

VIAIV

Q1

Quarterly Market Review

First Quarter 2020

# Quarterly Market Review

First Quarter 2020

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 Market Performance

Select Currency Performance vs. US Dollar

Real Estate Investment Trusts (REITs)

Commodities

Fixed Income

Global Fixed Income

Impact of Diversification

Quarterly Topic: The Coronavirus and Market Declines

# 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
<b>1Q 2020</b>	<b>STOCKS</b>					<b>BONDS</b>	
	<b>-20.90%</b> 	<b>-23.26%</b> 	<b>-23.60%</b> 	<b>-29.02%</b> 		<b>3.15%</b> 	<b>0.51%</b> 
<b>Since Jan. 2001</b>							
Avg. Quarterly Return	1.8%	1.2%	2.5%	2.2%		1.2%	1.1%
Best Quarter	16.8%	25.9%	34.7%	32.3%		4.6%	4.6%
	<b>2009 Q2</b>	<b>2009 Q2</b>	<b>2009 Q2</b>	<b>2009 Q3</b>		<b>2001 Q3</b>	<b>2008 Q4</b>
Worst Quarter	-22.8%	-23.3%	-27.6%	-36.1%		-3.0%	-2.7%
	<b>2008 Q4</b>	<b>2020 Q1</b>	<b>2008 Q4</b>	<b>2008 Q4</b>		<b>2016 Q4</b>	<b>2015 Q2</b>

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: US Stock Market (Russell 3000 Index), International Developed Stocks (MSCI World ex USA Index [net div.]), Emerging Markets (MSCI Emerging Markets Index [net div.]), Global Real Estate (S&P Global REIT Index [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 © 2020 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 2020, all rights reserved. Bloomberg Barclays data provided by Bloomberg.

# Long-Term Market Summary

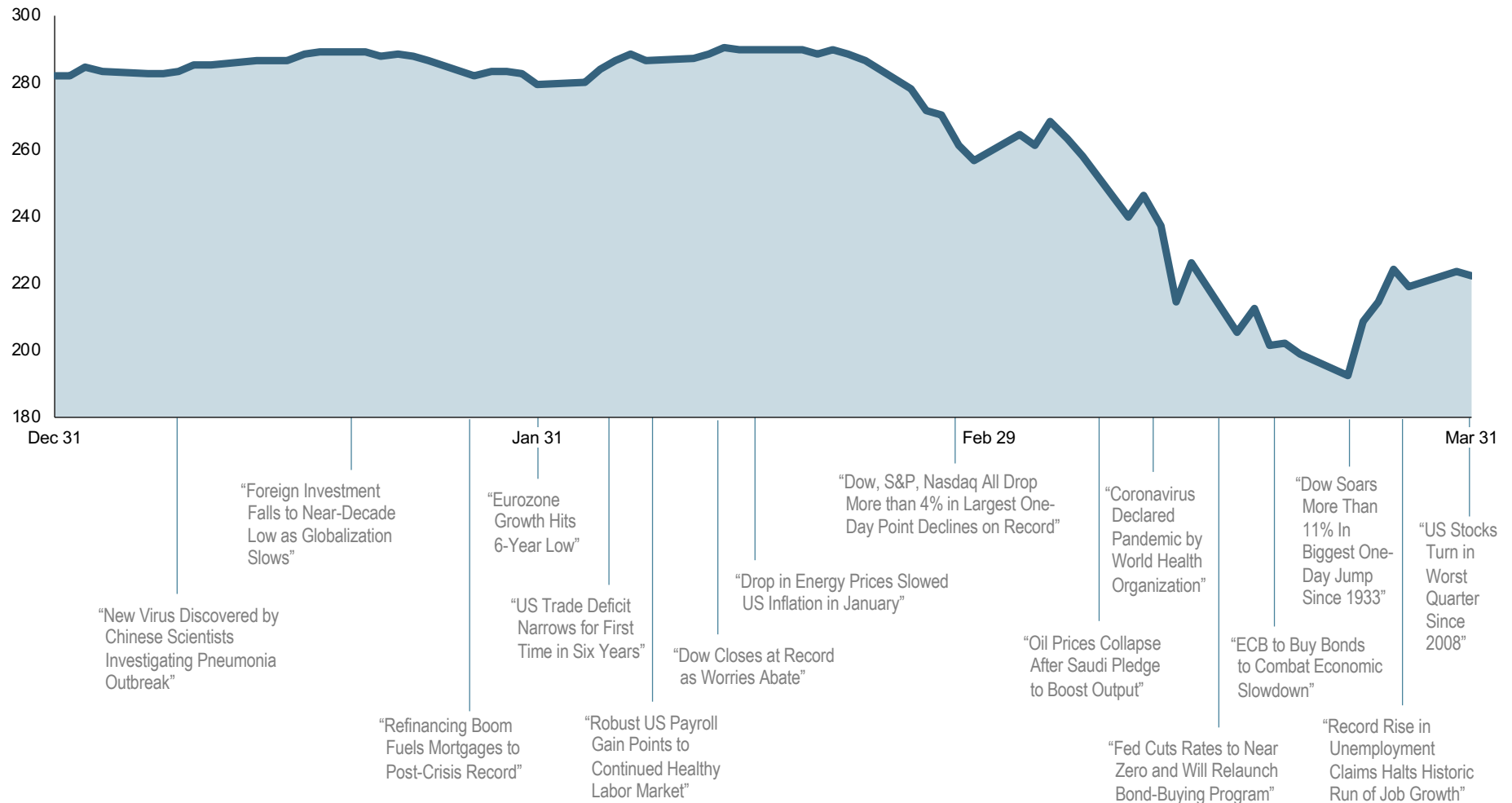
## Index Returns

	US Stock Market	International Developed Stocks	Emerging Markets Stocks	Global Real Estate		US Bond Market	Global Bond Market ex US
<b>1 Year</b>	<b>STOCKS</b>					<b>BONDS</b>	
	-9.13%	-14.89%	-17.69%	-23.39%		8.93%	5.01%
<b>5 Years</b>							
	5.77%	-0.76%	-0.37%	-2.14%		3.36%	3.56%
<b>10 Years</b>							
	10.15%	2.43%	0.68%	5.12%		3.88%	4.17%

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# World Stock Market Performance

