



COMMENCEMENT FINANCIAL PLANNING LLC

Q2

Quarterly Market Review

Second Quarter 2017

Quarterly Market Review

Second Quarter 2017

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 quarterly topics.

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)







Fixed Income

Impact of Diversification

Quarterly Topics: When Rates Go Up, Do Stocks Go Down?
Getting What You Don't Pay For

Market Summary

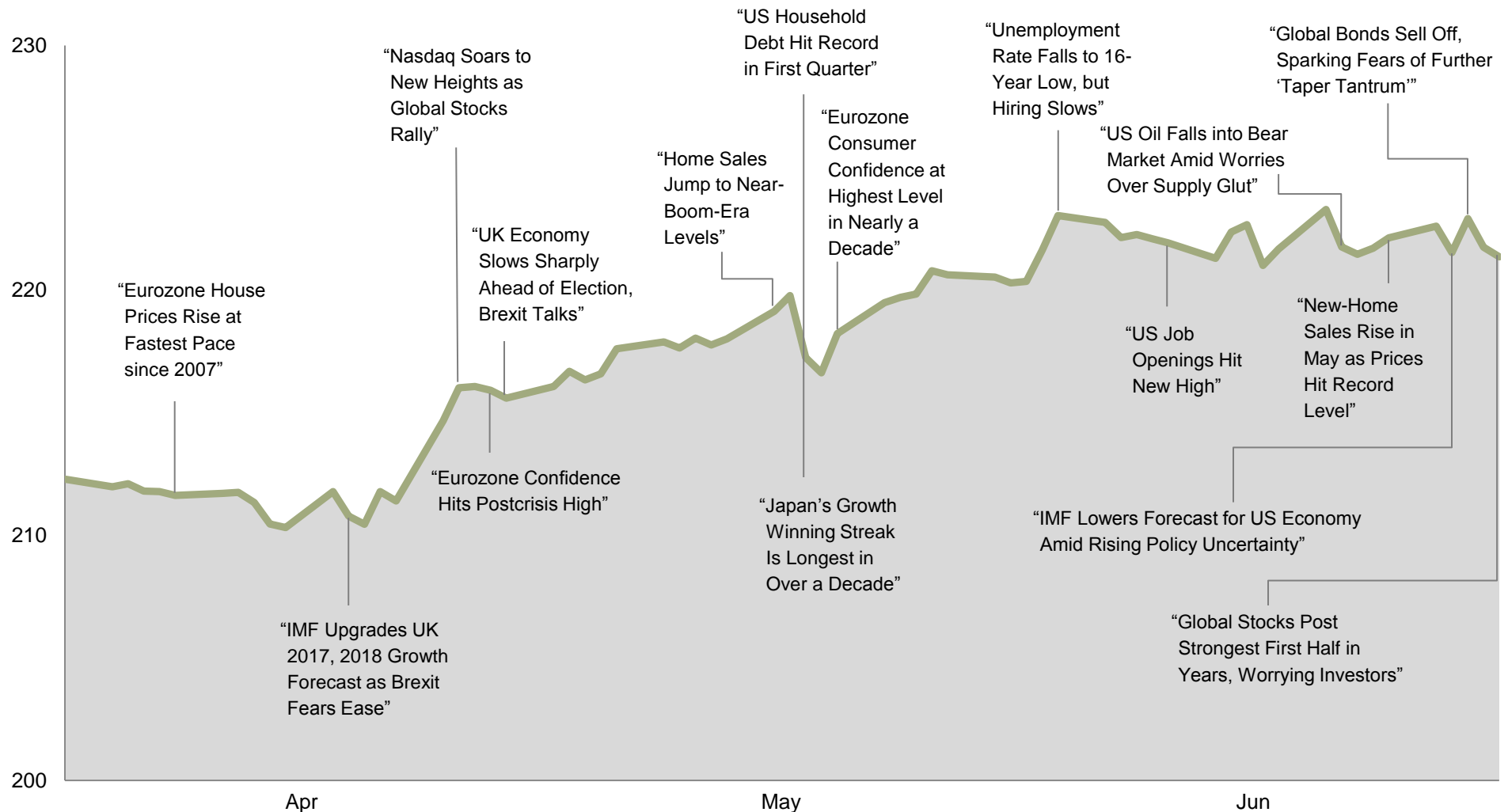
Index Returns

| | US Stock Market | International Developed Stocks | Emerging Markets Stocks | Global Real Estate | US Bond Market | Global Bond Market ex US |
|------------------------|---|---|---|---|---|---|
| Q2 2017 | STOCKS | | | | BONDS | |
| | 3.02%  | 5.63%  | 6.27%  | 1.67%  | 1.45%  | 0.60%  |
| Since Jan. 2001 | | | | | | |
| Avg. Quarterly Return | 1.9% | 1.5% | 3.1% | 2.7% | 1.2% | 1.1% |
