

Q4

Quarterly Market Review
Fourth Quarter 2018



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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.

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

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% 2009 Q2	25.9% 2009 Q2	34.7% 2009 Q2	32.3% 2009 Q3	4.6% 2001 Q3	4.6% 2008 Q4
Worst Quarter	-22.8% 2008 Q4	-21.2% 2008 Q4	-27.6% 2008 Q4	-36.1% 2008 Q4	-3.0% 2016 Q4	-2.7% 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

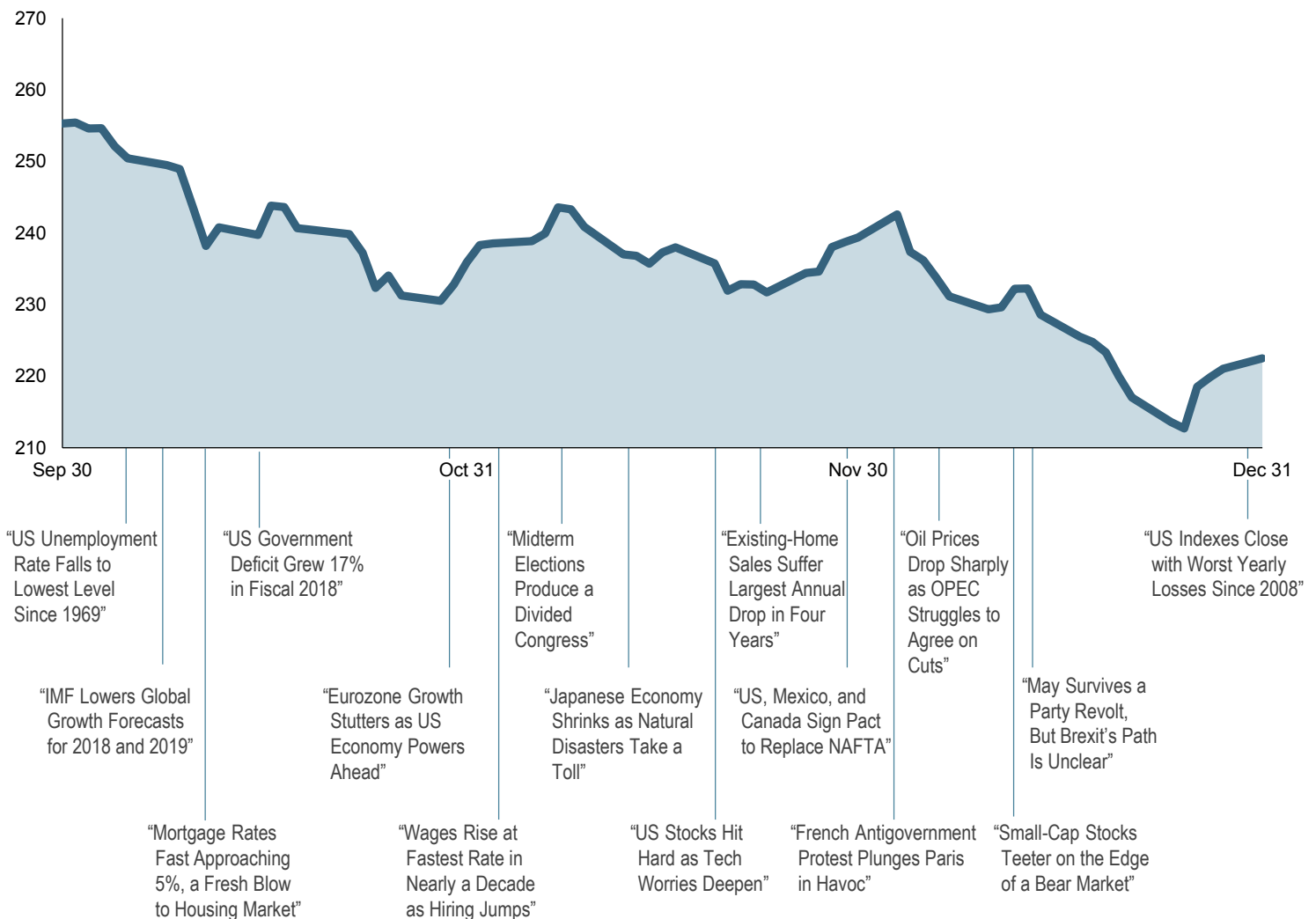
Index Returns

	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

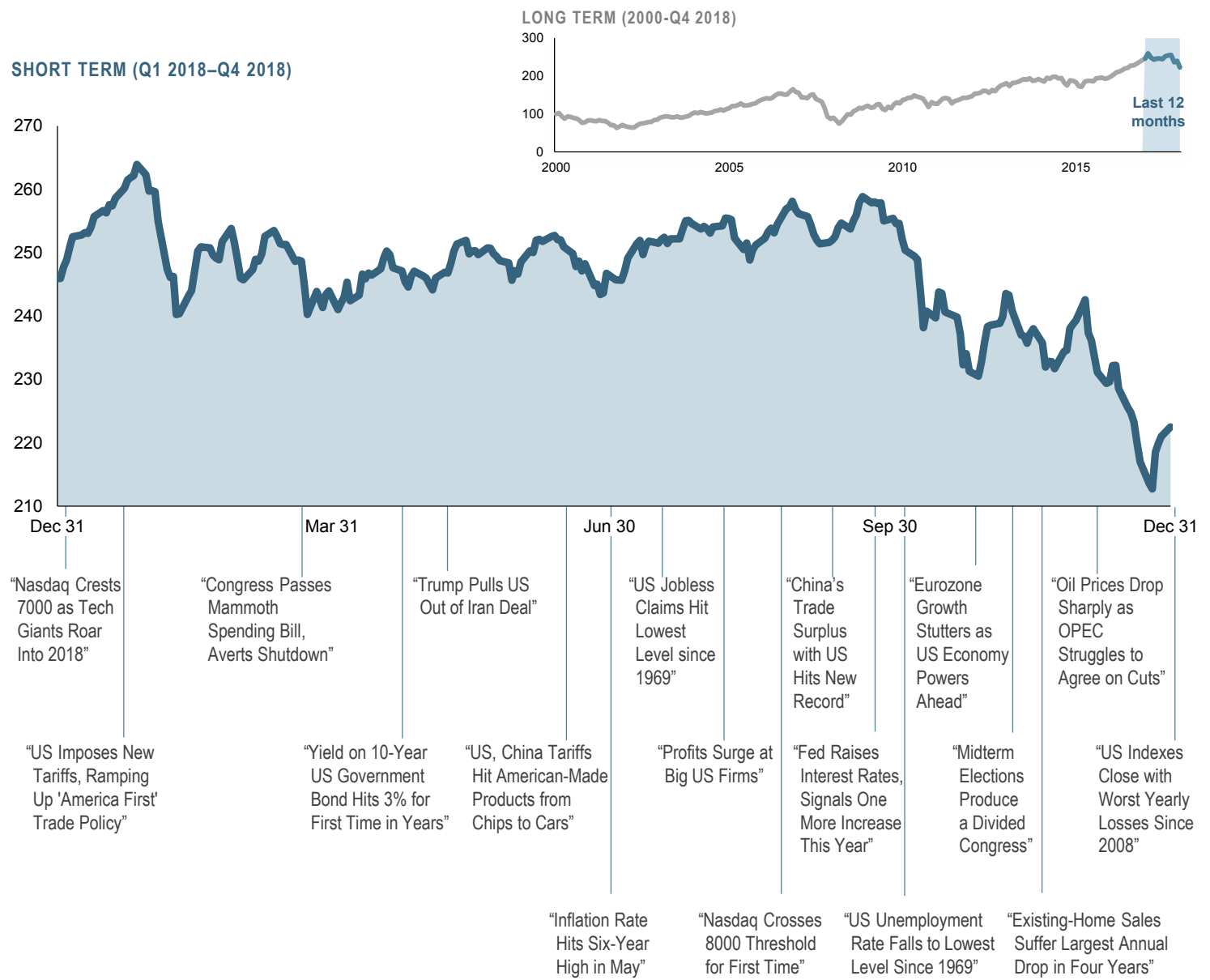


These headlines are not offered to explain market returns. Instead, they serve as a reminder that investors should view daily events from a long-term perspective and avoid making investment decisions based solely on the news.