MSCI All Country World Index with selected headlines from Q1 2020



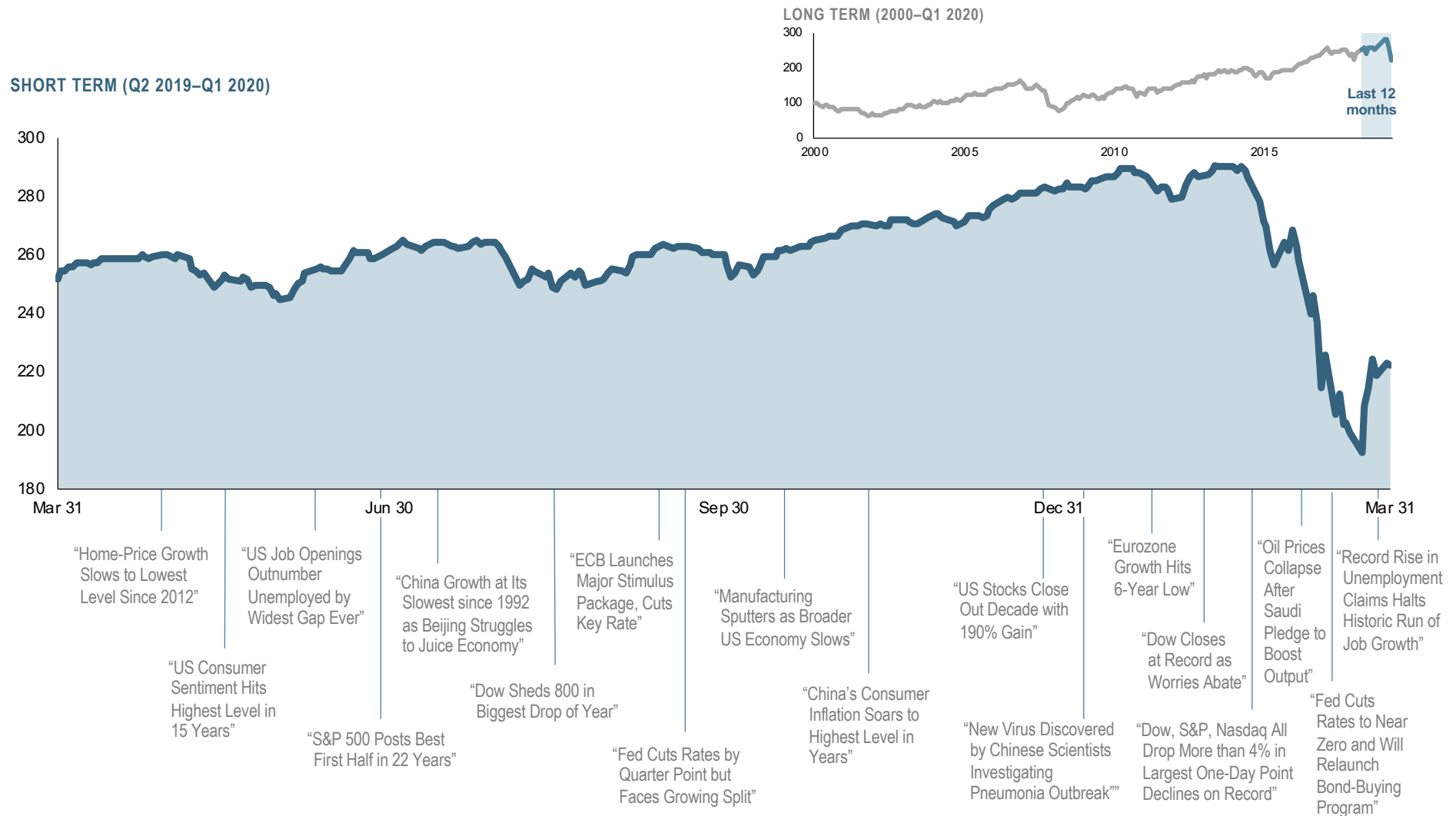
*These headlines are not offered to explain market returns. Instead, they serve as a reminder that investors should view daily events from a long-term perspective and avoid making investment decisions based solely on the news.*

Graph Source: MSCI ACWI Index [net div.]. MSCI data © MSCI 2020, 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 2020, 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.**

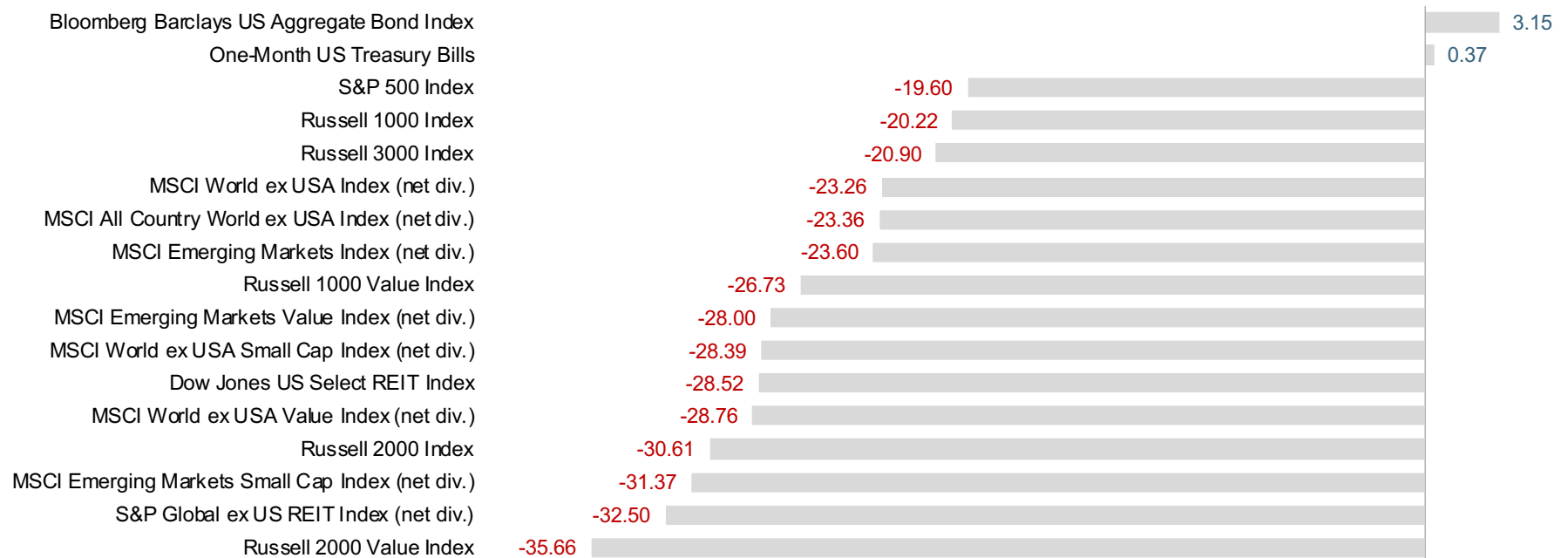
# World Asset Classes

## First Quarter 2020 Index Returns (%)

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

Value stocks underperformed growth stocks in all regions. Small caps also underperformed large caps in all regions.

