1. World Equity Market Capitalization



As of December 31, 2017. Data provided by Bloomberg. Market cap data is free-float adjusted and meets minimum liquidity and listing requirements. China market capitalization excludes A-shares, which are generally only available to mainland China investors. For educational purposes; should not be used as investment advice.

1. The total market value of a company's outstanding shares, computed as price times shares outstanding.



Why Should You Diversify?

(continued from page 18)

THE LOST DECADE

We can examine the potential opportunity cost associated with failing to diversify globally by reflecting on the period in global markets from 2000–2009. During this period, often called the “lost decade” by US investors, the S&P 500 Index recorded its worst ever 10-year performance with a total cumulative return of –9.1%. However, looking beyond US large cap equities, conditions were more favorable for global equity investors as most equity asset classes outside the US generated positive returns over the course of the decade. **(See Exhibit 2.)**

Expanding beyond this period and looking at performance for each of the 11 decades starting in 1900 and ending in 2010, the US market outperformed the world market in five decades and underperformed in the other six.² This further reinforces why an investor pursuing the equity premium should consider a global allocation. By holding a globally diversified portfolio, investors are positioned to capture returns wherever they occur.

Exhibit 2. Global Index Returns, January 2000–December 2009

	Total Cumulative Return (%)
S&P 500 Index	–9.10
MSCI World ex USA Index (net div.)	17.47
MSCI World ex USA Value Index (net div.)	48.71
MSCI World ex USA Small Cap Index (net div.)	94.33
MSCI Emerging Markets Index (net div.)	154.28
MSCI Emerging Markets Value Index (net div.)	212.72

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PICK A COUNTRY?

Are there systematic ways to identify which countries will outperform others in advance? **Exhibit 3** illustrates the randomness in country equity market rankings (from highest to lowest) for 22 different developed market countries over the past 20 years. This graphic conveys how difficult it would be to execute a strategy that relies on picking the best country and the resulting importance of diversification.

In addition, concentrating a portfolio in any one country can expose investors to large variations in returns. The difference between the best- and worst-performing countries can be significant. For example, since 1998, the average return of the best-performing developed market country was approximately 44%, while the average return of the worst-performing country was approximately –16%. Diversification means an investor’s portfolio is unlikely to be the best or worst performing relative to any individual country, but diversification also provides a means to achieve a more consistent outcome and more importantly helps reduce and manage catastrophic losses that can be associated with investing in just a small number of stocks or a single country.

A DIVERSIFIED APPROACH

Over long periods of time, investors may benefit from consistent exposure in their portfolios to both US and non-US equities. While both asset classes offer the potential to earn positive expected returns in the long run, they may perform quite differently over short periods. While the performance of different countries and asset classes will vary over time, there is no reliable evidence that this performance can be predicted in advance. An approach to equity investing that uses the global opportunity set available to investors can provide diversification benefits as well as potentially higher expected returns.

2. Source: Annual country index return data from the Dimson-Marsh-Staunton (DMS) Global Returns Data, provided by Morningstar, Inc.



Why Should You Diversify?

(continued from page 19)

