Vertex Planning Partners
LLC

Quarterly Market Review

Q2

Second Quarter 2019

Economy

Monetary Policy

What's Happening:

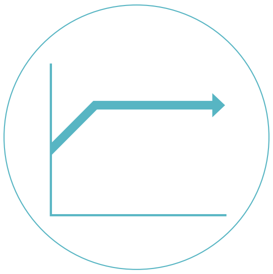
- The Fed continued its pause in 2019 from the rate hikes it began in 2015 with Janet Yellen after reaching 2.5% this past December.
- Over the past Quarter, long term government bonds have rallied (lowering interest rates), which has created periodic inversions of the yield curve (short term rates are higher than long term rates).
- Part of the reasons for the lowering of rates is the global rate environment, where overseas in Europe and Japan government 10-year bonds have remained ultra-low (even negative) to combat slowing growth and a overall lack of inflation.

What does this mean?

- The hopes of the Fed to raise interest rates prior to the next recession were thwarted by market action in December. This has been positive for risk assets, such as stocks, corporate bonds, as well as long term bonds.
- The inversion of the yield curve generally portends market expectations of slowing growth, low inflation, and an expectation of the fed to lower rates in the future.
- This environment can also lead to equity market action, as institutional investors take advantage of lower funding levels to acquire companies.

Economy

Fiscal Policy



What's Happening:

The US Government has continued to run a large fiscal deficit, which has been additive to US GDP. With low rates due to global demand of safe assets, presently the historic deficit levels have not had major impacts of Treasury demand.

What does this mean?

The budget has typically been run at a surplus this late in a market cycle in prior expansions. Although the spending has not been penalized by higher interest rates, the large amount of expenditures should rapidly grow the amount of treasury bonds needed to be issued in the future, which may lead to an explosion in costs if interest rates ever rise in the future. These issues will be interesting to note during the next election cycle.

Geopolitics

What's Happening:

Trade war disputes with China and Europe have dominated headlines and have had material effect on asset price volatility and economic trade volumes. Heading into the next election cycle we would expect these impacts to increase in frequency and volume, with the addition of immigration policy gaining traction.

What does this mean?

The trade war with China has already caused disruptions to the global business supply chain, with major companies like Apple looking to move manufacturing outside of the country to avoid tariffs. On the opposite side, Midwest farmers have been impacted by lower demand in soybeans and other agricultural goods effected by Chinese tariffs. The extent of the potential changes (higher prices, lower trade volumes) are yet to be determined.

Economy

GDP

What's Happening:

Unrevised seasonally adjusted Q1 Real GDP growth (inflation adjusted) increased 3.2%, higher than 2018 Q1 at 2.6% and Q4 3.0%

What does this mean?

Despite headline news, the US economy is still growing, with low unemployment and inflation.

Markets

Equity

After a strong recovery from the Q4 market pullbacks in Q1, returns have been mixed with Large Cap Developed markets having strong overall returns, with low to negative returns in Small Cap Domestic and Emerging Markets. Q2 experienced elevated volatility, as markets had mid-single digit pullbacks in May followed by historical rallies in June.

Fixed Income

The biggest impact in fixed income is the fed pause in short term rate hikes transitioning into market expectations of potential rate cuts. As the continued trade war rhetoric has driven investors to safety, 10-year treasury rates have once again flirted with 2%, causing an inversion in the yield curve (short term rates (3-mth or 2-year treasuries) yield more than longer term rates (10-year treasuries). The saying goes that yield curve inversions have predicted 12 of the last 7 recessions, so although it poses a cautionary sign, there are not always direct implications.

Current Strategy

Our opinion, along with several investment managers we follow, is the global economy is slowing, and in the US, we are in the later stages of the business cycle. This slowing growth environment is still positive for risk assets, and we have not made major changes to our portfolio allocations.

However, on an asset class level, we have look to tilt into higher quality, longer duration (interest rate sensitive) bonds as well as lower volatility equity strategies (particularly in international assets).

Exposure to real assets (Global REITs and Equity Infrastructure) have particularly benefited from continued economic growth and lowering interest rates, and we expect to continue our exposure.

Quarterly Market Review

Second Quarter 2019

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.

Market Summary

Index Returns

	US Stock Market	International Developed Stocks	Emerging Markets Stocks	Global Real Estate	US Bond Market	Global Bond Market ex US
Q2 2019	**STOCKS**				**BONDS**	
	4.10%	3.79%	0.61%	1.29%	3.08%	2.75%
Since Jan. 2001						
Avg. Quarterly Return	2.0%	1.5%	2.9%	2.6%	1.2%	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]).