| Best Quarter | 16.8% Q2 2009 | 25.9% Q2 2009 | 34.7% Q2 2009 | 32.3% Q3 2009 | 4.6% Q3 2001 | 5.5% Q4 2008 |
| Worst Quarter | -22.8% Q4 2008 | -21.2% Q4 2008 | -27.6% Q4 2008 | -36.1% Q4 2008 | -3.0% Q4 2016 | -3.2% Q2 2015 |

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 ex US Market (Citi WGBI ex USA 1-30 Years [Hedged to USD]). The S&P data are provided by Standard & Poor's Index Services Group. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. MSCI data © MSCI 2017, all rights reserved. Bloomberg Barclays data provided by Bloomberg. Citi fixed income indices copyright 2017 by Citigroup.

World Stock Market Performance

MSCI All Country World Index with selected headlines from Q2 2017



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.

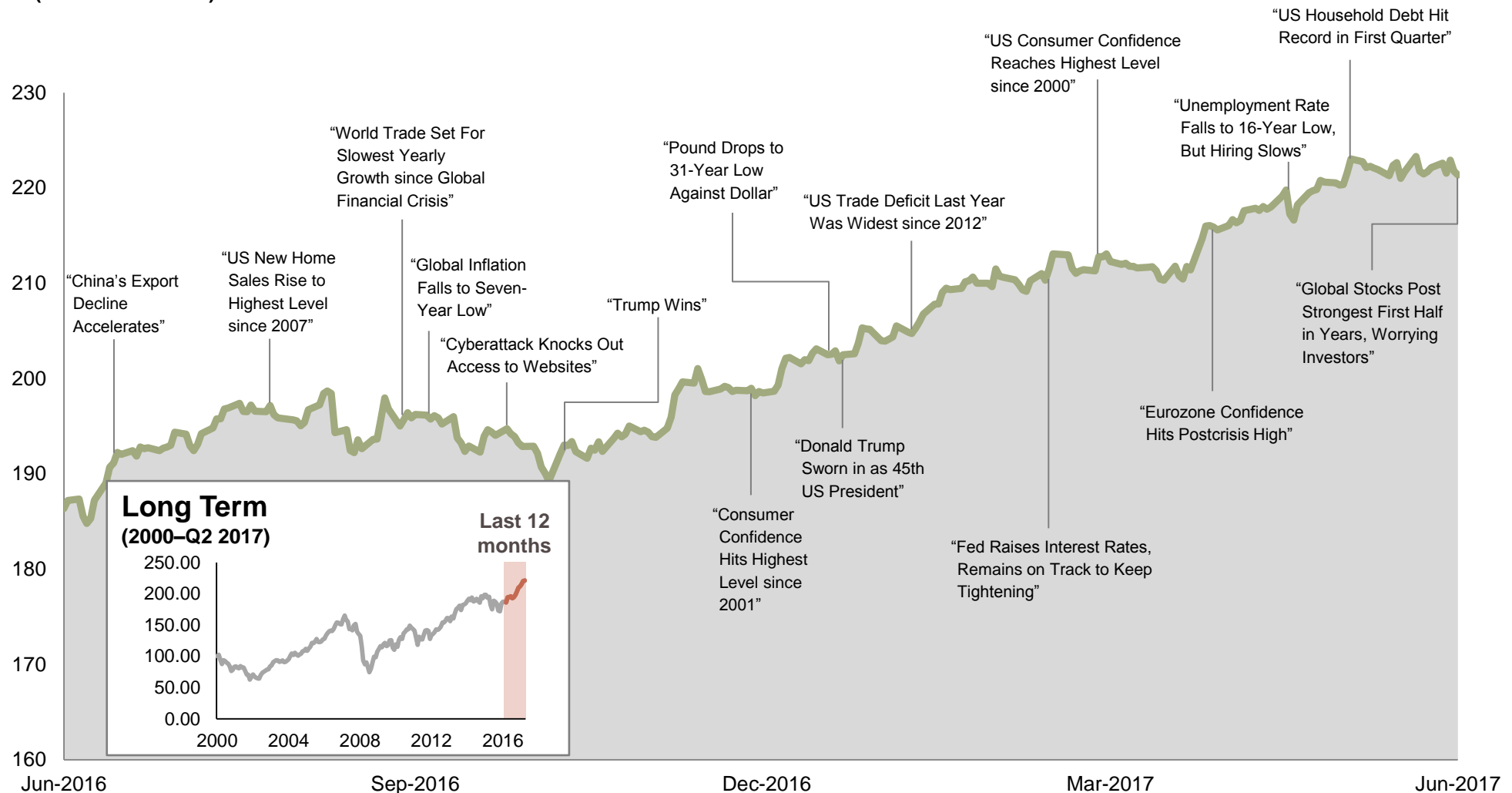
Graph Source: MSCI ACWI Index [net div.]. MSCI data © MSCI 2017, all rights reserved.