Exhibit 3. Equity Returns of Developed Markets

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Finland	121.6	152.6	5.9	8.4	24.2	64.5	71.5	28.3	49.4	48.7	-29.2	87.1	33.8	13.7	39.6	46.0	12.7	23.4	24.6	58.3
Belgium	67.7	99.4	5.3	1.7	16.5	63.8	53.3	25.5	47.4	41.2	-30.5	76.4	30.7	5.5	31.3	41.2	7.3	16.5	18.4	36.2
Italy	52.5	79.7	3.4	-2.8	-1.3	58.5	43.5	24.6	46.8	35.2	-37.6	74.0	23.2	1.4	31.0	31.8	6.2	12.1	13.3	35.6
Spain	49.9	61.5	-0.9	-5.6	-7.3	57.0	43.1	24.5	46.7	31.4	-40.6	64.2	22.1	-2.6	30.9	31.4	5.1	9.6	11.4	34.7
France	41.5	59.5	-1.3	-10.9	-7.3	55.4	36.3	24.3	45.1	29.6	-43.3	60.2	20.5	-6.8	29.3	31.3	4.1	3.5	11.3	32.2
Japan	35.3	53.7	-4.1	-11.4	-10.3	54.6	35.2	16.7	43.4	28.4	-45.5	57.5	15.4	-10.0	28.3	31.3	3.0	2.3	10.9	28.7
UK	30.1	31.7	-4.3	-12.2	-10.3	49.5	32.5	16.3	38.8	28.3	-45.9	56.2	14.8	-10.6	25.9	27.6	2.3	2.0	4.9	28.4
Germany	29.4	29.3	-10.0	-12.4	-11.0	49.3	30.8	16.0	36.7	25.6	-47.4	50.4	14.5	-11.0	22.1	27.2	1.5	1.3	4.8	28.3
Portugal	27.5	21.9	-10.3	-14.0	-13.2	48.1	30.3	14.4	36.5	24.0	-47.6	43.5	11.8	-12.1	22.0	26.6	-0.1	0.9	3.6	27.7
Sweden	23.5	20.0	-11.5	-14.8	-13.8	43.8	28.9	13.9	36.0	24.0	-48.2	43.3	10.9	-12.3	21.3	26.3	-0.7	0.7	2.8	27.0
Netherlands	23.2	17.6	-12.0	-18.6	-15.0	43.0	25.0	10.3	34.5	20.6	-48.3	43.2	10.3	-12.7	20.6	25.2	-3.4	0.4	2.4	24.0
UK	17.8	12.9	-12.7	-20.4	-15.2	40.2	24.7	9.9	32.5	13.2	-49.9	42.3	9.9	-14.3	20.4	24.5	-3.5	-0.1	2.3	23.8
Taiwan	14.0	12.5	-12.8	-21.4	-15.3	38.1	22.3	9.9	31.4	8.9	-50.0	40.4	8.8	-16.0	18.7	20.7	-4.0	-0.5	1.4	22.5
Denmark	9.0	12.1	-14.2	-22.0	-16.0	37.8	22.2	9.0	30.9	8.4	-50.7	36.6	8.4	-16.0	15.3	20.4	-4.7	-1.9	0.6	22.5
Australia	6.1	6.9	-14.7	-22.1	-17.8	37.6	19.6	8.4	30.6	6.1	-51.2	31.8	8.3	-16.0	15.3	13.4	-5.4	-5.0	-0.1	22.3
Japan	5.1	4.8	-15.6	-22.4	-20.8	35.9	18.5	7.4	30.4	5.4	-52.2	26.6	1.7	-16.9	14.6	11.3	-7.5	-6.3	-1.0	21.2
Austria	0.4	-0.3	-15.9	-22.4	-21.2	35.3	16.2	5.1	29.9	5.3	-53.8	26.3	-0.4	-17.9	12.5	11.1	-9.5	-7.6	-4.7	20.6
Hong Kong	-2.9	-7.0	-16.8	-23.4	-23.1	34.1	15.9	4.4	27.4	2.2	-55.2	25.3	-4.1	-18.1	9.1	11.0	-9.9	-10.0	-4.9	19.9
Canada	-6.1	-8.9	-21.3	-26.6	-26.2	32.1	15.0	1.9	17.8	0.6	-64.2	25.2	-11.3	-23.1	8.2	9.4	-10.4	-15.0	-7.1	18.6
Singapore	-12.9	-9.1	-27.7	-27.2	-30.3	28.4	12.2	1.7	16.6	-2.7	-66.5	12.3	-15.0	-23.2	5.7	5.6	-22.0	-15.6	-7.6	18.1
New Zealand	-22.6	-12.6	-28.2	-29.4	-30.5	28.1	10.1	-1.9	14.7	-4.2	-68.4	11.1	-18.1	-31.9	3.5	4.2	-29.8	-17.7	-10.5	16.1
Norway	-30.1	-14.3	-33.5	-38.2	-33.2	19.4	6.1	-2.3	6.2	-20.1	-71.9	6.3	-22.0	-36.4	3.0	1.7	-38.2	-24.2	-15.8	11.7

Source: MSCI country indices (net dividends) for each country listed. Does not include Israel, which MSCI classified as an emerging market prior to May 2010. MSCI data © MSCI 2019, all rights reserved. Past performance is no guarantee of future results. Indices are not available for direct investment; therefore, their performance does not reflect the expenses associated with the management of an actual portfolio.

Source: Dimensional Fund Advisors LP.

Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results.

Diversification does not eliminate the risk of market loss.

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.

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. Investors should talk to their financial advisor prior to making any investment decision



Appendix

2018 Annual Market Review



2018 Annual Market Review

This report features world capital market performance for the past year.

Overview:

Market Summary

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



Market Summary

Index Returns

	US Stock Market	International Developed Stocks	Emerging Markets Stocks	Global Real Estate	US Bond Market	Global Bond Market ex US
2018	STOCKS				BONDS	
	-5.24%	-14.09%	-14.58%	-5.90%	0.01%	3.17%
						
Since Jan. 2001						
Avg. Annual Return	7.6%	5.8%	13.1%	10.1%	4.5%	4.4%
Best Year	33.6% 2013	39.4% 2003	78.5% 2009	37.4% 2006	10.3% 2002	8.8% 2014
Worst Year	-37.3% 2008	-43.6% 2008	-53.3% 2008	-45.7% 2008	-2.0% 2013	1.2% 2013

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.