Long-Term Market Summary

Index Returns

	US Stock Market	International Developed Stocks	Emerging Markets Stocks	Global Real Estate	US Bond Market	Global Bond Market ex US
1 Year	**STOCKS**				**BONDS**	
	8.98%	1.29%	1.21%	8.81%	7.87%	7.61%
5 Years						
	10.19%	2.04%	2.49%	5.29%	2.95%	4.43%
10 Years						
	14.67%	6.75%	5.81%	12.19%	3.90%	4.44%

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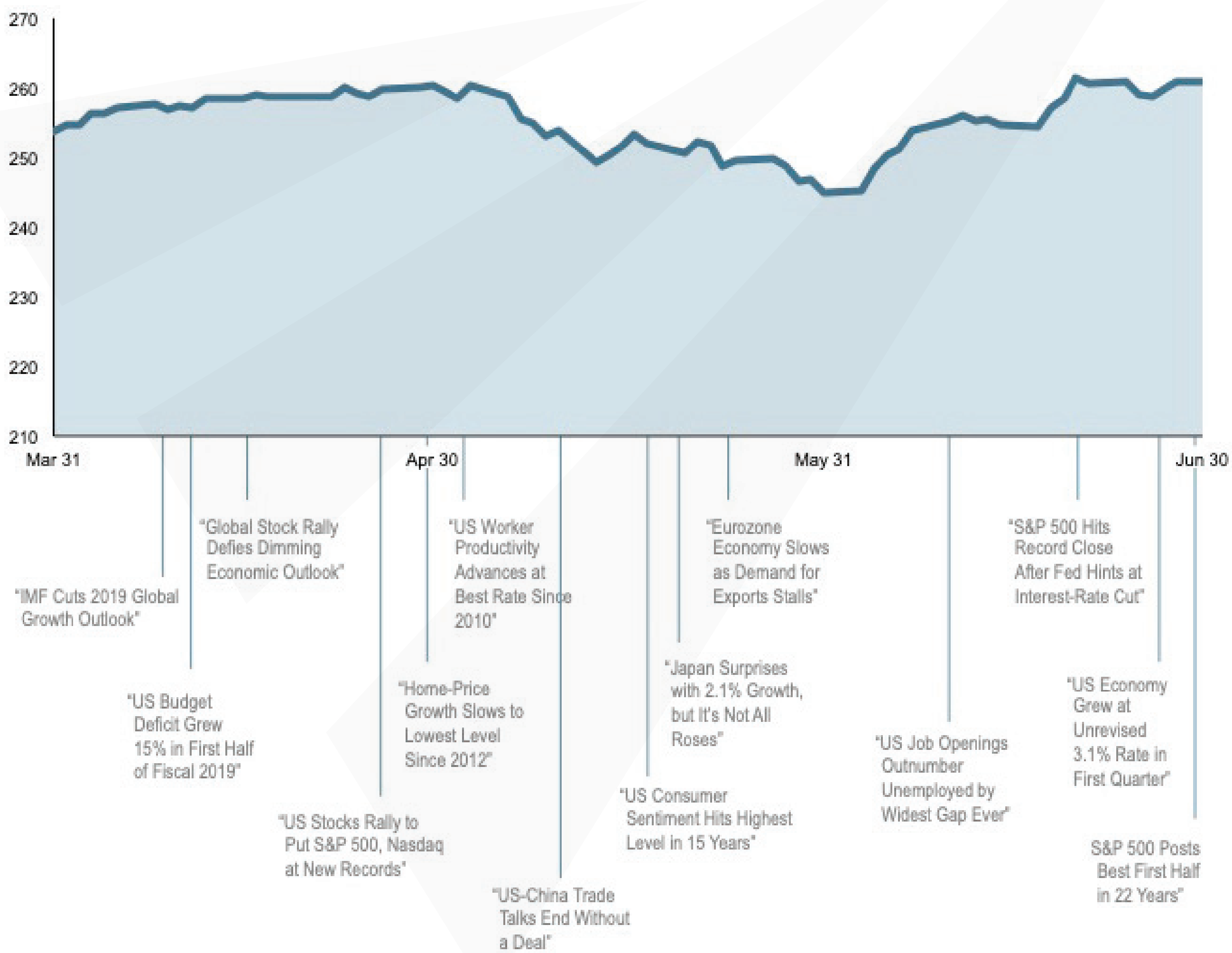
World Stock Market Performance

MSCI All Country World Index with selected headlines from Q2 2019



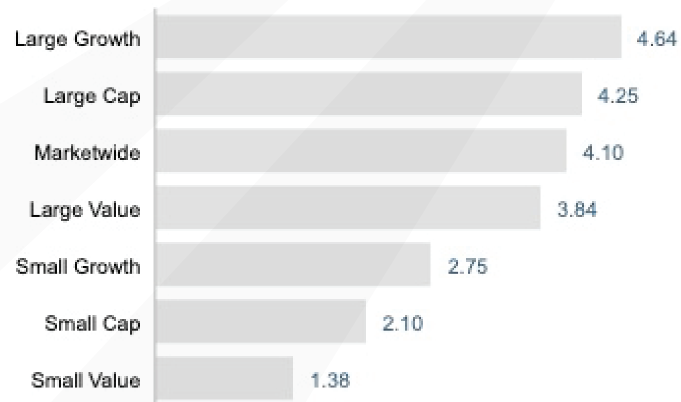
These headlines are not offered to explain market returns. Instead, they serve as a reminder that investors should view daily events from a long-term perspective and avoid making investment decisions based solely on the news.