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

Short Term (Q3 2016–Q2 2017)



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 2017, all rights reserved.

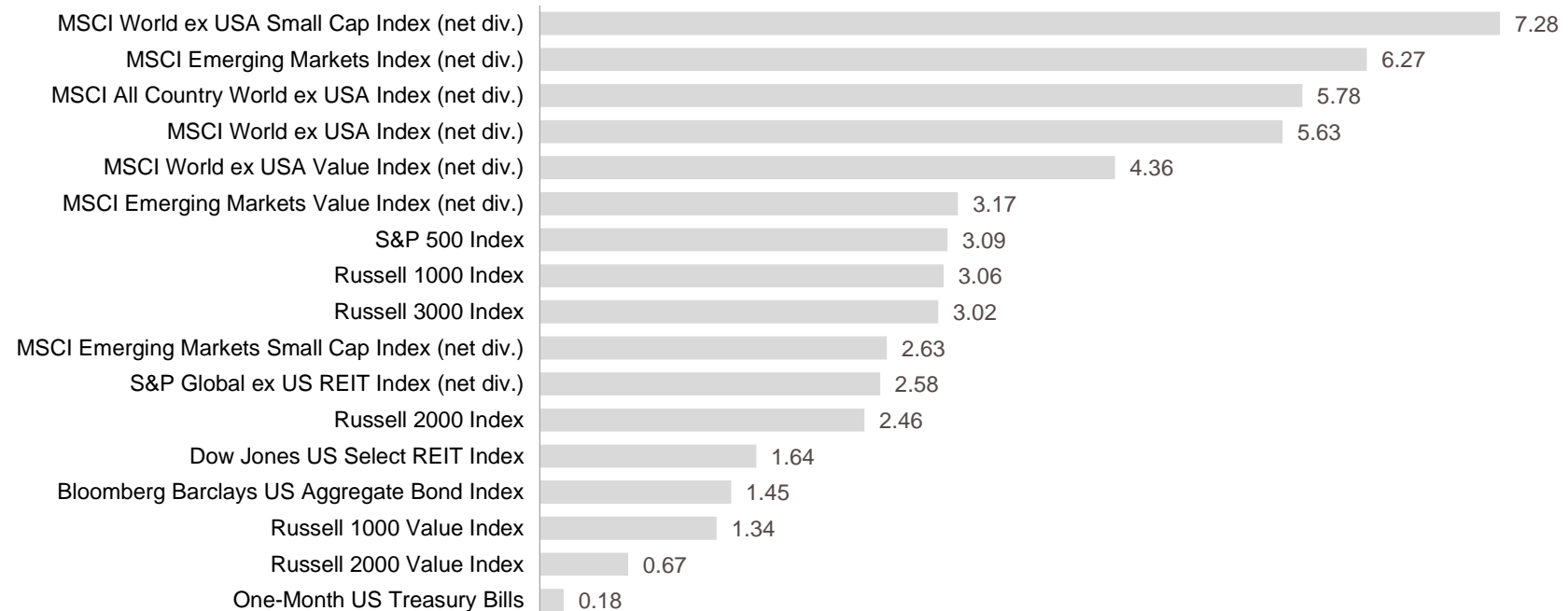
It is not possible to invest directly in an index. Performance does not reflect the expenses associated with management of an actual portfolio. **Past performance is not a guarantee of future results.**