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



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# US Stocks

## First Quarter 2020 Index Returns

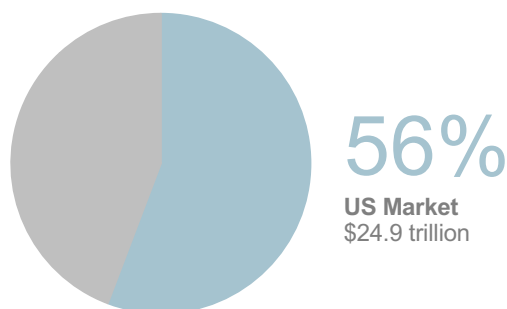
The US equity market posted negative returns for the quarter but on a broad index level outperformed non-US developed markets and emerging markets.

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

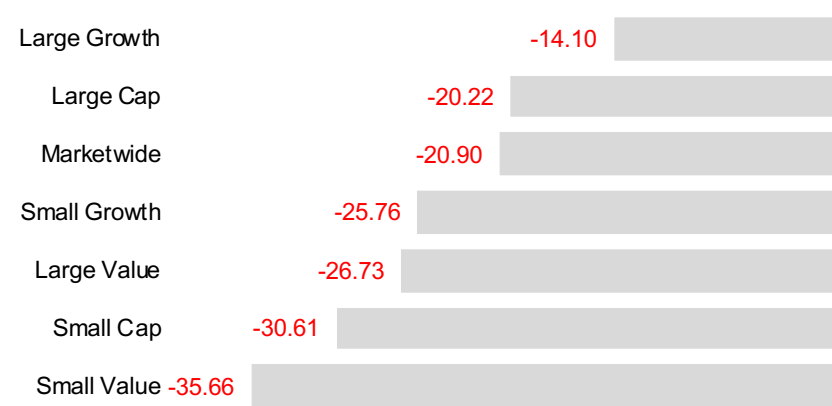
Small caps underperformed large caps in the US.

REIT indices underperformed equity market indices.

### World Market Capitalization—US



### Ranked Returns (%)



### Period Returns (%)

Asset Class	YTD	1 Year	* Annualized		
			3 Years*	5 Years*	10 Years*
Large Growth	-14.10	0.91	11.32	10.36	12.97
Large Cap	-20.22	-8.03	4.64	6.22	10.39
Marketwide	-20.90	-9.13	4.00	5.77	10.15
Small Growth	-25.76	-18.58	0.10	1.70	8.89
Large Value	-26.73	-17.17	-2.18	1.90	7.67
Small Cap	-30.61	-23.99	-4.64	-0.25	6.90
Small Value	-35.66	-29.64	-9.51	-2.42	4.79

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. Dow Jones US Select REIT Index used as proxy for the US REIT market. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. MSCI data © MSCI 2020, all rights reserved.



# International Developed Stocks

## First Quarter 2020 Index Returns

Developed markets outside the US underperformed the US equity market but outperformed emerging markets equities during the quarter.

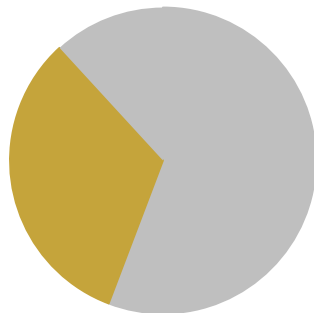
Small caps underperformed large caps in non-US developed markets.

Value underperformed growth across large and small cap stocks.

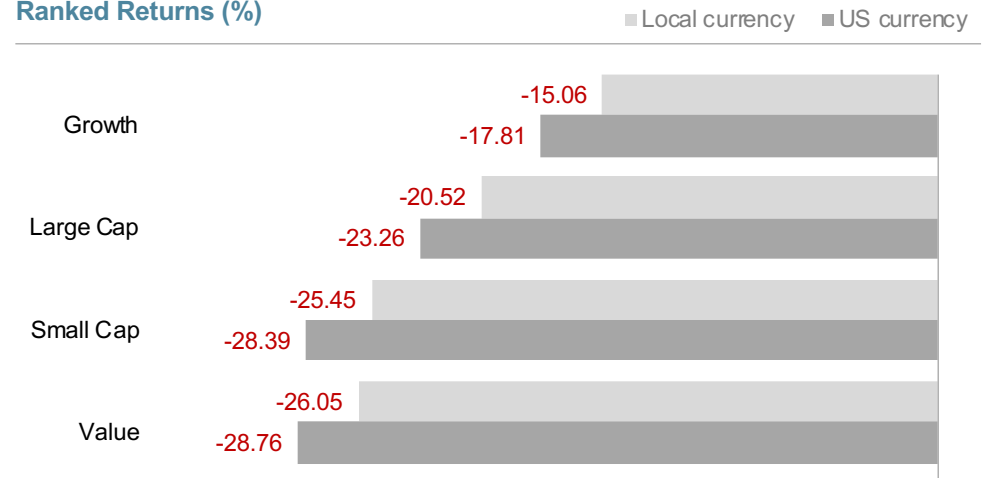
### World Market Capitalization—International Developed

**32%**

International Developed Market  
\$14.4 trillion



### Ranked Returns (%)



### Period Returns (%)

Asset Class	YTD	1 Year	3 Years*	5 Years*	10 Years*
Growth	-17.81	-6.47	2.55	2.05	4.25
Large Cap	-23.26	-14.89	-2.07	-0.76	2.43
Small Cap	-28.39	-19.04	-3.60	0.39	3.95
Value	-28.76	-23.16	-6.74	-3.70	0.51

\* Annualized

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# Emerging Markets Stocks

## First Quarter 2020 Index Returns

Emerging markets underperformed developed markets, including the US, for the quarter.

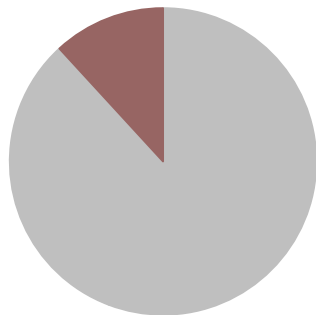
Value stocks underperformed growth stocks.

Small caps underperformed large caps.