US Stocks

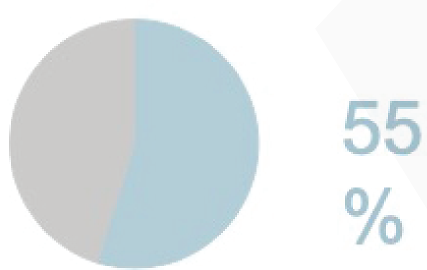
Second Quarter 2019 Index Returns

- US equities outperformed both non-US developed and emerging markets equities.
- Small caps underperformed large caps in the US.
- Value underperformed growth in the US across large and small cap stocks.

Ranked Returns for the Quarter (%)



World Market Capitalization—US



Period Returns (%)

*Annualized

Asset Class	YTD	1 Year	3 Years*	5 Years*	10 Years*
Large Growth	21.49	11.56	18.07	13.39	16.28
Small Growth	20.36	-0.49	14.69	8.63	14.41
Large Cap	18.84	10.02	14.15	10.45	14.77
Marketwide	18.71	8.98	14.02	10.19	14.67
Small Cap	16.98	-3.31	12.30	7.06	13.45
Large Value	16.24	8.46	10.19	7.46	13.19
Small Value	13.47	-6.24	9.81	5.39	12.40

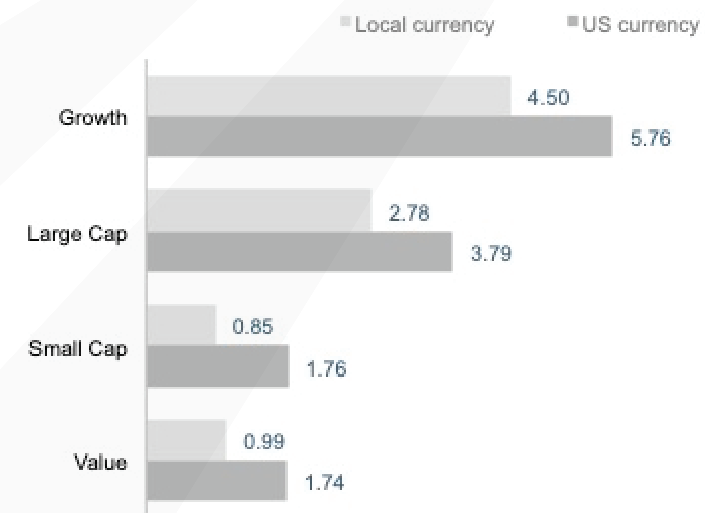
Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: Marketwide (Russell 3000 Index), Large Cap (Russell 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.

International Developed Stocks

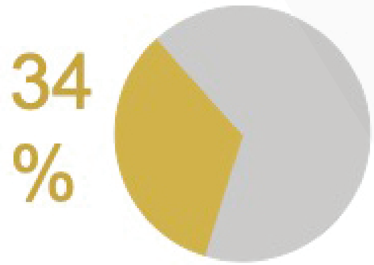
Second Quarter 2019 Index Returns

- In US dollar terms, developed markets stocks outside the US outperformed emerging markets equities but underperformed the US equity market during the quarter.
- Small caps underperformed large caps in non-US developed markets.
- Value underperformed growth across large and small cap stocks.

Ranked Returns for the Quarter (%)



World Market Capitalization—International Developed



Period Returns (%)

* Annualized

Asset Class	YTD	1 Year	3 Years*	5 Years*	10 Years*
Growth	18.89	4.36	9.42	4.02	7.81
Large Cap	14.64	1.29	9.01	2.04	6.75
Small Cap	12.88	-6.17	8.38	3.39	9.19
Value	10.38	-1.80	8.54	0.01	5.62

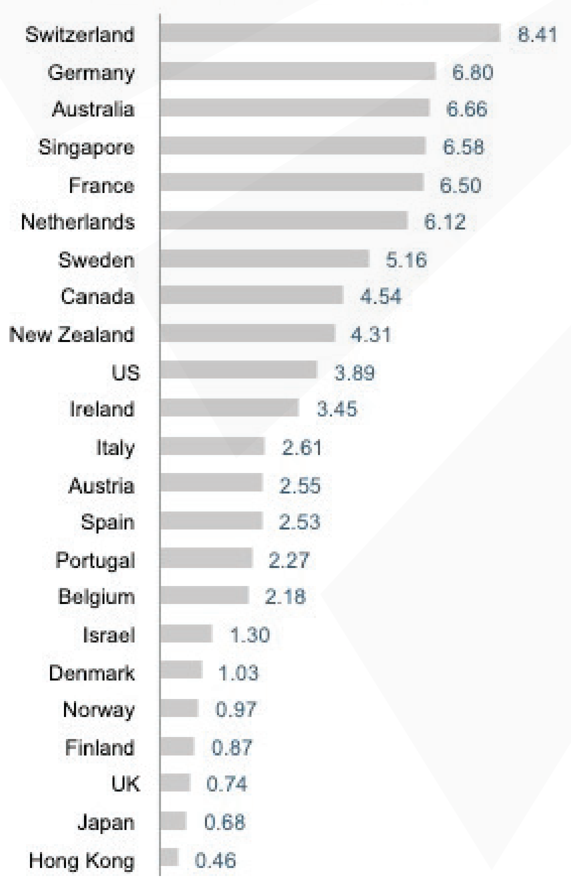
Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: Large Cap (MSCI World ex USA Index), Small Cap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