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.**

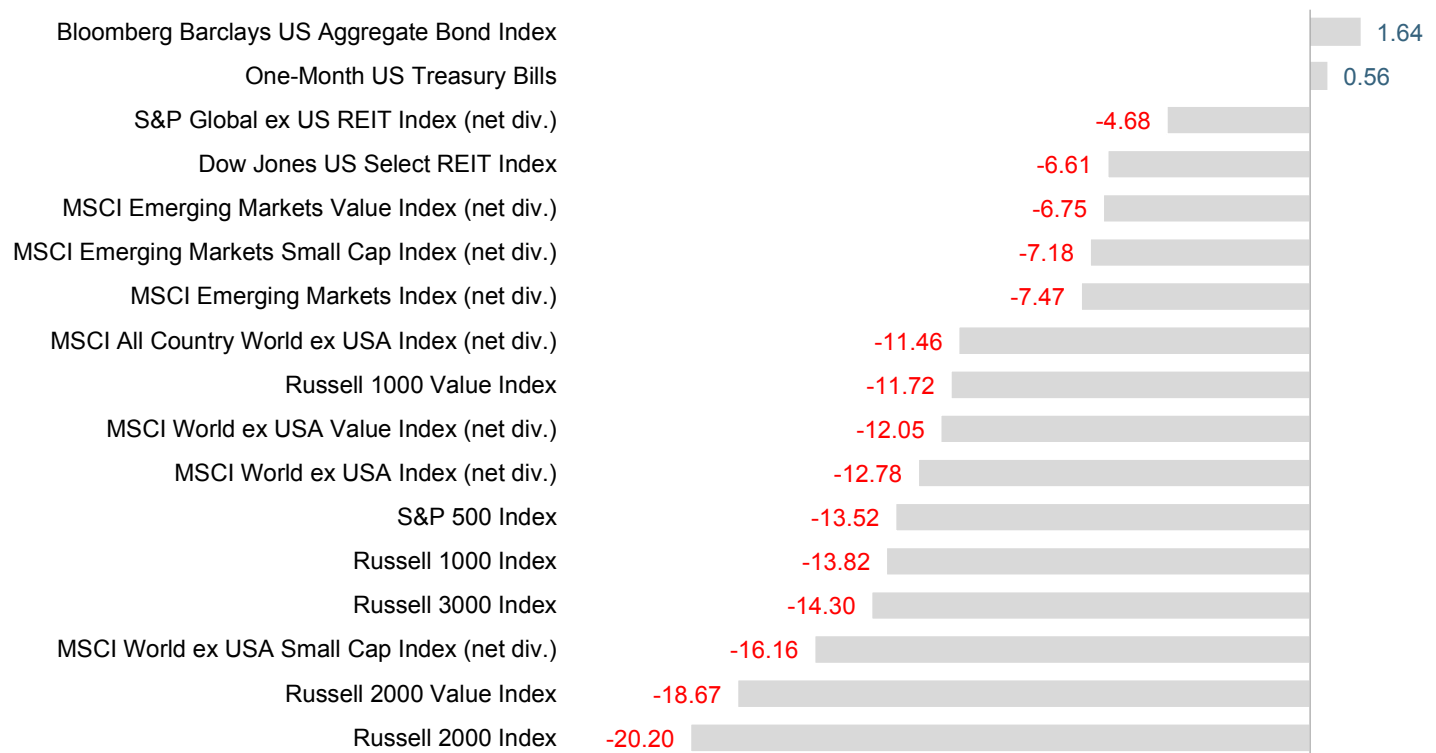
World Asset Classes

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

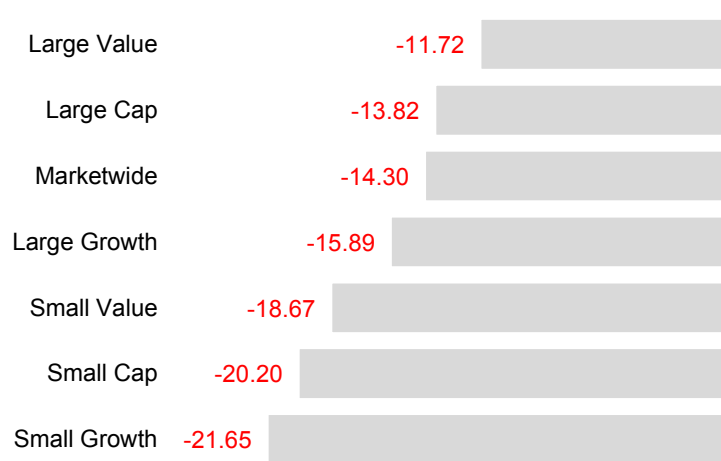
Fourth Quarter 2018 Index Returns

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

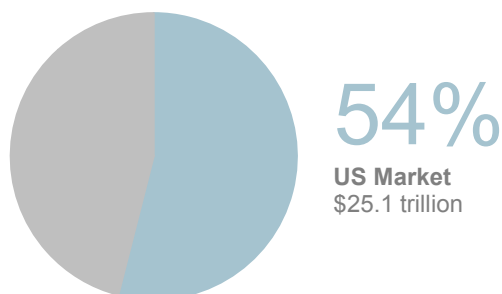
Value outperformed growth in the US across large and small cap stocks.

Small caps underperformed large caps in the US.

Ranked Returns for the Quarter (%)