World Asset Classes

Second Quarter 2017 Index Returns (%)

Looking at broad market indices, non-US developed markets and emerging markets recorded similar returns, outperforming the US during the quarter.

The value effect was negative in the US, non-US, and emerging markets. Small caps outperformed large caps in non-US developed markets but underperformed in the US and emerging markets.



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. The S&P data is provided by Standard & Poor's Index Services Group. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. MSCI data © MSCI 2017, all rights reserved. Dow Jones data (formerly Dow Jones Wilshire) provided by Dow Jones Indices. Bloomberg Barclays data provided by Bloomberg. Treasury bills © Stocks, Bonds, Bills, and Inflation Yearbook™, Ibbotson Associates, Chicago (annually updated work by Roger G. Ibbotson and Rex A. Sinquefeld).

US Stocks

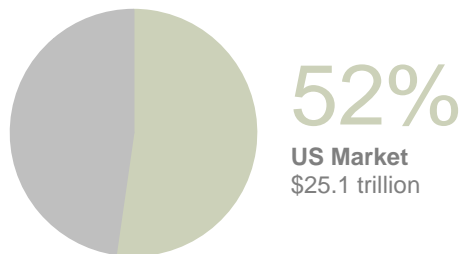
Second Quarter 2017 Index Returns

The broad US equity market posted positive returns for the quarter but underperformed both non-US developed and emerging markets.

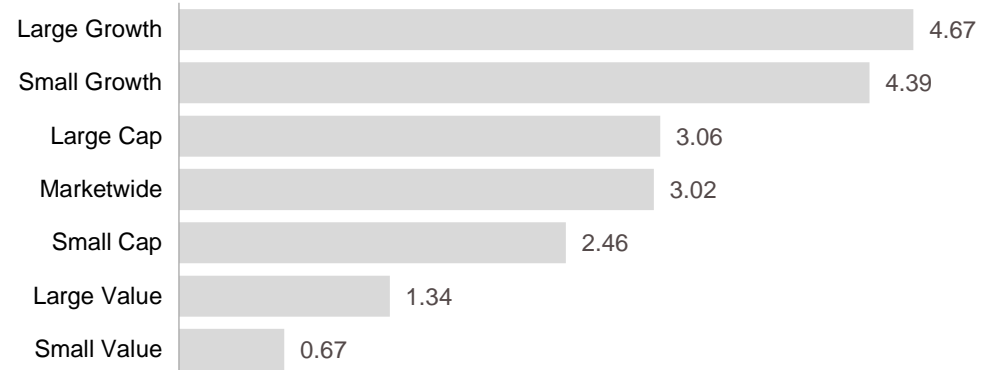
Value underperformed growth indices in the US across all size ranges.

Small caps in the US underperformed large caps.

World Market Capitalization—US



Ranked Returns for the Quarter (%)



Period Returns (%)

| Asset Class | YTD | 1 Year | * Annualized | | |
|--------------|-------|--------|--------------|----------|-----------|
| | | | 3 Years* | 5 Years* | 10 Years* |
| Marketwide | 8.93 | 18.51 | 9.10 | 14.58 | 7.26 |
| Large Cap | 9.27 | 18.03 | 9.26 | 14.67 | 7.29 |
| Large Value | 4.66 | 15.53 | 7.36 | 13.94 | 5.57 |
| Large Growth | 13.99 | 20.42 | 11.11 | 15.30 | 8.91 |
| Small Cap | 4.99 | 24.60 | 7.36 | 13.70 | 6.92 |
| Small Value | 0.54 | 24.86 | 7.02 | 13.39 | 5.92 |
| Small Growth | 9.97 | 24.40 | 7.64 | 13.98 | 7.82 |

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 2017, all rights reserved.