Select Country Performance

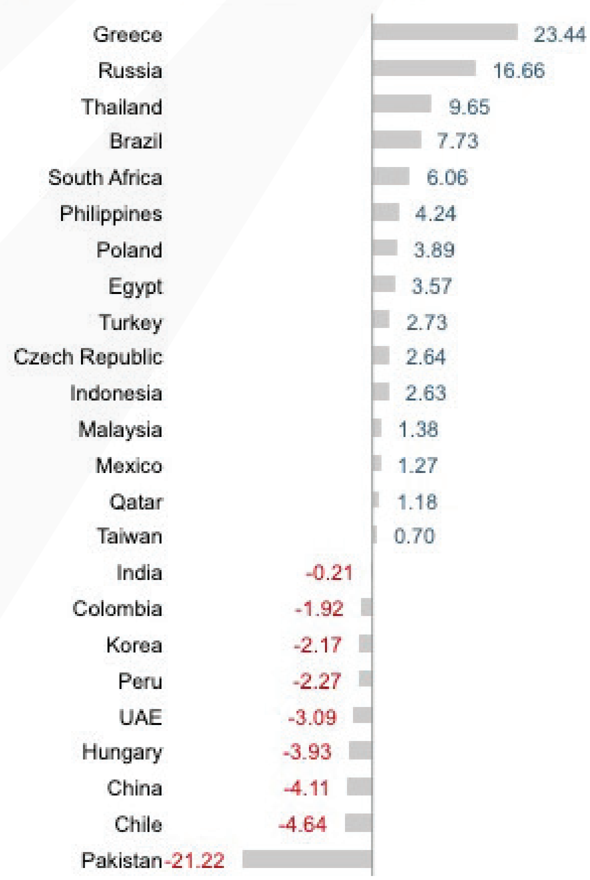
Second Quarter 2019 Index Returns

In US dollar terms, Switzerland and Germany recorded the highest country performance in developed markets, while Hong Kong and Japan posted the lowest returns for the quarter. There was a wide dispersion in returns across emerging markets. Greece recorded the highest country performance with a gain of 23%, while Pakistan posted the lowest performance, declining 21%.

Ranked Developed Markets Returns (%)



Ranked Emerging Markets Returns (%)