World Market Capitalization—US



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

International Developed Stocks

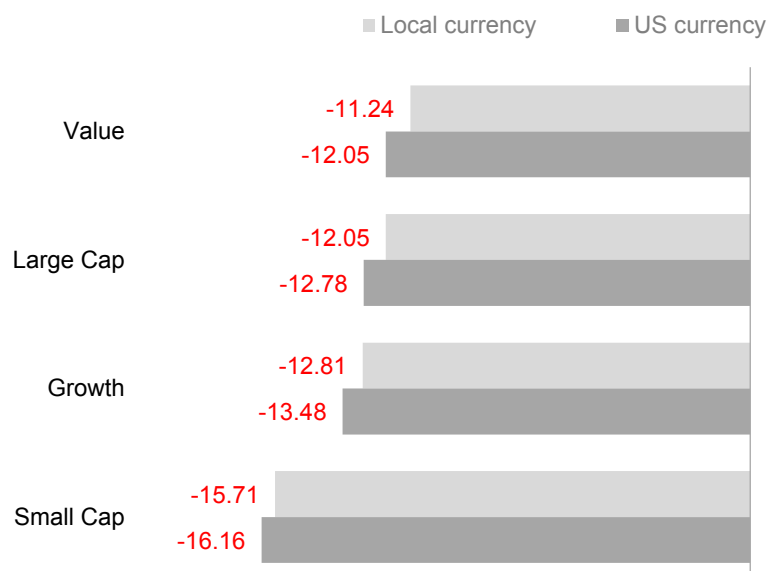
Fourth Quarter 2018 Index Returns

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.

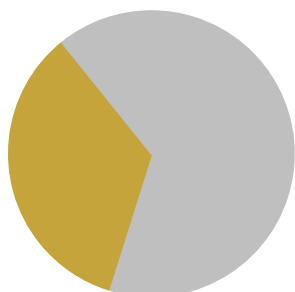
Ranked Returns for the Quarter (%)



World Market Capitalization— International Developed

34%

International
Developed Market
\$16.0 trillion



Period Returns (%)

* Annualized

Asset Class	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

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Emerging Markets Stocks

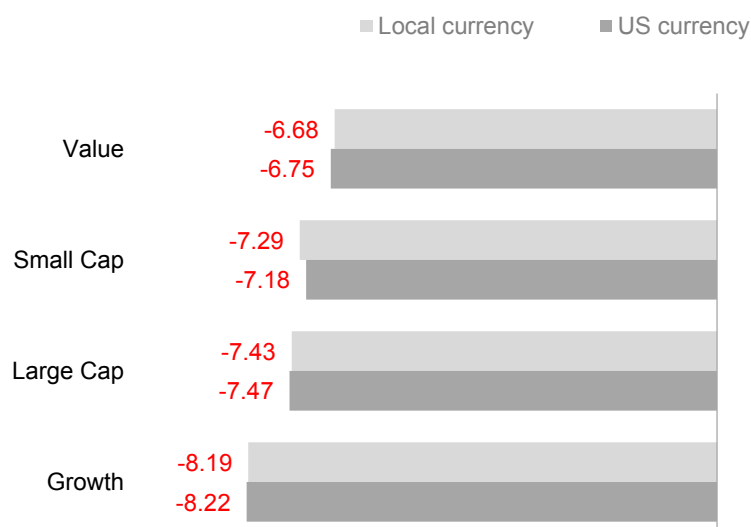
Fourth Quarter 2018 Index Returns

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.

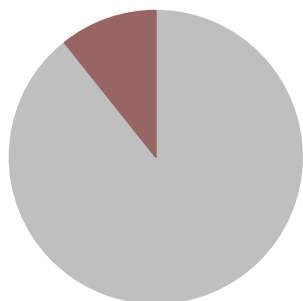
Ranked Returns for the Quarter (%)



World Market Capitalization— Emerging Markets

12%

Emerging
Markets
\$5.4 trillion



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

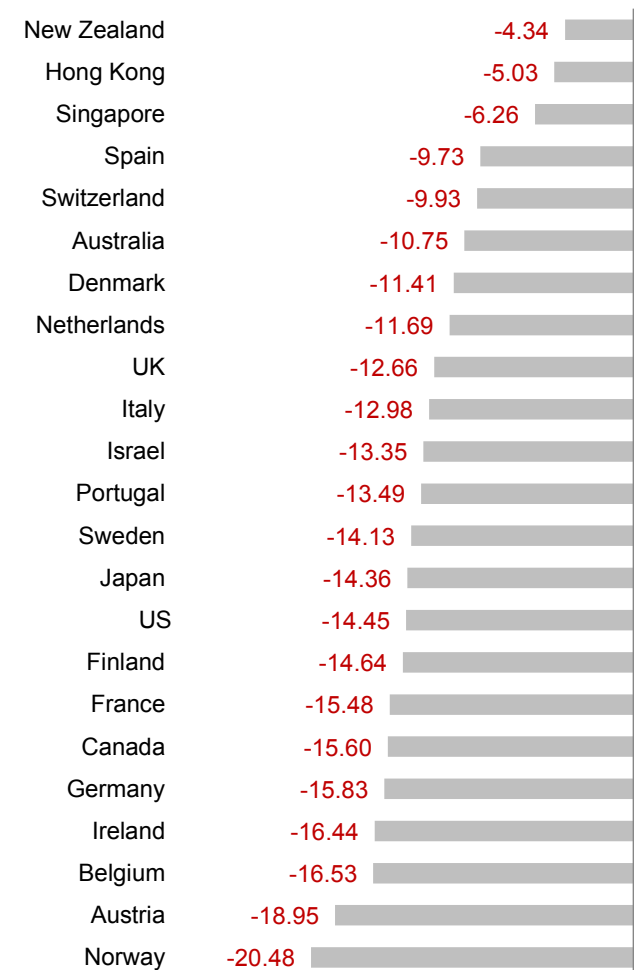
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Select Country Performance