### World Market Capitalization—Emerging Markets

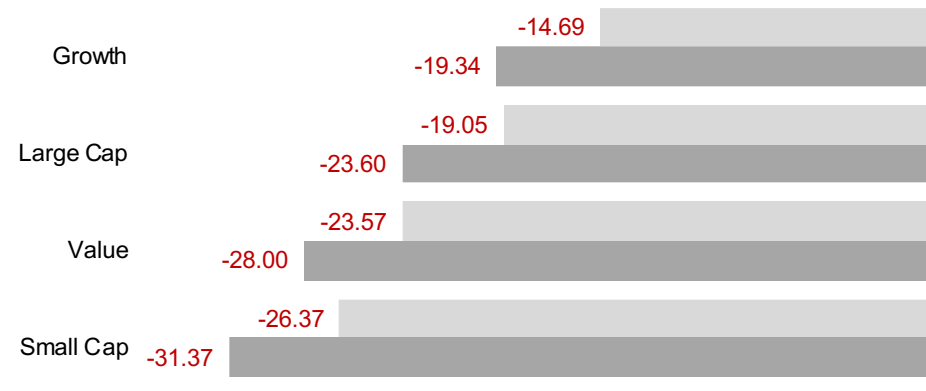
12%

Emerging Markets  
\$5.3 trillion



### Ranked Returns (%)

■ Local currency ■ US currency



### Period Returns (%)

\* Annualized

Asset Class	YTD	1 Year	3 Years*	5 Years*	10 Years*
Growth	-19.34	-9.94	2.39	2.13	2.71
Large Cap	-23.60	-17.69	-1.62	-0.37	0.68
Value	-28.00	-25.26	-5.78	-3.00	-1.45
Small Cap	-31.37	-28.98	-9.64	-5.17	-1.34

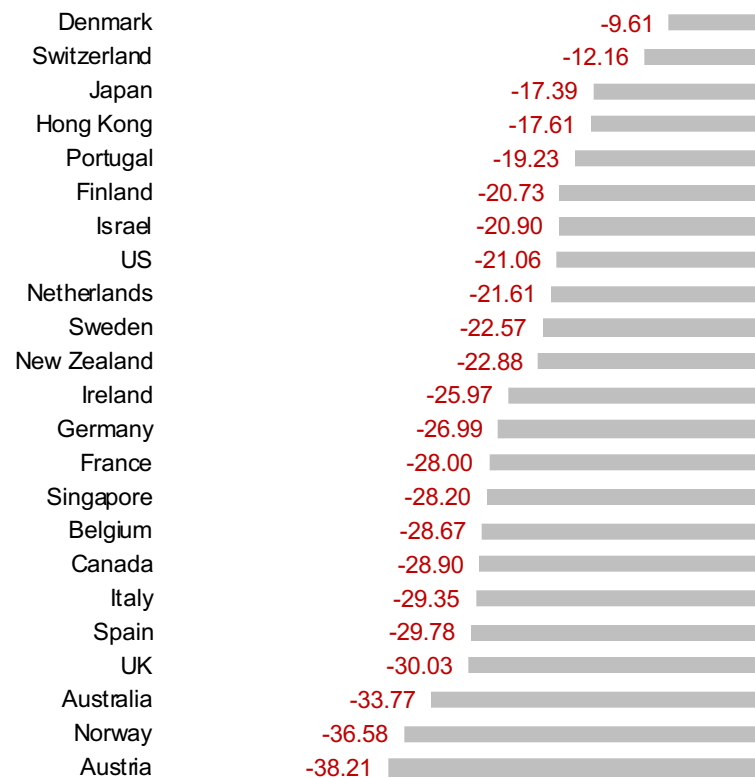
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# Select Market Performance

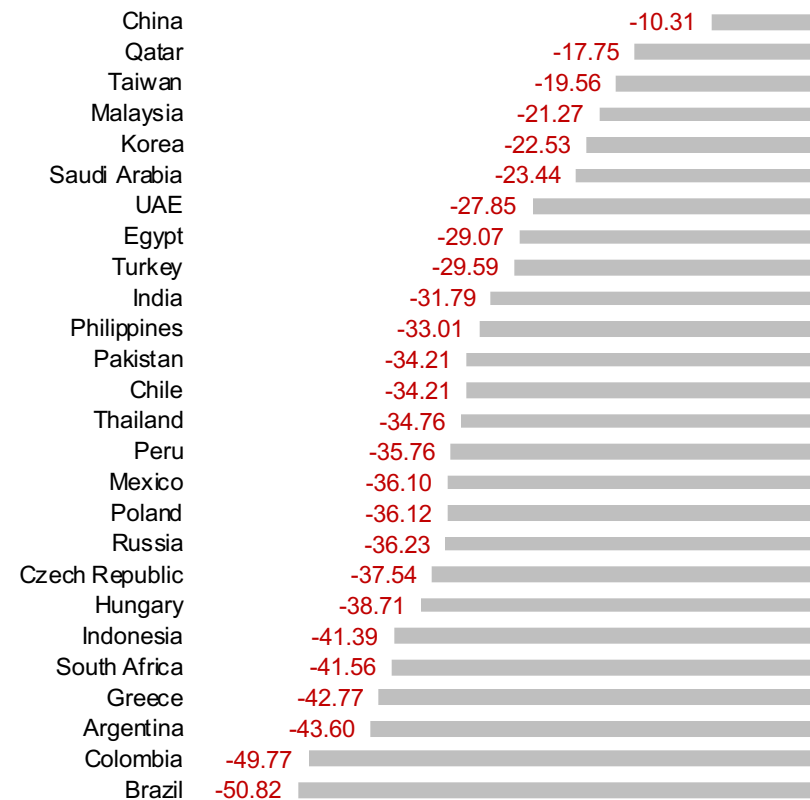
## First Quarter 2020 Index Returns

In US dollar terms, Denmark and Switzerland recorded the highest country performance in developed markets, while Austria and Norway posted the lowest returns for the quarter. In emerging markets, China and Qatar recorded the highest country performance, while Brazil and Colombia posted the lowest performance.