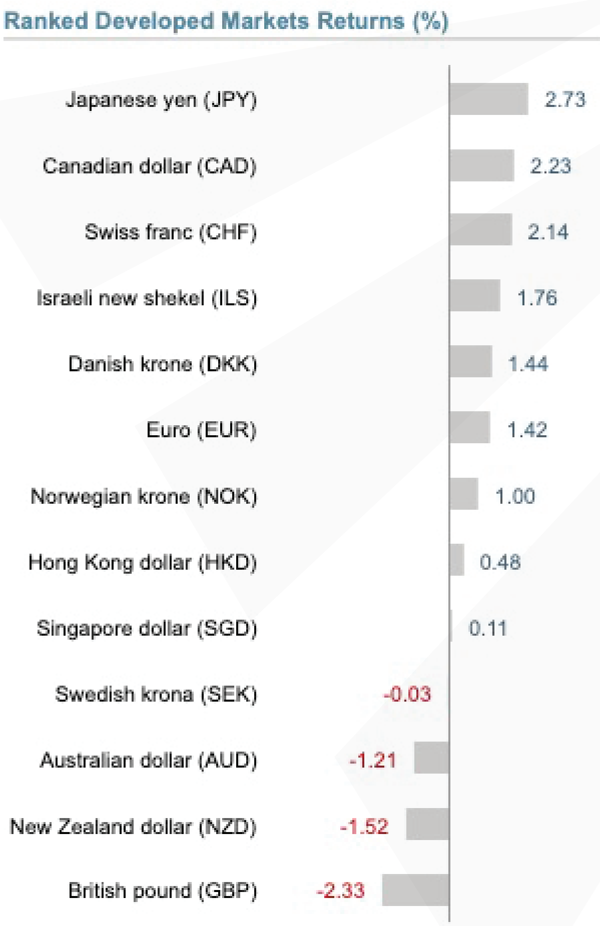


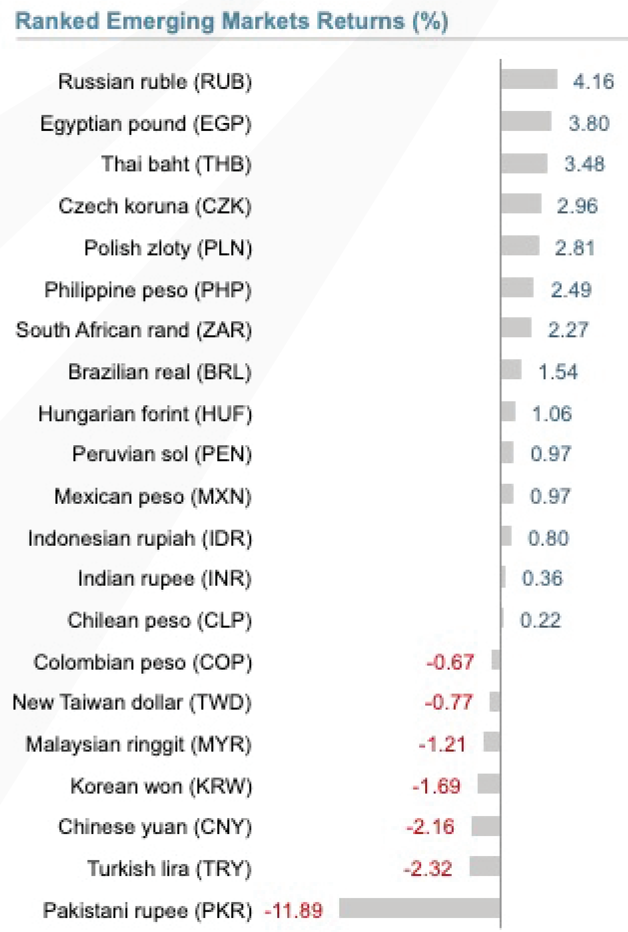
Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Country performance based on respective indices in the MSCI World ex US IMI Index (for developed markets), MSCI USA IMI Index (for US), and MSCI Emerging Markets IMI Index. All returns in USD and net of withholding tax on dividends. UAE and Qatar have been reclassified as emerging markets by MSCI, effective May 2014.

Select Currency Performance vs. US Dollar

Second Quarter 2019

In both developed and emerging markets, currencies were mixed against the US dollar.



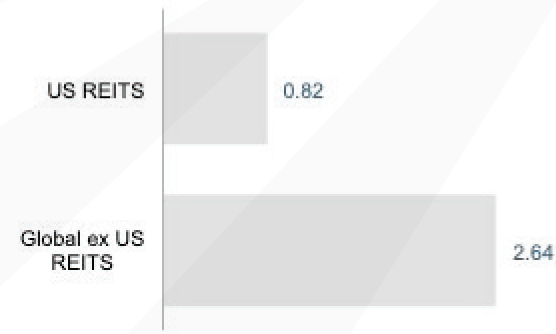


Real Estate Investment Trusts (REITs)

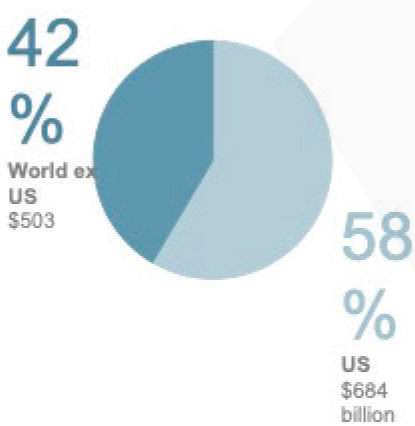
Second Quarter 2019 Index Returns

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

Ranked Returns for the Quarter (%)



Total Value of REIT Stocks



Period Returns (%)

** Annualized*

Asset Class	YTD	1 Year	3 Years*	5 Years*	10 Years*
US REITS	16.67	9.75	3.73	7.61	15.40
Global ex US REITS	14.68	7.78	4.79	3.62	9.84

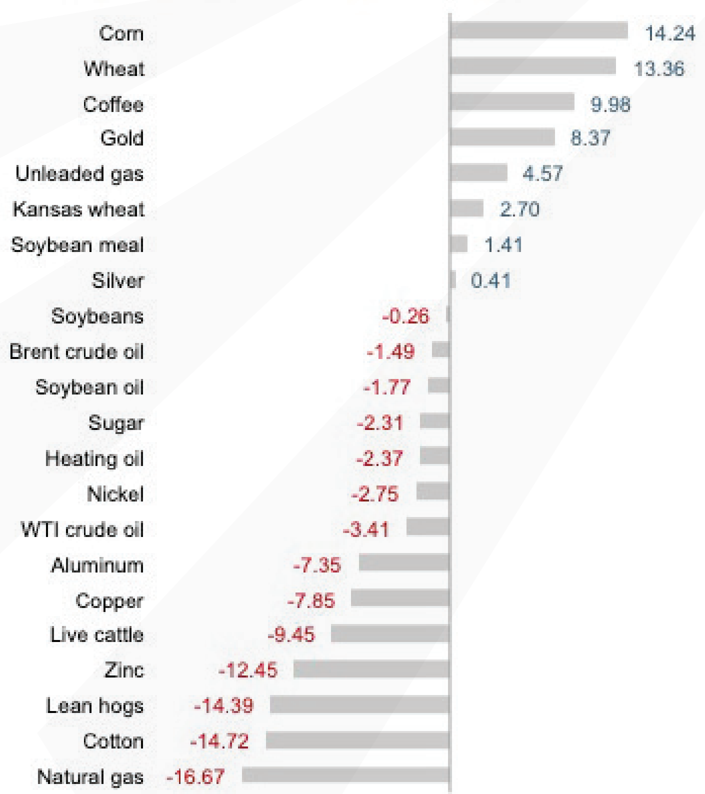
Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Number of REIT stocks and total value based on the two indices. All index returns are net of withholding 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.