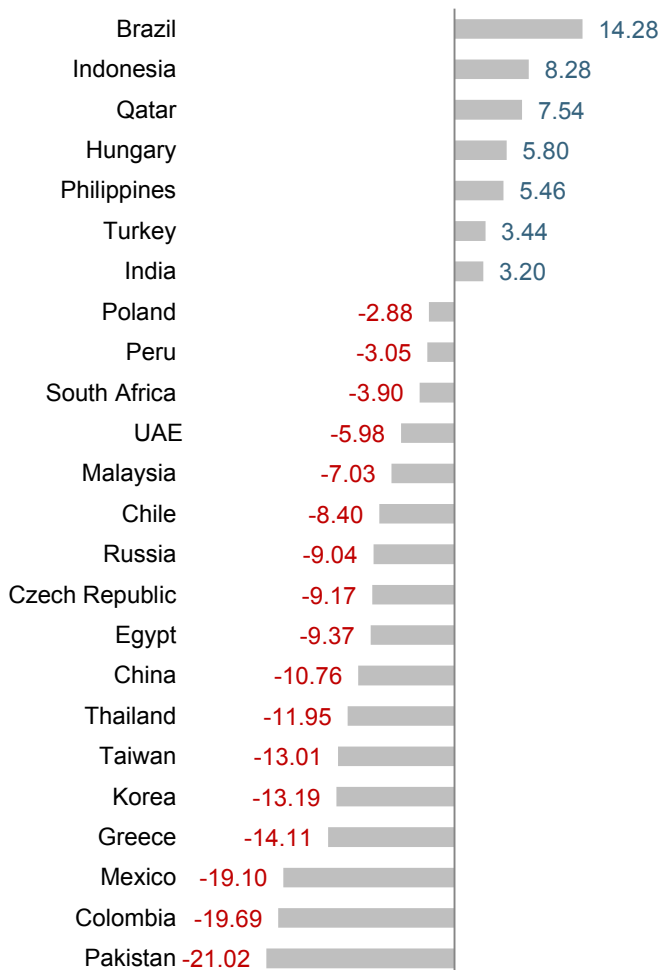
Fourth Quarter 2018 Index Returns

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 Colombia and Pakistan posted the lowest performance.

Ranked Developed Markets Returns (%)



Ranked Emerging Markets Returns (%)



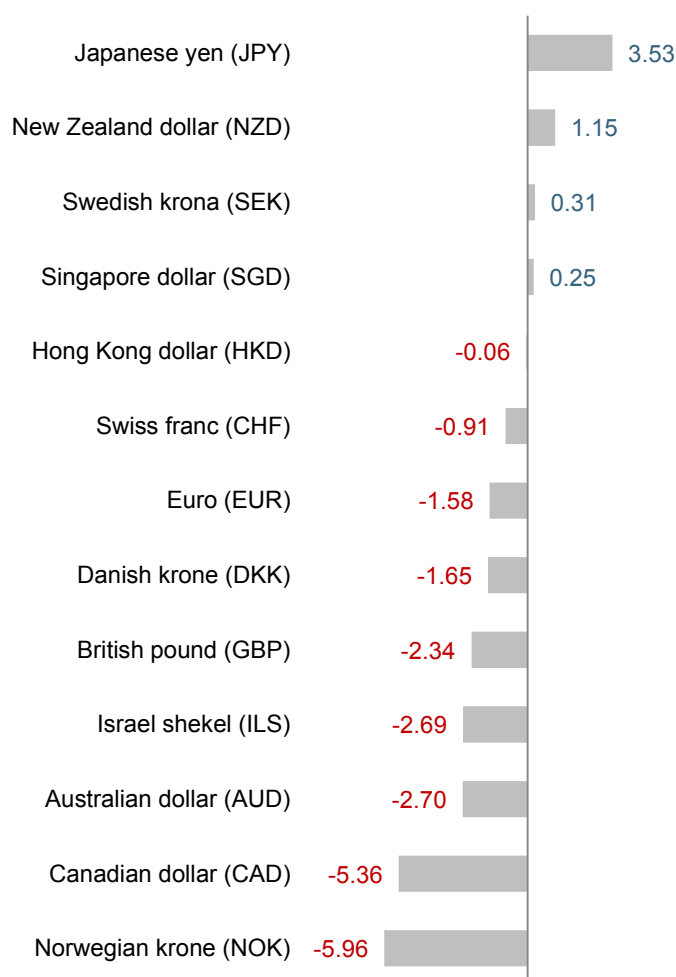
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Select Currency Performance vs. US Dollar