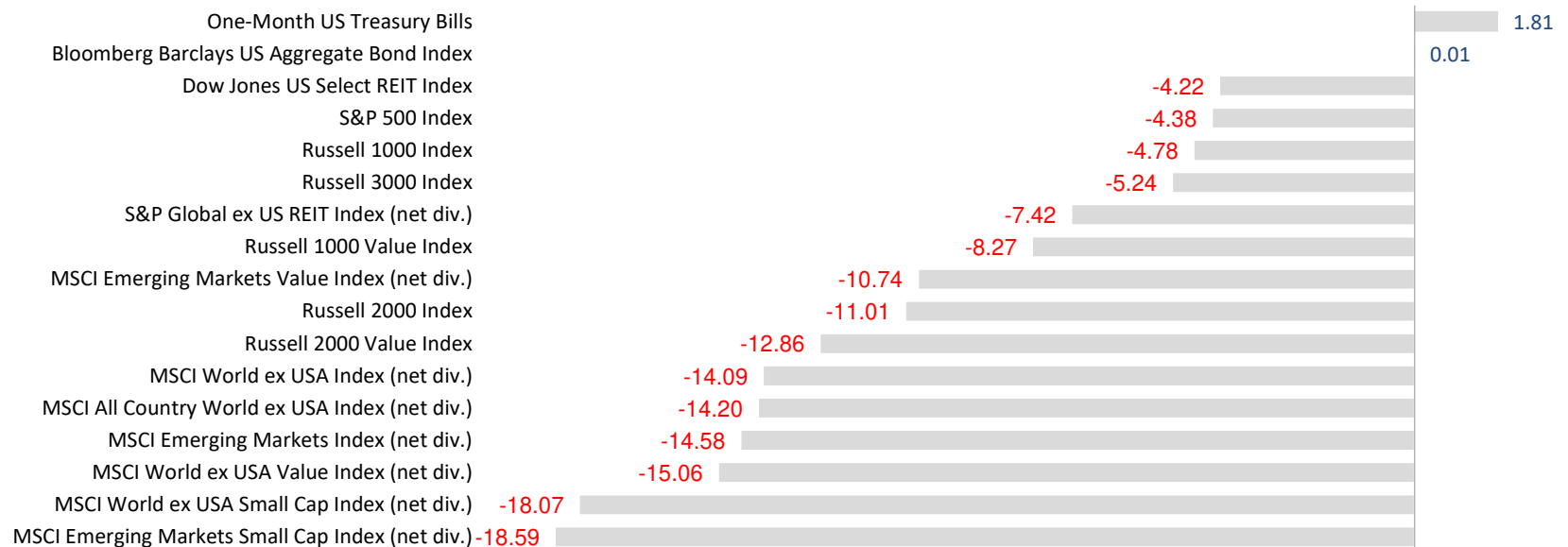
World Asset Classes

2018 Index Returns (%)

Equity markets around the world posted negative returns for 2018. Looking at broad market indices, the US outperformed non-US developed and emerging markets.

Value stocks were positive vs. growth stocks in emerging markets but negative in the US and non-US developed markets. Small caps underperformed large caps in the US, non-US developed, and emerging markets.

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



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US Stocks

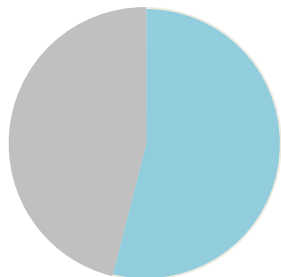
2018 Index Returns

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

Value underperformed growth in the US across large and small cap stocks.

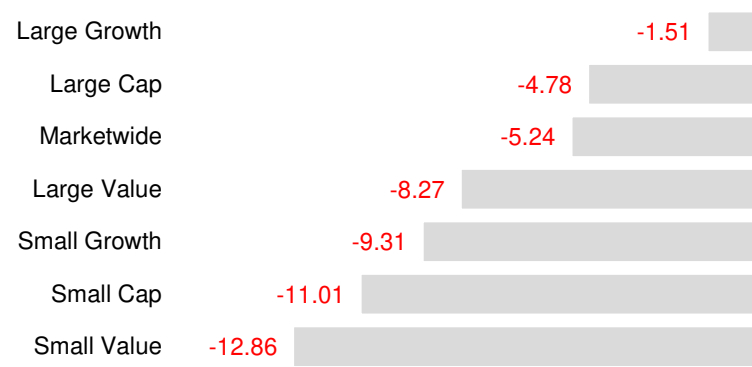
Small caps underperformed large caps in the US.