International Developed Stocks

Second Quarter 2017 Index Returns

In US dollar terms, developed markets outperformed the US equity market and had similar performance to emerging markets indices during the quarter.

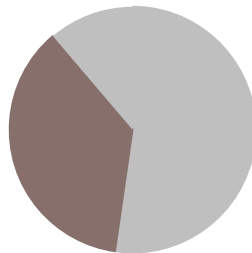
Looking at broad market indices, the value effect was negative across all size ranges in non-US developed markets.

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

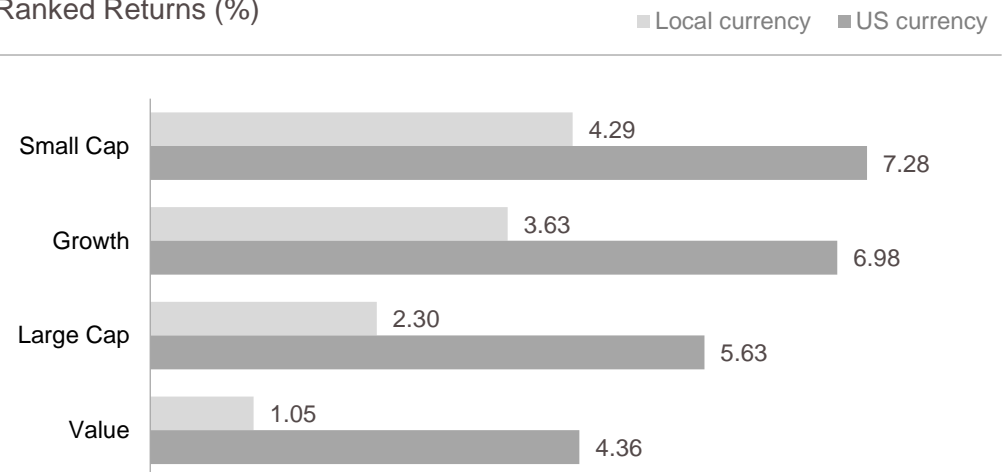
World Market Capitalization—International Developed

36%

International
Developed
Market
\$17.5 trillion



Ranked Returns (%)



Period Returns (%)

| Asset Class | YTD | 1 Year | 3 Years* | 5 Years* | 10 Years* |
|-------------|-------|--------|----------|----------|-----------|
| Large Cap | 12.82 | 19.49 | 0.67 | 8.15 | 1.00 |
| Small Cap | 15.45 | 21.26 | 4.02 | 11.43 | 2.92 |
| Value | 10.27 | 24.24 | -0.94 | 7.69 | 0.09 |
| Growth | 15.57 | 14.90 | 2.22 | 8.54 | 1.84 |

* Annualized

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 2017, 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

Second Quarter 2017 Index Returns

In US dollar terms, emerging markets indices outperformed the US and recorded similar performance to developed markets outside the US.

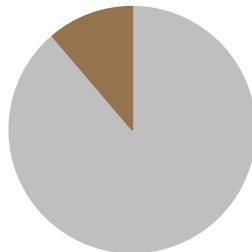
Looking at broad market indices, the value effect was negative across all size ranges in emerging markets.

Small caps underperformed large caps in emerging markets.

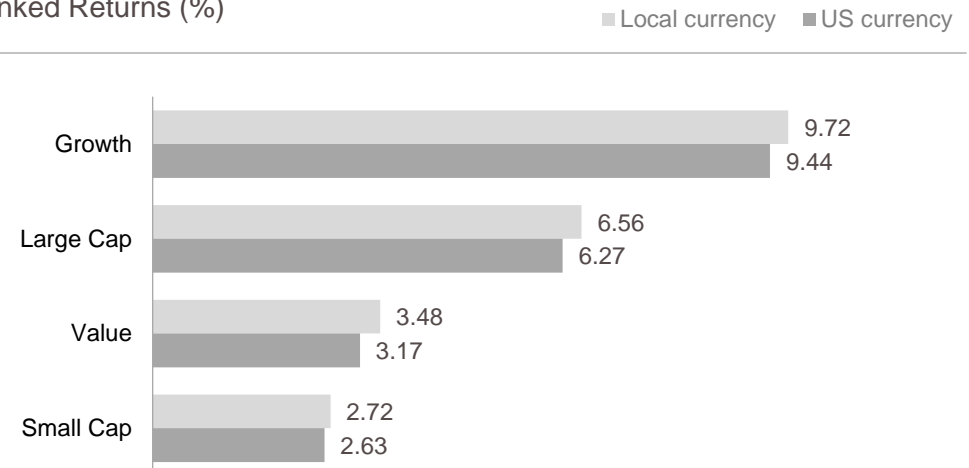
World Market Capitalization—Emerging Markets