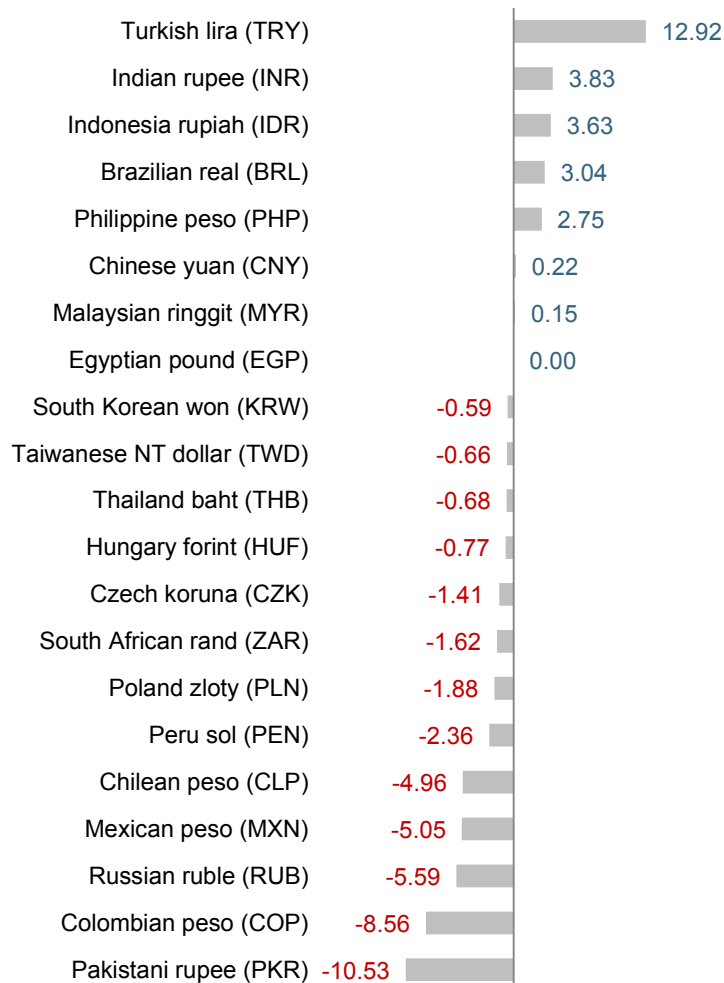
Fourth Quarter 2018

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 Returns (%)



Ranked Emerging Markets Returns (%)



Real Estate Investment Trusts (REITs)

Fourth Quarter 2018 Index Returns

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

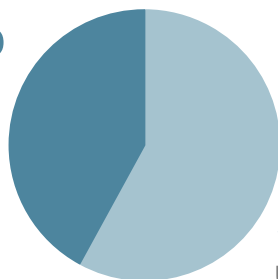
Ranked Returns (%)



Total Value of REIT Stocks

42%

World ex US
\$436 billion
245 REITs
(22 other countries)



58%

US
\$601 billion
97 REITs

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.

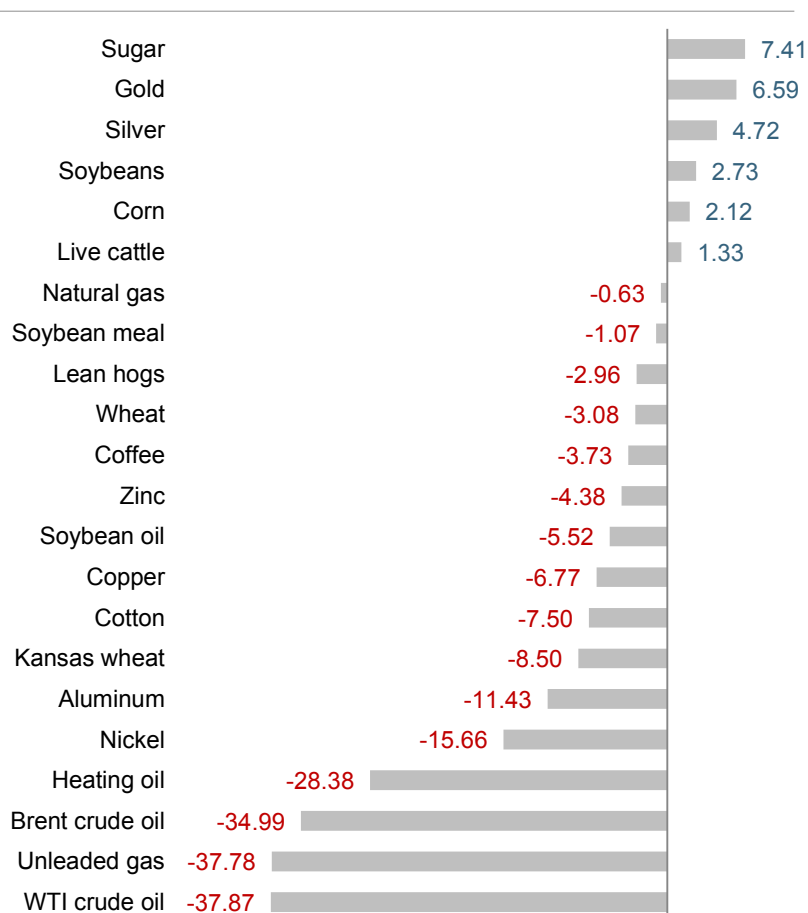
Commodities

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.