World Market Capitalization—US



54%
US Market
 \$25.1
 trillion

Ranked Returns for 2018 (%)



Period Returns (%)

* Annualized

Asset Class	1 Year	3 Years*	5 Years*	10 Years*
Large Growth	-1.51	11.15	10.40	15.29
Large Cap	-4.78	9.09	8.21	13.28
Marketwide	-5.24	8.97	7.91	13.18
Large Value	-8.27	6.95	5.95	11.18
Small Growth	-9.31	7.24	5.13	13.52
Small Cap	-11.01	7.36	4.41	11.97
Small Value	-12.86	7.37	3.61	10.40

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

2018 Index Returns

In US dollar terms, developed markets outside the US outperformed emerging markets but underperformed the US during 2018.

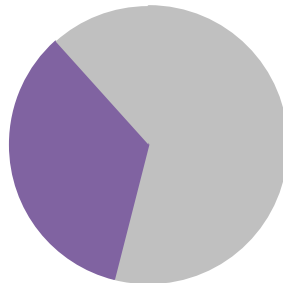
Value underperformed growth across large and small cap stocks in non-US developed markets.

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

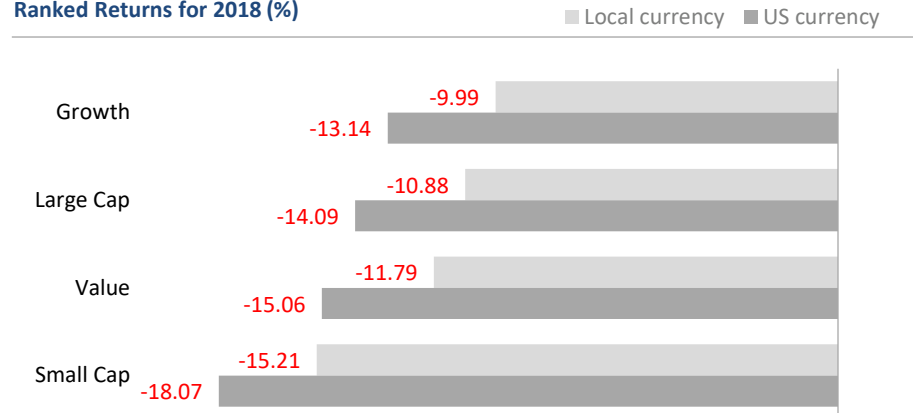
World Market Capitalization—International Developed

34%

**International
Developed Market**
\$16.0 trillion



Ranked Returns for 2018 (%)



Period Returns (%)

Asset Class	* Annualized			
	1 Year	3 Years*	5 Years*	10 Years*
Growth	-13.14	2.84	1.36	6.74
Large Cap	-14.09	3.11	0.34	6.24
Value	-15.06	3.36	-0.73	5.69
Small Cap	-18.07	3.85	2.25	10.06

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 2019, all rights reserved.



Emerging Markets Stocks

2018 Index Returns

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

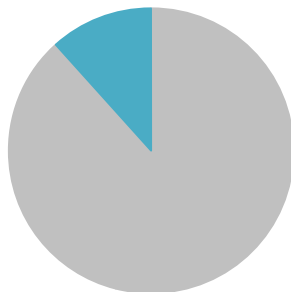
Value outperformed growth across large and small cap stocks in emerging markets.

Small caps underperformed large caps in emerging markets.

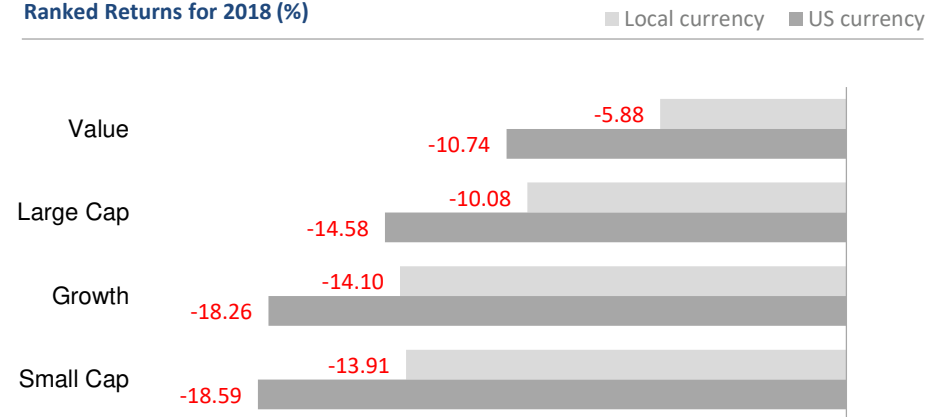
World Market Capitalization—Emerging Markets