11%

Emerging
Markets
\$5.4 trillion



Ranked Returns (%)



Period Returns (%)

* Annualized

| Asset Class | YTD | 1 Year | 3 Years* | 5 Years* | 10 Years* |
|-------------|-------|--------|----------|----------|-----------|
| Large Cap | 18.43 | 23.75 | 1.07 | 3.96 | 1.91 |
| Small Cap | 15.99 | 17.03 | 0.81 | 5.15 | 2.17 |
| Value | 13.65 | 21.57 | -1.33 | 1.67 | 1.53 |
| Growth | 23.45 | 25.99 | 3.42 | 6.18 | 2.22 |

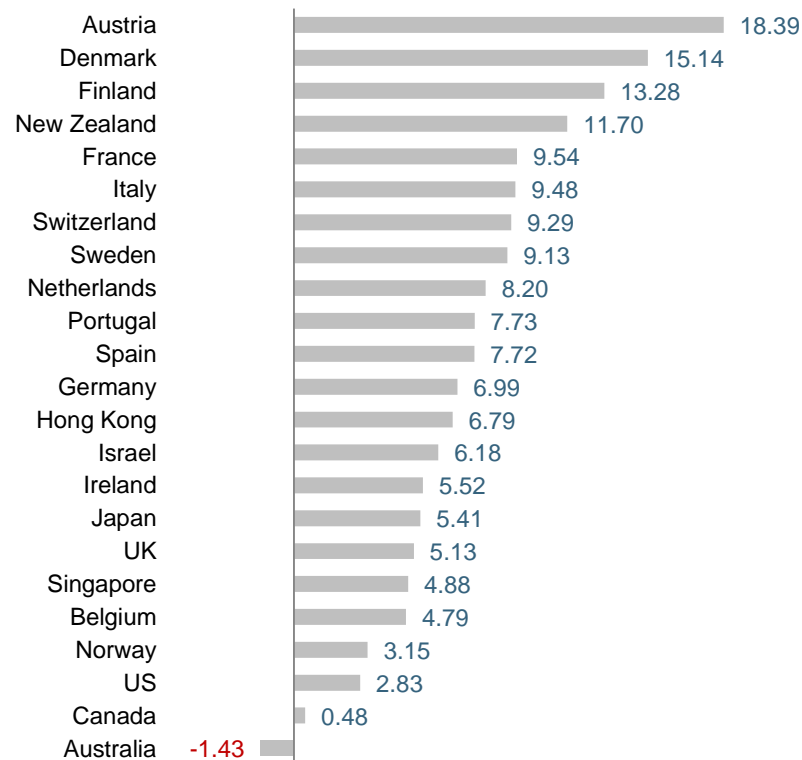
Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: Large Cap (MSCI Emerging Markets Index), Small 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 2017, 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