Ranked Returns for Individual Commodities (%)



Period Returns (%)

* Annualized

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

Fixed Income

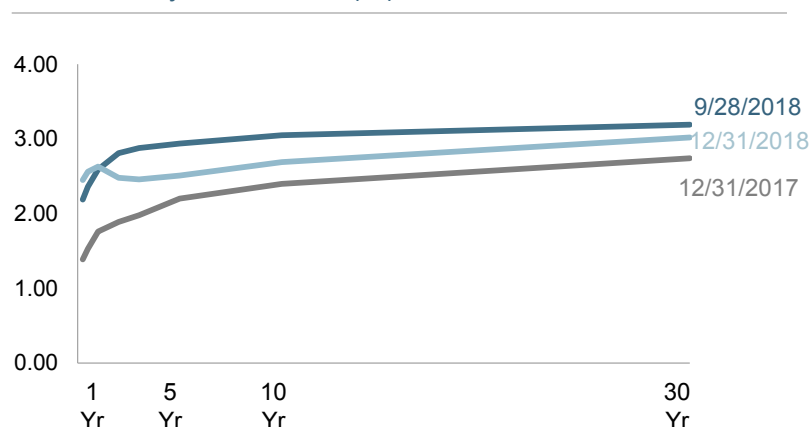
Fourth Quarter 2018 Index Returns

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.

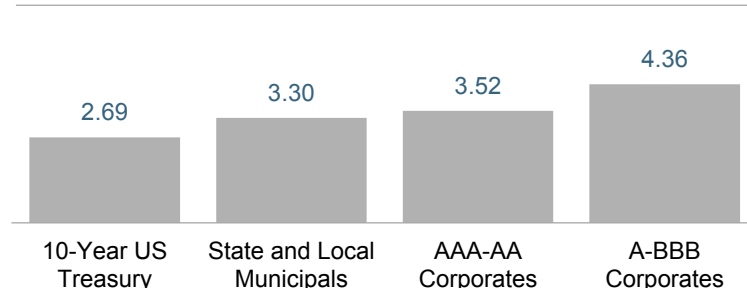
In terms of total returns, short-term corporate bonds increased 0.78% during the quarter. Intermediate-term corporate bonds had a total return of 0.58%.

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 Yields across Issuers (%)



Period Returns (%)

* Annualized

Asset Class	QTR	1 Year	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 ICE BofAML US Corporates, AA-AAA rated. A-BBB Corporates represent the ICE BofAML US Corporates, BBB-A rated. Bloomberg Barclays data provided by Bloomberg. US long-term bonds, bills, inflation, and fixed income factor data © Stocks, Bonds, Bills, and Inflation (SBBBI) Yearbook™, Ibbotson Associates, Chicago (annually updated work by Roger G. Ibbotson and Rex A. Sinquefeld). FTSE fixed income indices © 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.

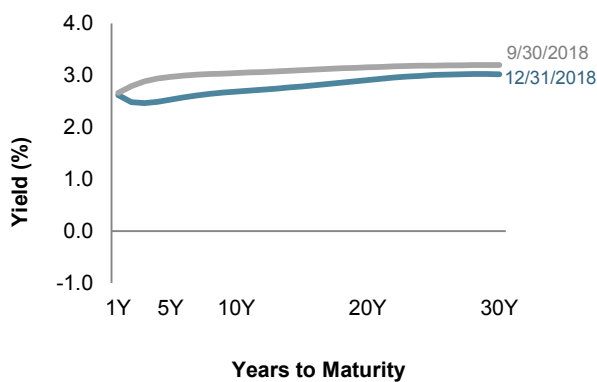
Longer-term bonds generally outperformed shorter-term bonds in the global developed markets.

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.