12%

Emerging Markets
\$5.4 trillion



Ranked Returns for 2018 (%)



Period Returns (%)

* Annualized

Asset Class	1 Year	3 Years*	5 Years*	10 Years*
Value	-10.74	9.52	0.51	6.99
Large Cap	-14.58	9.25	1.65	8.02
Growth	-18.26	8.89	2.67	8.97
Small Cap	-18.59	3.68	0.95	9.87

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 2019, all rights reserved.

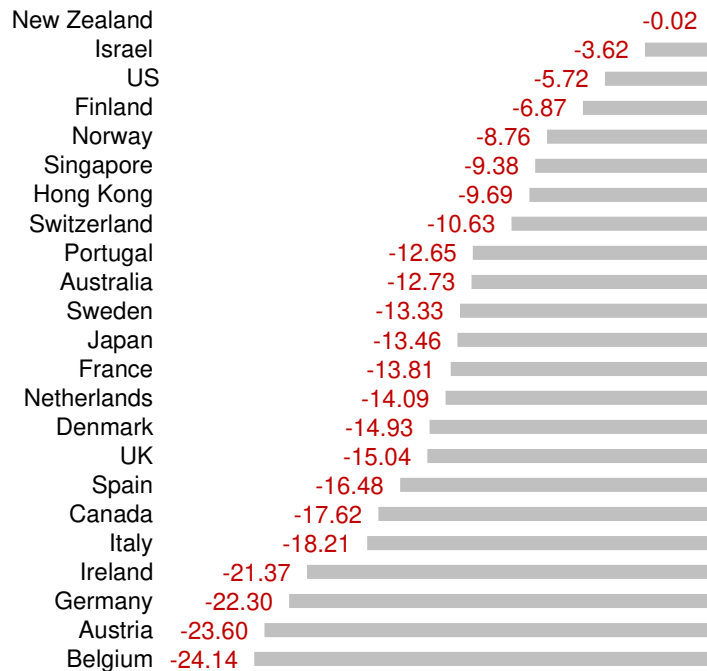


Select Country Performance

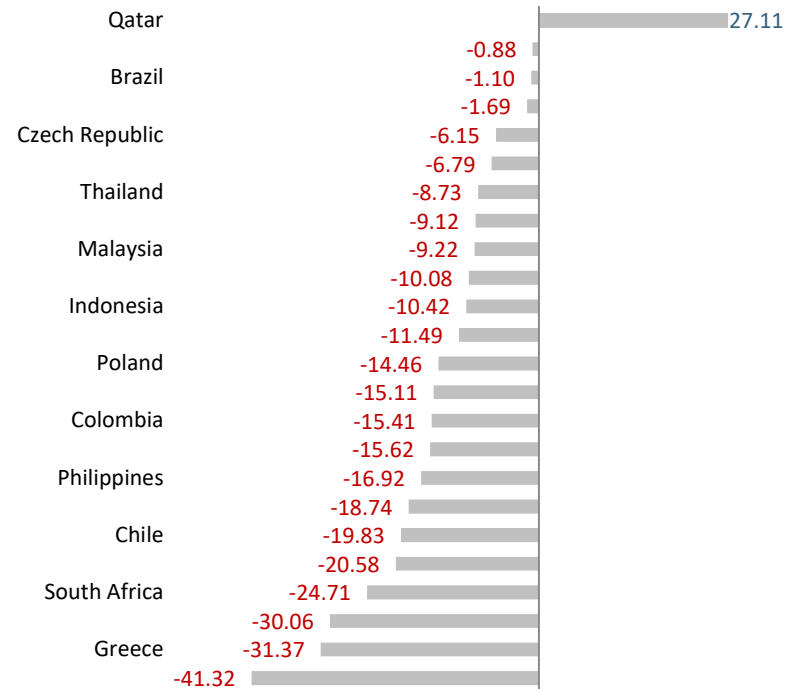
2018 Index Returns

Most non-US developed and emerging markets countries posted negative returns in US dollar terms in 2018, with wider dispersion for emerging markets countries.

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.