Commodities

Second Quarter 2019 Index Returns

- The Bloomberg Commodity Index Total Return declined 1.19% in the second quarter of 2019.
- Corn and wheat led performance, returning 14.24% and 13.36%, respectively.
- Natural gas and cotton were the worst performers, declining by 16.67% and 14.72%, respectively.

Ranked Returns for Individual Commodities (%)



Period Returns (%)

** Annualized*

Asset Class	QTR	YTD	1 Year	3 Years*	5 Years*	10 Years*
Commodities	-1.19	5.06	-6.75	-2.18	-9.15	-3.74

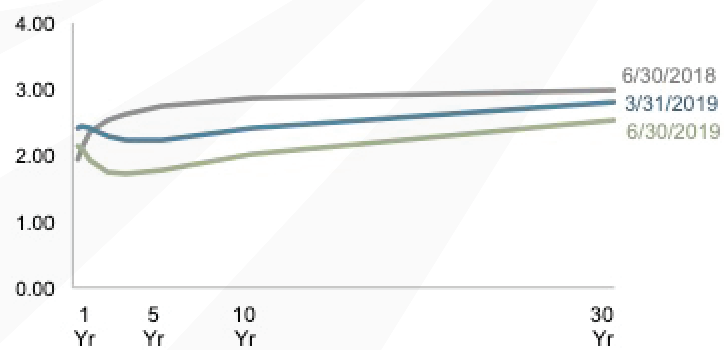
Past performance is not a guarantee of future results. Index is not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Commodities returns represent the return of the Bloomberg Commodity Total Return Index. Individual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

Fixed Income

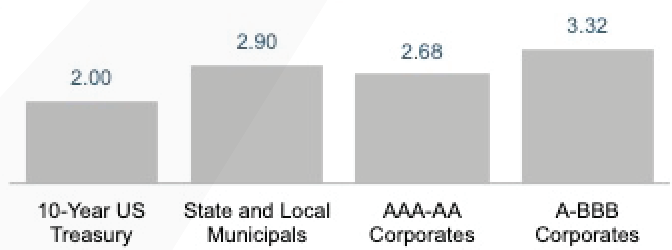
Second Quarter 2019 Index Returns

- Interest rates decreased in the US Treasury fixed income market during the second quarter. The yield on the 5-year Treasury note declined by 47 basis points (bps), ending at 1.76%. The yield on the 10-year Treasury note fell by 41 bps to 2.00%. The 30-year Treasury bond yield decreased by 29 bps to finish at 2.52%.
- On the short end of the curve, the 1-month Treasury bill yield decreased to 2.18%, while the 1-year T-bill yield decreased by 48 bps to 1.92%. The 2-year T-note yield finished at 1.75%, decreasing 52 bps.
- In terms of total returns, short-term corporate bonds increased by 2.09%. Intermediate-term corporate bonds had a total return oaf 3.13%.
- The total return for short-term municipal bonds was 1.12%, while intermediate munis returned 1.98%. Revenue bonds outperformed general obligation bonds.

US Treasury Yield Curve (%)



Bond Yields across Issuers (%)



Period Returns (%)

* Annualized

Asset Class	QTR	YTD	1 Year	3 Years*	5 Years*	10 Years*
Bloomberg Barclays US Government Bond Index Long	6.00	10.92	12.28	1.42	5.68	6.54
Bloomberg Barclays US Aggregate Bond Index	3.08	6.11	7.87	2.31	2.95	3.90
Bloomberg Barclays US TIPS Index	2.86	6.15	4.84	2.08	1.76	3.64
Bloomberg Barclays US High Yield Corporate Bond Index	2.50	9.94	7.48	7.52	4.70	9.24
Bloomberg Barclays Municipal Bond Index	2.14	5.09	6.71	2.55	3.64	4.72
FTSE World Government Bond Index 1-5 Years	1.92	2.27	2.57	0.67	-0.76	0.53
FTSE World Government Bond Index 1-5 Years (hedged to USD)	1.51	2.69	4.44	1.85	1.84	1.86
ICE BofAML 1-Year US Treasury Note Index	0.94	1.76	2.98	1.43	1.02	0.76
ICE BofAML US 3-Month Treasury Bill Index	0.64	1.24	2.31	1.38	0.87	0.49

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 (SBBI) Yearbook™, Ibbotson Associates, Chicago (annually updated work by Roger G. Ibbotson and Rex A. Sinquefield).