### Ranked Developed Markets Returns (%)



### Ranked Emerging Markets Returns (%)



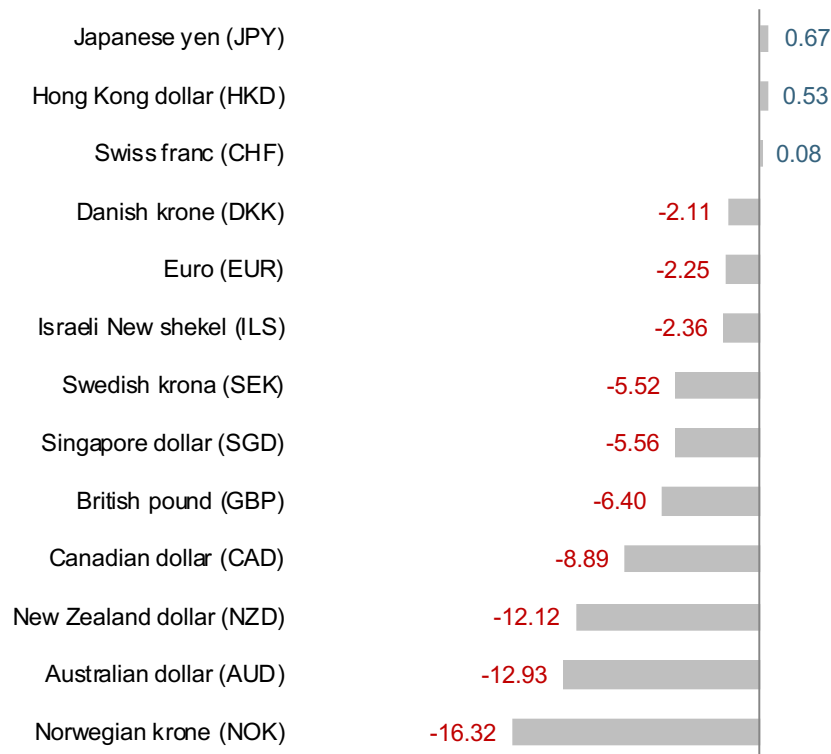
Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Country performance based on respective indices in the MSCI World ex US IMI Index (for developed 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 2020, all rights reserved. UAE and Qatar have been reclassified as emerging markets by MSCI, effective May 2014. Saudi Arabia and Argentina have been reclassified as emerging markets by MSCI, effective May 2019.

# Select Currency Performance vs. US Dollar

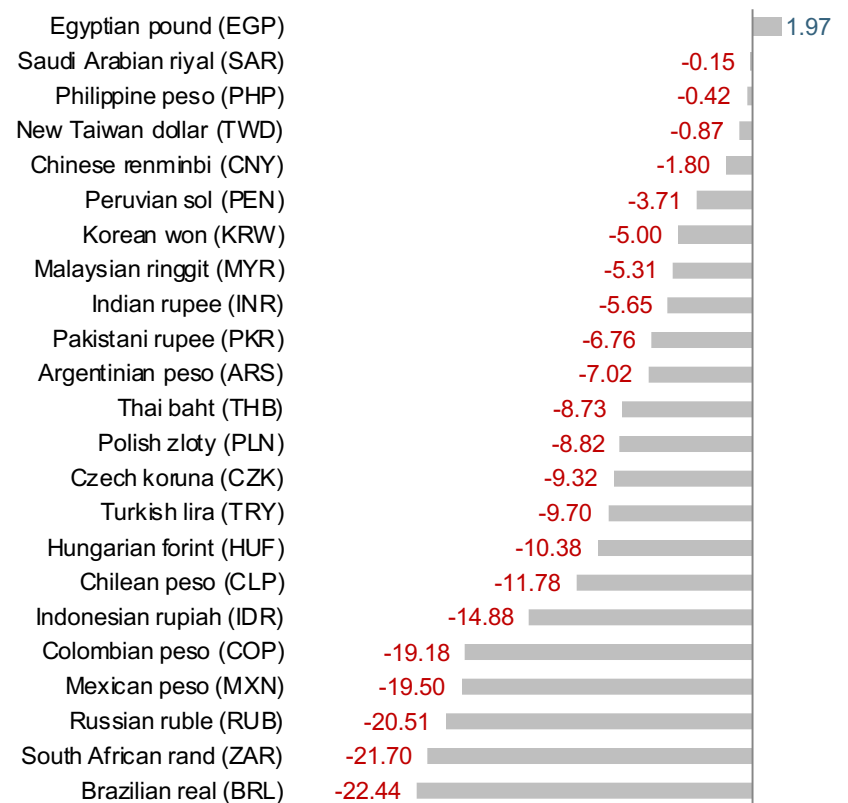
First Quarter 2020

In developed and emerging markets, currencies mostly depreciated vs. the US dollar with a few exceptions, including the Japanese yen and the Swiss franc.

## Ranked Developed Markets (%)



## Ranked Emerging Markets (%)

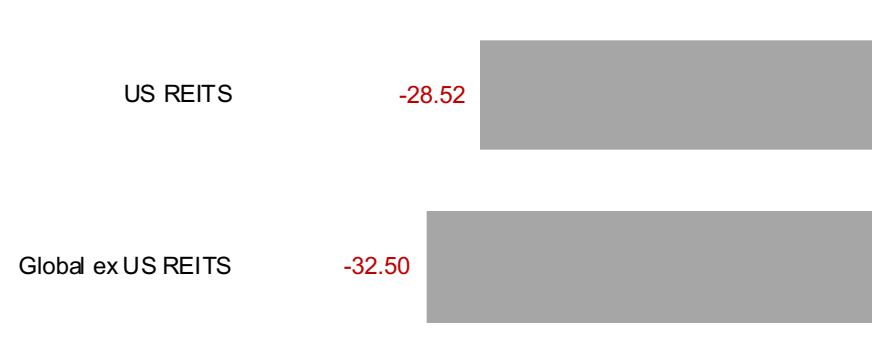


# Real Estate Investment Trusts (REITs)

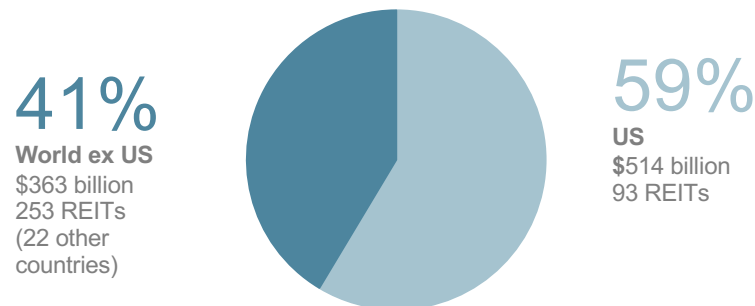
## First Quarter 2020 Index Returns

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

### Ranked Returns (%)



### Total Value of REIT Stocks



### Period Returns (%)

Asset Class	YTD	1 Year	3 Years*	5 Years*	* Annualized
					10 Years*
US REITS	-28.52	-23.96	-4.28	-1.42	6.88
Global ex US REITS	-32.50	-25.34	-4.83	-2.76	3.61

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 © 2020 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved.