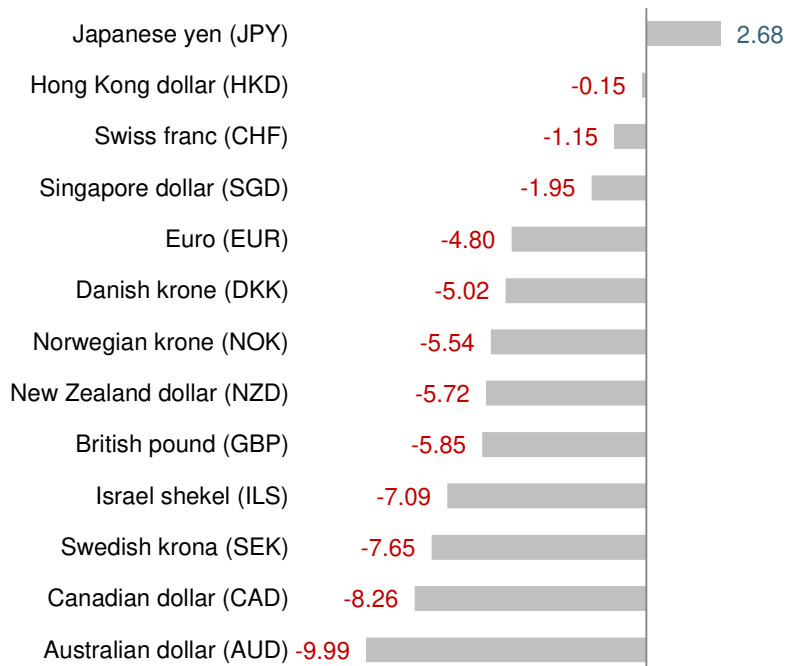


Select Currency Performance vs. US Dollar

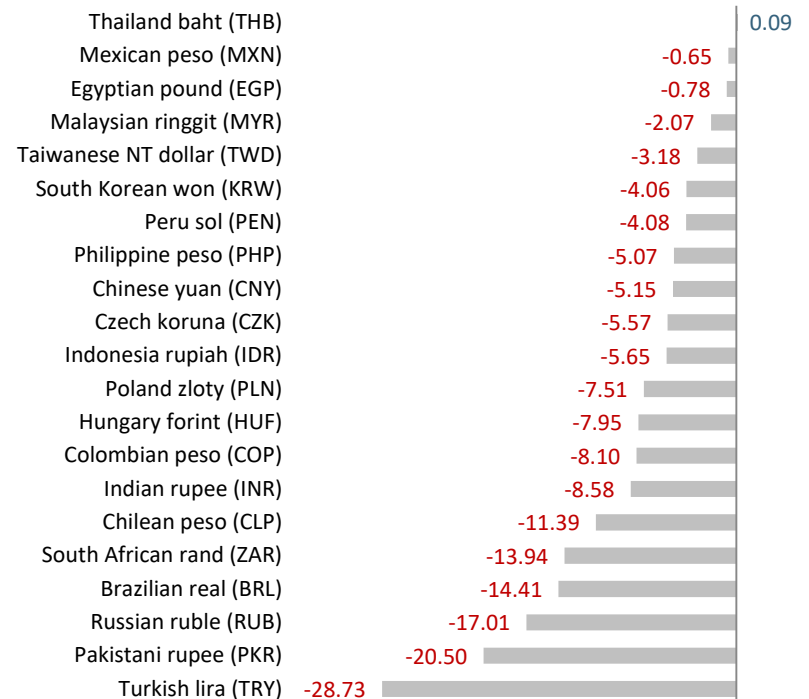
2018 Index Returns

Most currencies depreciated against the US dollar in developed and emerging markets, notably the Australian dollar in developed markets and the Turkish lira in emerging markets. One exception was the Japanese yen, which appreciated vs. the US dollar.

Ranked Developed Markets (%)



Ranked Emerging Markets (%)



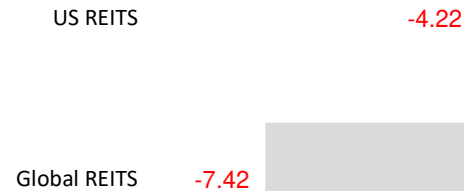


Real Estate Investment Trusts (REITs)

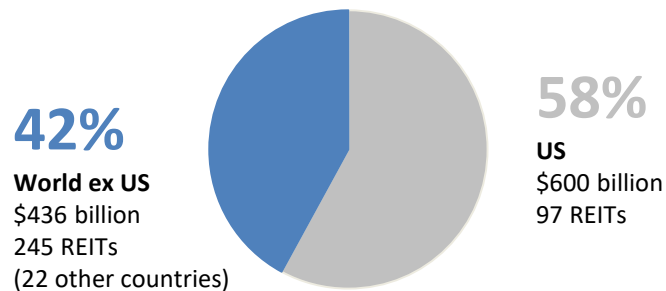
2018 Index Returns

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

Ranked Returns for 2018 (%)



Total Value of REIT Stocks



Period Returns (%)

Asset Class	* Annualized			
	1 Year	3 Years*	5 Years*	10 Years*
US REITS	-4.22	1.97	7.89	12.05
Global REITS	-7.42	3.35	3.39	8.94

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



Commodities

2018 Returns

The Bloomberg Commodity Index Total Return declined 11.25% in 2018.