Global Fixed Income

Second Quarter 2019 Yield Curves

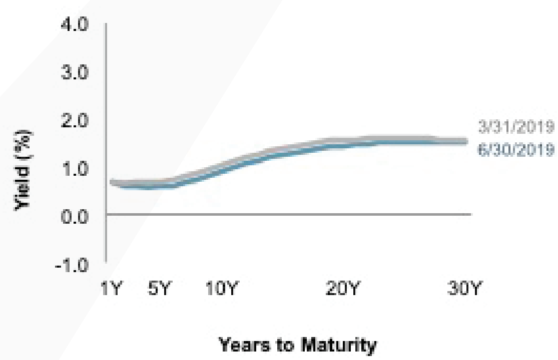
- Interest rates in the global developed markets generally decreased during the quarter.
- Longer-term bonds generally outperformed shorter-term bonds in global developed markets.
- Short- and intermediate-term nominal interest rates were negative in Germany and Japan.

Changes in Yields (bps) since 3/31/2019

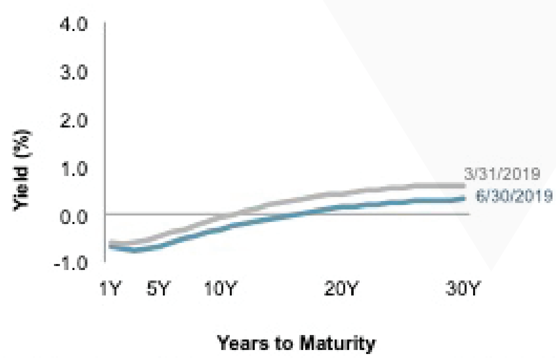
	1Y	5Y	10Y	20Y	30Y
US	-45.3	-48.8	-41.4	-30.9	-29.0
UK	2.8	-10.5	-13.6	-11.0	-6.0
Germany	-8.5	-19.3	-24.0	-30.1	-29.9
Japan	-0.9	-5.8	-6.7	-11.0	-15.0

US

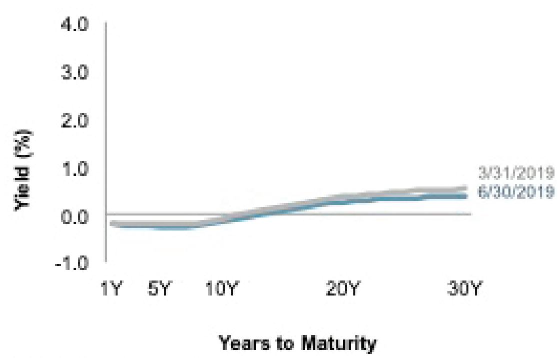
UK



Germany



Japan



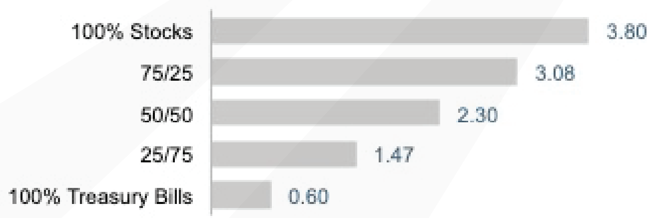
One basis point equals 0.01%. Source: ICE BofAML government yield.

Impact of Diversification

Second Quarter 2019 Index Returns

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

Ranked Returns for the Quarter (%)

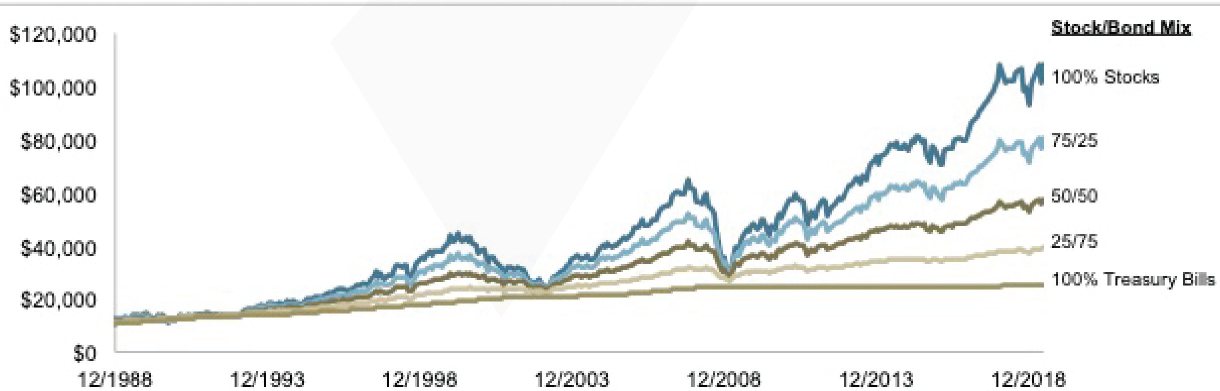


Period Returns (%)

** Annualized*

Asset Class	YTD	1 Year	3 Years*	5 Years*	10 Years*	10-Year STDEV
100% Stocks	16.60	6.32	12.22	6.74	10.73	13.48
75/25	12.69	5.56	9.53	5.36	8.25	10.11
50/50	8.82	4.62	6.80	3.91	5.70	6.74
25/75	4.98	3.51	4.06	2.39	3.09	3.37
100% Treasury Bills	1.18	2.23	1.30	0.80	0.43	0.21

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.