# Commodities

## First Quarter 2020 Index Returns

The Bloomberg Commodity Index Total Return decreased 23.29% for the first quarter.

Unleaded gas and WTI crude oil were the worst performers, declining by 68.20% and 66.63%, respectively.

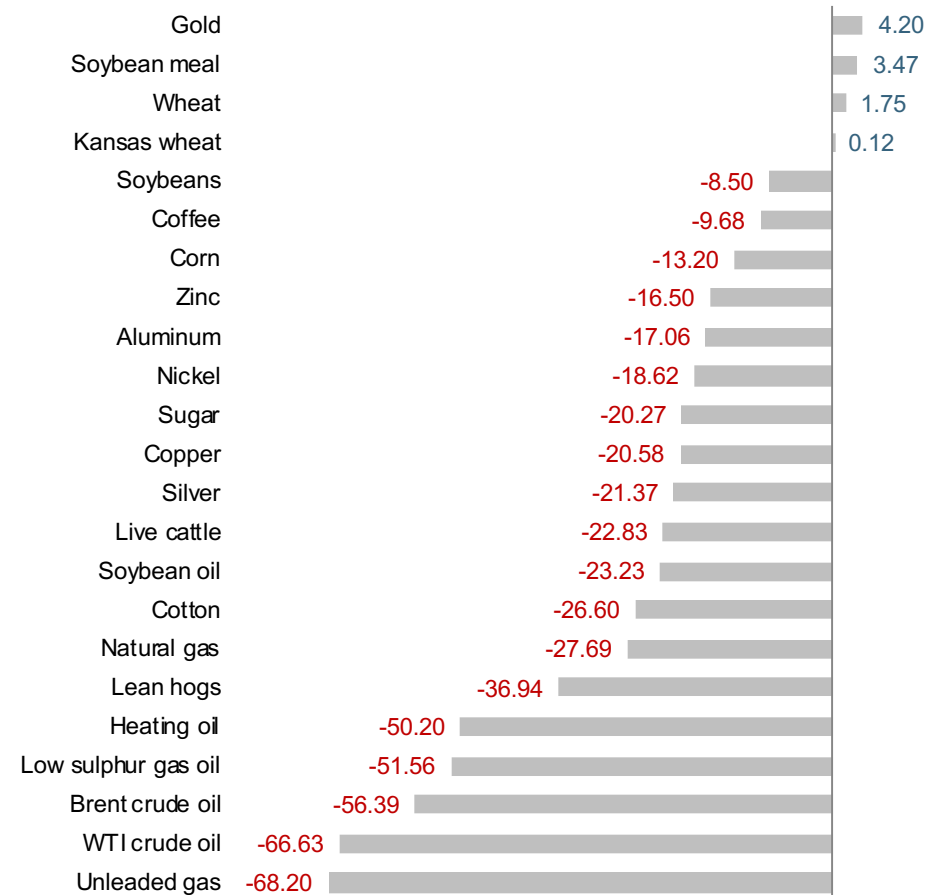
Gold and soybean meal led quarterly performance, returning 4.20% and 3.47%, respectively.

### Period Returns (%)

\* Annualized

Asset Class	QTR	1 Year	3 Years*	5 Years*	10 Years*
Commodities	-23.29	-22.31	-8.61	-7.76	-6.74

### Ranked Returns (%)



# Fixed Income

## First Quarter 2020 Index Returns

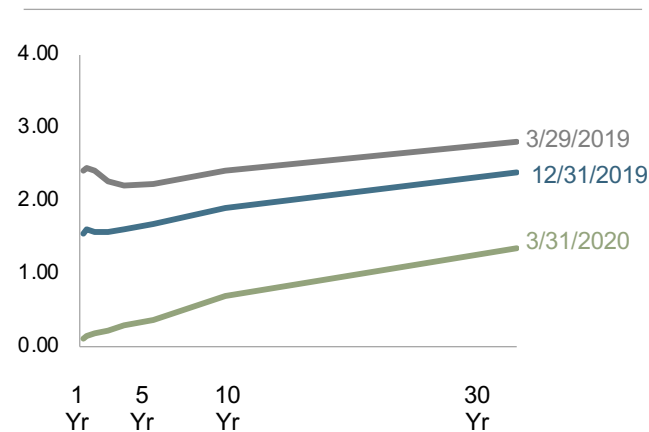
Interest rates decreased in the US treasury market in the first quarter. The yield on the 5-year Treasury note decreased by 132 basis points (bps), ending at 0.37%. The yield on the 10-year note decreased by 122 bps to 0.70%. The 30-year Treasury bond yield decreased 104 bps to 1.35%.

On the short end of the yield curve, the 1-month Treasury bill yield decreased to 0.05%, while the 1-year Treasury bill yield decreased by 142 bps to 0.17%. The 2-year note finished at 0.23% after a decrease of 135 bps.

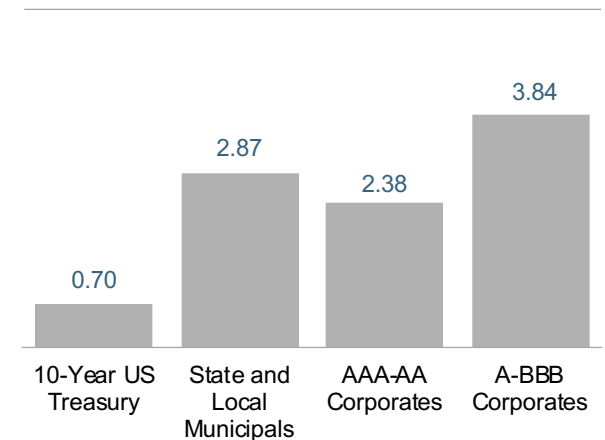
In terms of total returns, short-term corporate bonds declined 2.19%. Intermediate-term corporate bonds declined 3.15%.

The total return for short-term municipal bonds was -0.51%, while intermediate-term municipal bonds returned -0.82%. General obligation bonds outperformed revenue bonds.