Wheat (Chicago) was the strongest performer, gaining 1.51%.

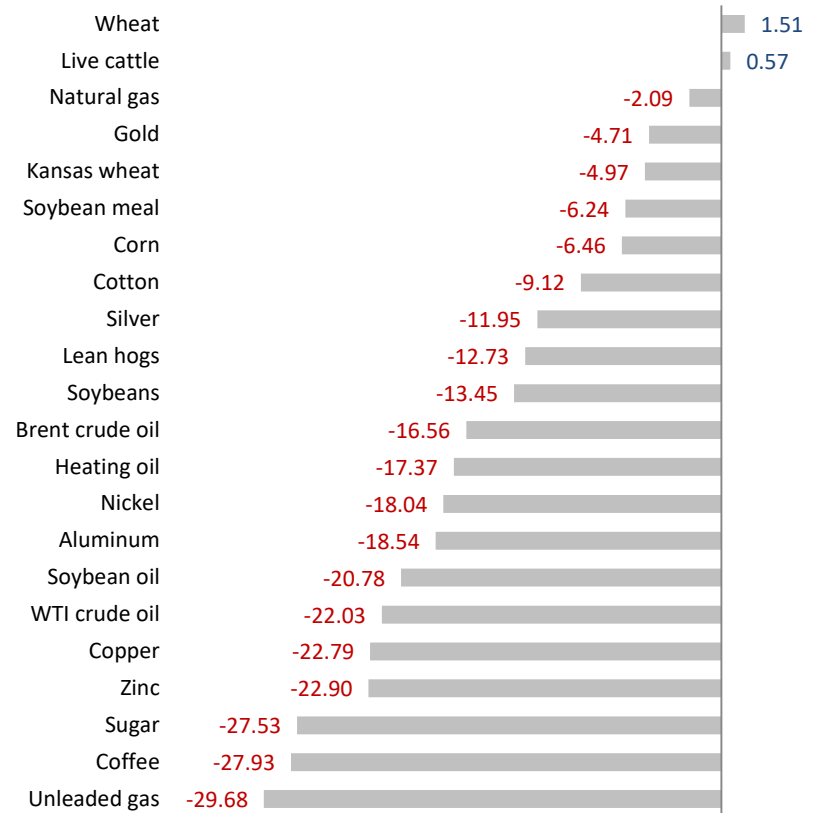
Unleaded gas was the weakest performer, falling 29.68%. Coffee lost 27.93%, while sugar declined 27.53%.

Period Returns (%)

** Annualized*

Asset Class	1 Year	3 Years*	5 Years*	10 Years*
Commodities	-11.25	0.30	-8.80	-3.78

Ranked Returns for Individual Commodities (%)