The Uncommon Average

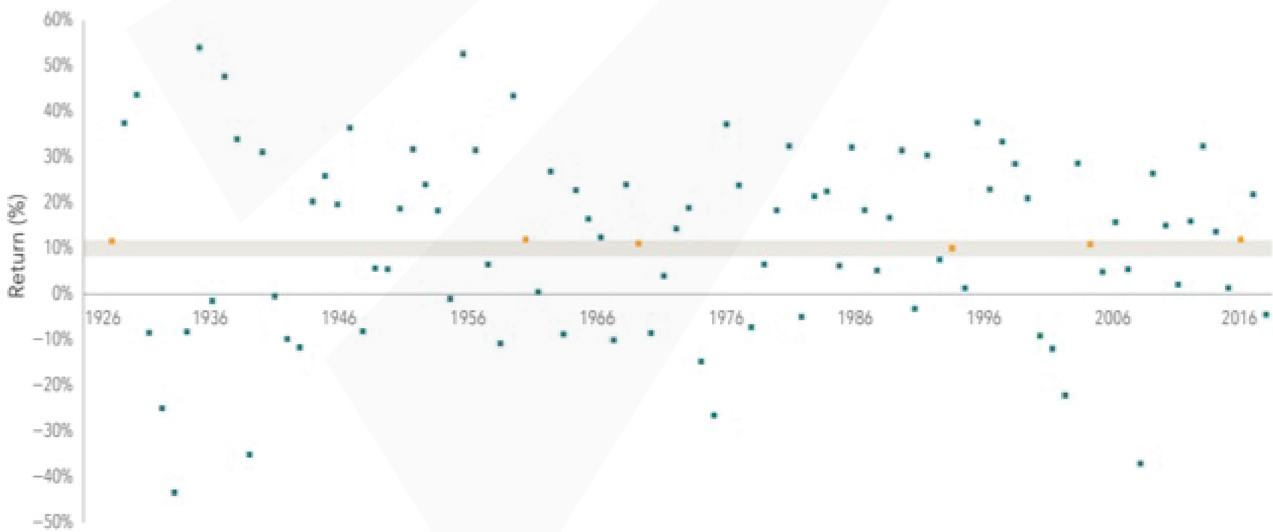
Second Quarter 2019

"I have found that the importance of having an investment philosophy—one that is robust and that you can stick with— cannot be overstated."
—David Booth

The US stock market has delivered an average annual return of around 10% since 1926. But short-term results may vary, and in any given period stock returns can be positive, negative, or flat. When setting expectations, it's helpful to see the range of outcomes experienced by investors historically. For example, how often have the stock market's annual returns actually aligned with its long-term average?

Exhibit 1 shows calendar year returns for the S&P 500 Index since 1926. The shaded band marks the historical average of 10%, plus or minus 2 percentage points. The S&P 500 Index had a return within this range in only six of the past 93 calendar years. In most years, the index's return was outside of the range—often above or below by a wide margin—with no obvious pattern. For investors, the data highlight the importance of looking beyond average returns and being aware of the range of potential outcomes.

Exhibit 1. S&P 500 Index Annual Returns
1926–2018



In US dollars. S&P data © S&P Dow Jones Indices LLC, a division of S&P Global. Indices are not available for direct investment. Index returns are not representative of actual portfolios and do not reflect costs and fees associated with an actual investment. Past performance is no guarantee of future results. Actual returns may be lower.

The Uncommon Average

(continued from page 22)

TUNING IN TO DIFFERENT FREQUENCIES

Despite the year-to-year volatility, investors can potentially increase their chances of having a positive outcome by maintaining a long-term focus. **Exhibit 2** documents the historical frequency of positive returns over rolling periods of one, five, and 10 years in the US market. The data show that, while positive performance is never assured, investors' odds improve over longer time horizons.

CONCLUSION

While some investors might find it easy to stay the course in years with above average returns, periods of disappointing results may test an investor's faith in equity markets. Being aware of the range of potential outcomes can help investors remain disciplined, which in the long term can increase the odds of a successful investment experience. What can help investors endure the ups and downs? While there is no silver bullet, understanding how markets work and trusting market prices are good starting points. An asset allocation that aligns with personal risk tolerances and investment goals is also valuable. By thoughtfully considering these and other issues, investors may be better prepared to stay focused on their long-term goals during different market environments.

Exhibit 2. Frequency of Positive Returns in the S&P 500 Index
Overlapping Periods: 1926–2018

In US dollars. From January 1926–December 2018, there are 997 overlapping 10-year periods, 1,057 overlapping 5-year periods, and 1,105 overlapping 1-year periods. The first period starts in January 1926, the second period starts in February 1926, the third in March 1926, and so on. S&P data © S&P Dow Jones Indices LLC, a division of S&P Global. Indices are not available for direct investment. Index returns are not representative of actual portfolios and do not reflect costs and fees associated with an actual investment. Past performance is no guarantee of future results. Actual returns may be lower.