US Treasury Yield Curve (%)



Bond Yield across Issuers (%)



Period Returns (%)

Asset Class	QTR	1 Year	3 Years*	5 Years*	10 Years*
Bloomberg Barclays US Government Bond Index Long	20.63	32.28	13.30	7.32	8.89
Bloomberg Barclays US Aggregate Bond Index	3.15	8.93	4.82	3.36	3.88
FTSE World Government Bond Index 1-5 Years (hedged to USD)	2.25	4.98	3.03	2.24	2.00
ICE BofA 1-Year US Treasury Note Index	1.72	3.85	2.31	1.57	0.98
Bloomberg Barclays US TIPS Index	1.69	6.85	3.46	2.67	3.48
FTSE World Government Bond Index 1-5 Years	0.69	2.79	2.12	1.55	0.40
ICE BofA US 3-Month Treasury Bill Index	0.57	2.25	1.83	1.19	0.64
Bloomberg Barclays Municipal Bond Index	-0.63	3.85	3.96	3.19	4.15
Bloomberg Barclays US High Yield Corporate Bond Index	-12.68	-6.94	0.77	2.78	5.64

\*Annualized

One basis point (bps) 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 BofA 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 (SBBI) Yearbook™, Ibbotson Associates, Chicago (annually updated work by Roger G. Ibbotson and Rex A. Sinquefeld). FTSE fixed income indices © 2020 FTSE Fixed Income LLC, all rights reserved. ICE BofA index data © 2020 ICE Data Indices, LLC. S&P data © 2020 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved.

# Global Fixed Income

## First Quarter 2020 Yield Curves

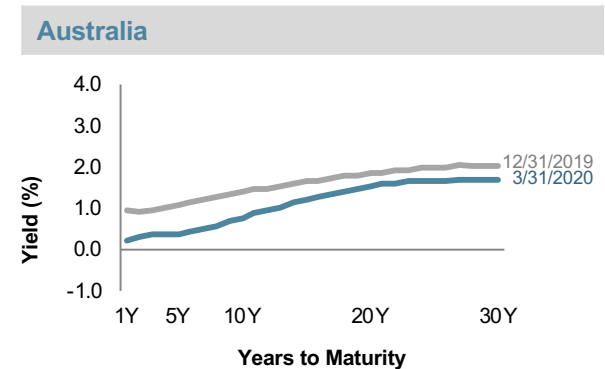
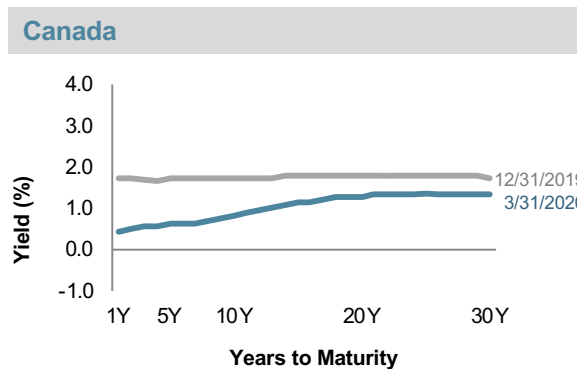
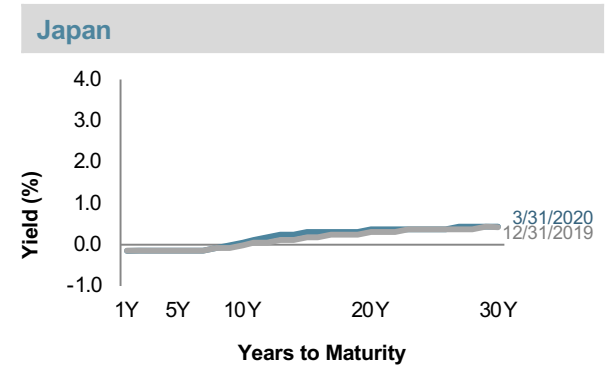
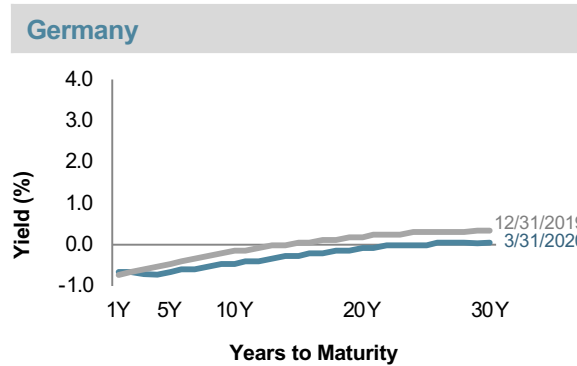
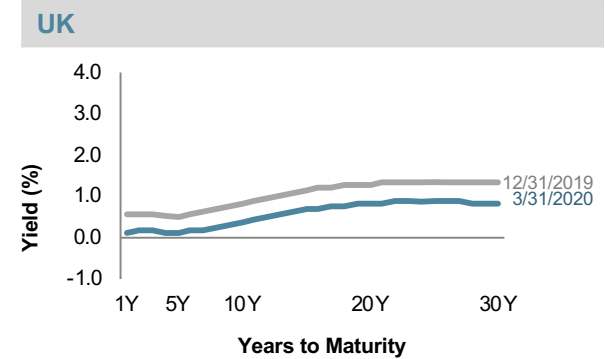
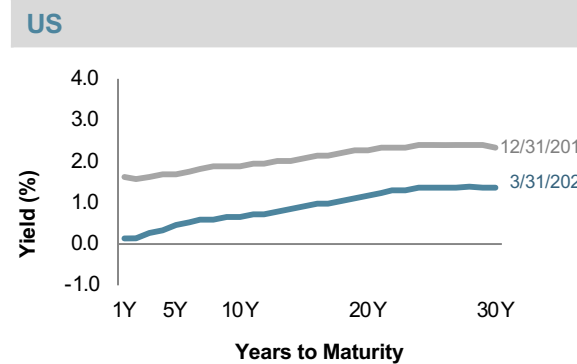
Government bond interest rates in the global developed markets generally decreased during the quarter.

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

Short- and Intermediate-term nominal interest rates are negative in Japan and Germany.