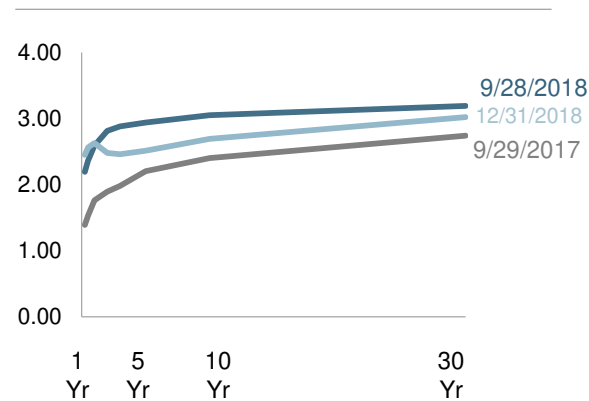


Fixed Income

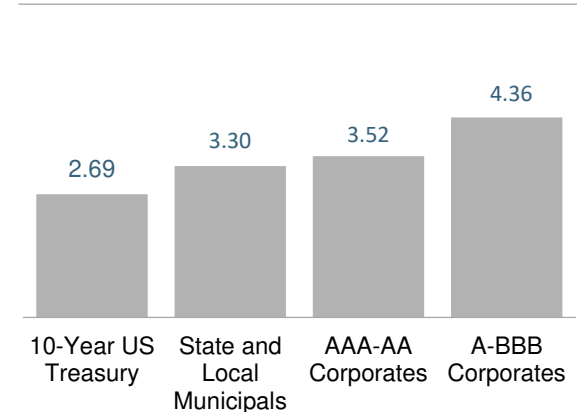
2018 Index Returns

- For 2018, yields on the 10-year Treasury note and 30-year Treasury bond increased 29 basis points (bps) and 28 bps, respectively.
- The short end of the yield curve experienced the greatest increases. The yield on the 1-year Treasury bill increased 87 bps to end at 2.63%, while the 2-year Treasury note finished with a yield of 2.48% after an increase of 59 bps.
- In terms of total returns, short-term corporate bonds increased 1.57% for the year. Intermediate-term corporate bonds declined 0.23%.
- The total returns for short-term municipal bonds were 1.77%. Intermediate-term municipal bonds returned 1.57%. General obligation bonds outperformed revenue bonds.

US Treasury Yield Curve (%)



Bond Yields across Issuers (%)



Period Returns (%)

Asset Class	1 Year	3 Years*	5 Years*	10 Years*
FTSE World Government Bond Index 1-5 Years (hedged to USD)	2.12	1.58	1.53	1.69
ICE BofAML US 3-Month Treasury Bill Index	1.87	1.02	0.63	0.37
ICE BofAML 1-Year US Treasury Note Index	1.86	1.06	0.70	0.62
Bloomberg Barclays Municipal Bond Index	1.28	2.30	3.82	4.85
Bloomberg Barclays US Aggregate Bond Index	0.01	2.06	2.52	3.48
FTSE World Government Bond Index 1-5 Years	-0.76	1.56	-0.82	0.29
Bloomberg Barclays US TIPS Index	-1.26	2.11	1.69	3.64
Bloomberg Barclays US Government Bond Index Long	-1.79	2.63	5.90	4.15
Bloomberg Barclays US High Yield Corporate Bond Index	-2.08	7.23	3.83	11.12

* 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 (S&BBI) 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.



Impact of Diversification

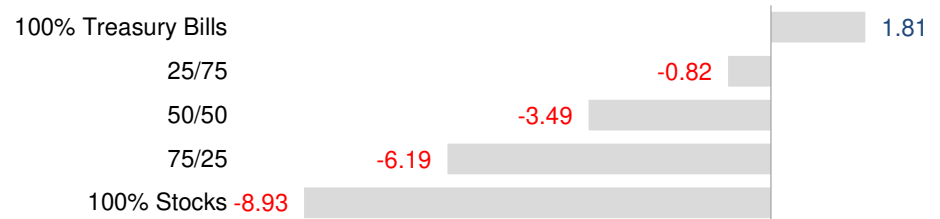
2018 Index Returns

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

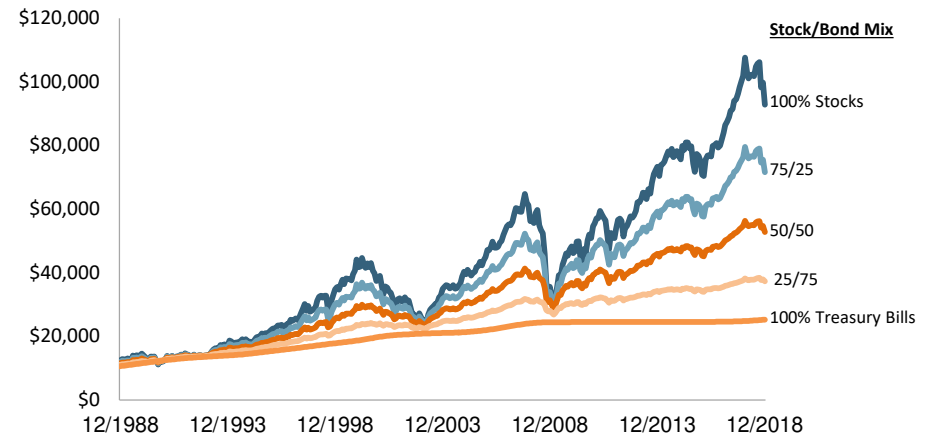
Period Returns (%)

Asset Class	* Annualized				
	1 Year	3 Years*	5 Years*	10 Years*	10-Year STDEV ¹
100% Treasury Bills	1.81	0.93	0.57	0.32	0.16
25/75	-0.82	2.57	1.73	2.88	3.65
50/50	-3.49	4.16	2.82	5.36	7.32
75/25	-6.19	5.70	3.86	7.75	10.98
100% Stocks	-8.93	7.18	4.82	10.05	14.65

Ranked Returns for 2018 (%)



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).