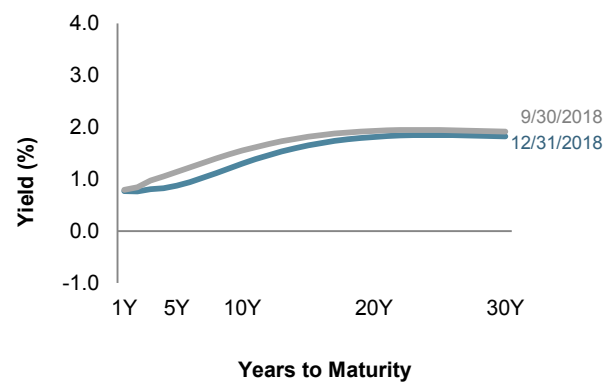
Changes in Yields (bps) since 12/31/2018

	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

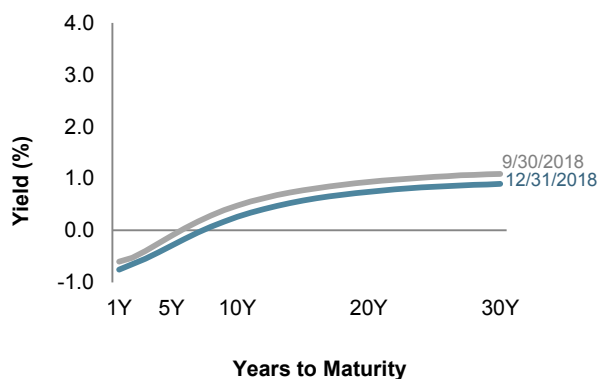
US



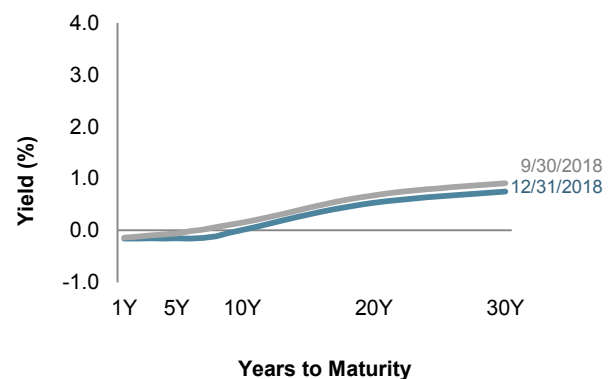
UK



Germany



Japan

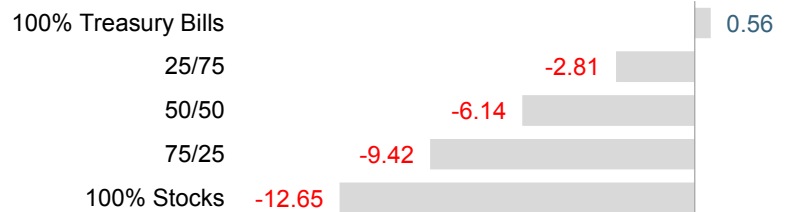


Impact of Diversification

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.

Ranked Returns (%)

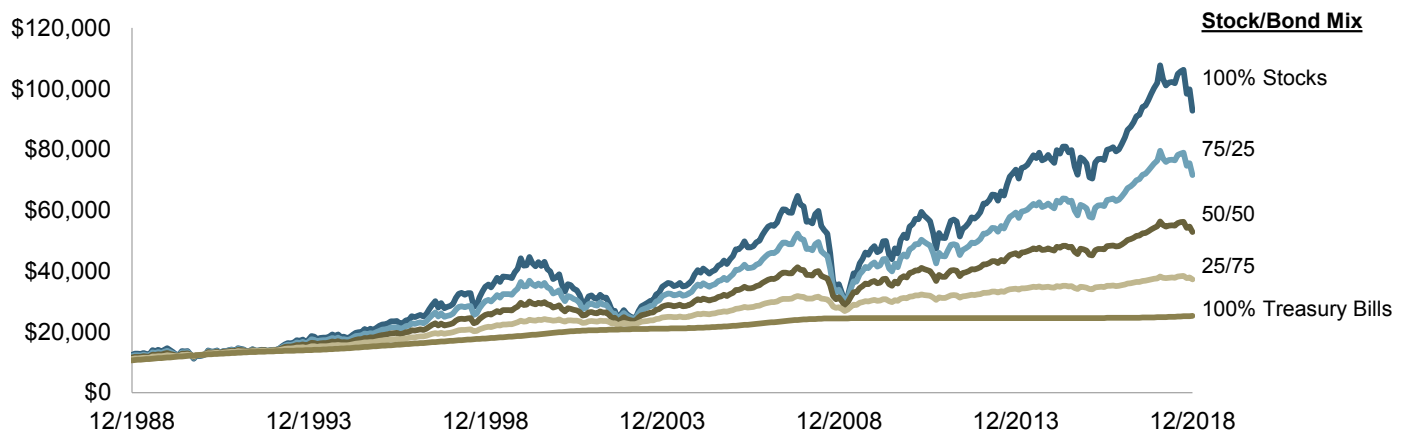


Period Returns (%)

* Annualized

Asset Class	1 Year	3 Years*	5 Years*	10 Years*	10-Year STDEV
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

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).