Changes in Yields (bps) since 12/31/2019

	1Y	5Y	10Y	20Y	30Y
US	-1.5	-1.3	-1.2	-1.1	-1.0
UK	-0.5	-0.4	-0.5	-0.5	-0.5
Germany	0.1	-0.2	-0.3	-0.3	-0.3
Japan	-0.0	0.0	0.1	0.1	0.0
Canada	-1.3	-1.1	-0.9	-0.5	-0.4
Australia	-0.7	-0.7	-0.6	-0.3	-0.3





# Impact of Diversification

First Quarter 2020

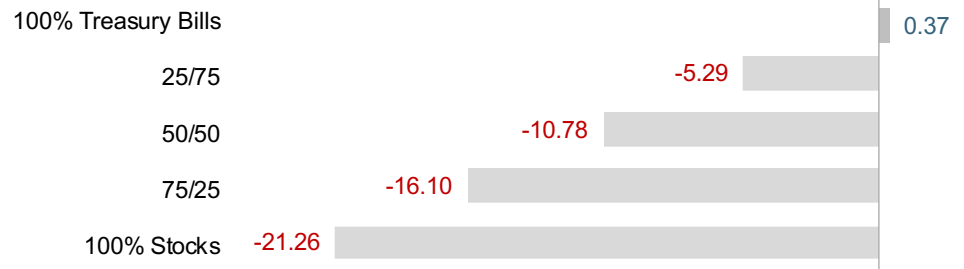
These portfolios illustrate the performance of different global stock/bond mixes and highlight the benefits of diversification. Mixes with larger allocations to stocks are considered riskier but have higher expected returns over time.

## Period Returns (%)

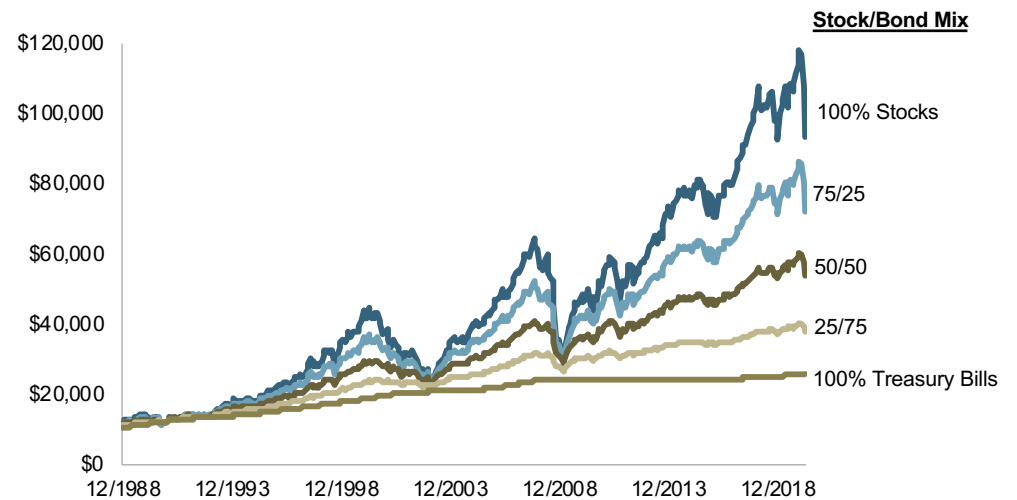
\* Annualized

Asset Class	QTR	1 Year	3 Years*	5 Years*	10 Years*	10-Year STDEV
100% Treasury Bills	0.37	1.93	1.67	1.06	0.56	0.23
25/75	-5.29	-1.03	1.98	1.83	2.19	3.50
50/50	-10.78	-4.14	2.15	2.48	3.72	7.00
75/25	-16.10	-7.39	2.17	3.01	5.14	10.50
100% Stocks	-21.26	-10.76	2.05	3.41	6.45	14.00

## 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 2020, 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).

# The Coronavirus and Market Declines

First Quarter 2020

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The world is watching with concern the spread of the new coronavirus. The uncertainty is being felt around the globe, and it is unsettling on a human level as well as from the perspective of how markets respond.

At Dimensional, it is a fundamental principle that markets are designed to handle uncertainty, processing information in real-time as it becomes available. We see this happening when markets decline sharply, as they have recently, as well as when they rise. Such declines can be distressing to any investor, but they are also a demonstration that the market is functioning as we would expect.

Market declines can occur when investors are forced to reassess expectations for the future. The expansion of the outbreak is causing worry among governments, companies, and individuals about the impact on the global economy. Apple announced earlier this month that it expected revenue to take a hit from problems making and selling products in China.<sup>1</sup> Australia's prime minister has said the virus will likely become a global pandemic,<sup>2</sup> and other officials there warned of a serious blow to the country's economy.<sup>3</sup> Airlines are preparing for the toll it will take on travel<sup>4</sup>. And these are just a few examples of how the impact of the coronavirus is being assessed.

The market is clearly responding to new information as it becomes known, but the market is pricing in unknowns, too. As risk increases during a time of heightened uncertainty, so do the returns investors demand for bearing that risk, which pushes prices lower. Our investing approach is based on the principle that prices are set to deliver positive future expected returns for holding risky assets.

We can't tell you when things will turn or by how much, but our expectation is that bearing today's risk will be compensated with positive expected returns. That's been a lesson of past health crises, such as the Ebola and swine-flu outbreaks earlier this century, and of market disruptions, such as the global financial crisis of 2008–2009. Additionally, history has shown no reliable way to identify a market peak or bottom. These beliefs argue against making market moves based on fear or speculation, even as difficult and traumatic events transpire.

Dimensional also stands behind the important role financial professionals play in helping investors develop a long-term plan they can stick with in a variety of conditions. Financial professionals are trained to consider a wide range of possible outcomes, both good and bad, when helping an investor establish an asset allocation and plan. Those preparations include the possibility, even the inevitability, of a downturn. Amid the anxiety that accompanies developments surrounding the coronavirus, decades of financial science and long-term investing principles remain a strong guide.

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1. Apple, February 17 press release. <https://www.apple.com/newsroom/2020/02/investor-update-on-quarterly-guidance/>

2. Ben Doherty and Katharine Murphy, "Australia Declares Coronavirus Will Become a Pandemic as It Extends China Travel Ban," *The Guardian*, February 27, 2020. <https://www.theguardian.com/world/2020/feb/27/australia-declares-coronavirus-will-become-a-pandemic-as-it-extends-china-travel-ban>

3. Ben Butler, "Coronavirus Threatens Australian Economy Reeling from Drought and Fires," *The Guardian*, February 5, 2020. <https://www.theguardian.com/business/2020/feb/05/coronavirus-threatens-australian-economy-reeling-from-drought-and-fires>; Ed Johnson, "Australia Says Economy to Take 'Significant' Hit from Virus," *Bloomberg*, February 5, 2020. <https://www.bloomberg.com/news/articles/2020-02-05/australia-says-economy-to-take-significant-hit-from-virus>

4. Alistair MacDonald and William Boston, "Global Airlines Brace for Coronavirus Impact," *Wall Street Journal*, February 26, 2020. <https://www.wsj.com/articles/germanys-lufthansa-makes-cuts-as-it-braces-for-coronavirus-impact-11582712819>

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