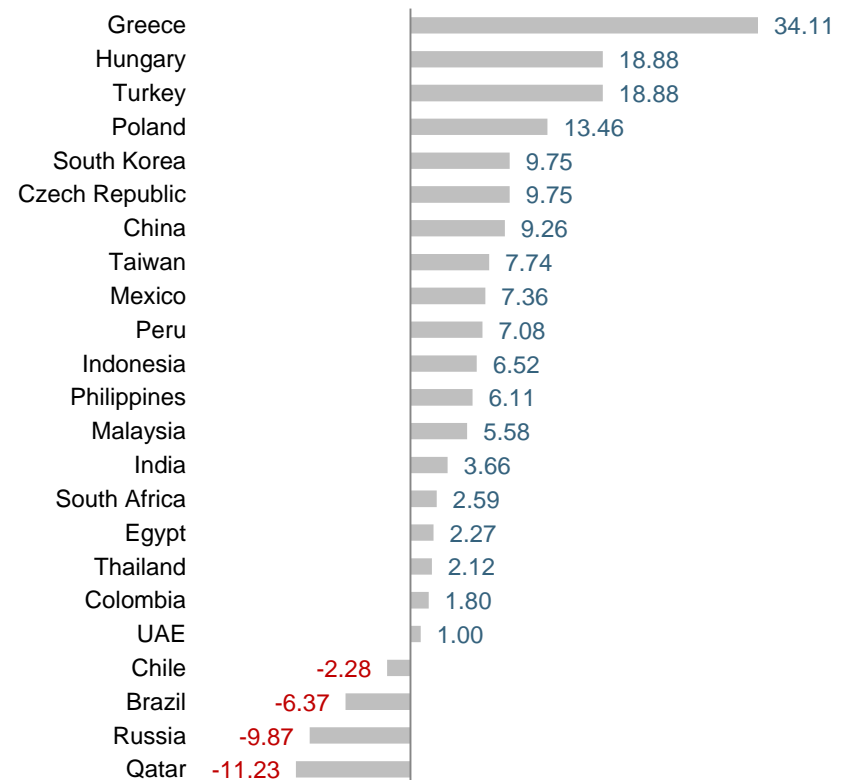
Second Quarter 2017 Index Returns

In US dollar terms, Austria and Denmark recorded the highest country performance in developed markets, while Australia and Canada posted the lowest returns for the quarter. In emerging markets, Greece, Hungary, and Turkey posted the highest country returns, while Qatar and Russia had the lowest performance.

Ranked Developed Markets Returns (%)



Ranked Emerging Markets Returns (%)



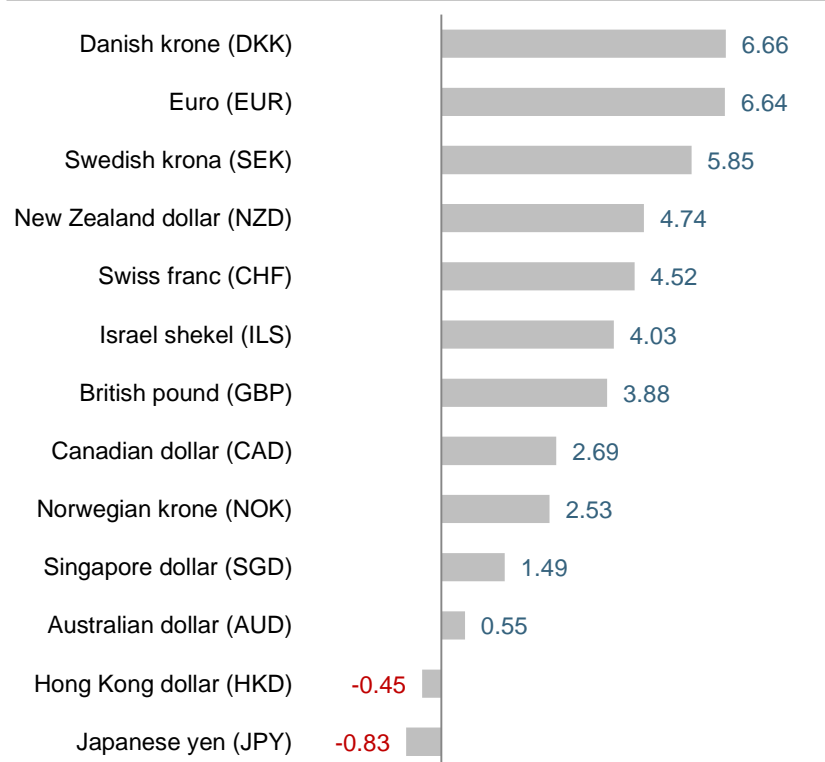
Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Country performance based on respective indices in the MSCI World ex US IMI Index (for developed 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 2017, all rights reserved. UAE and Qatar have been reclassified as emerging markets by MSCI, effective May 2014.

Select Currency Performance vs. US Dollar

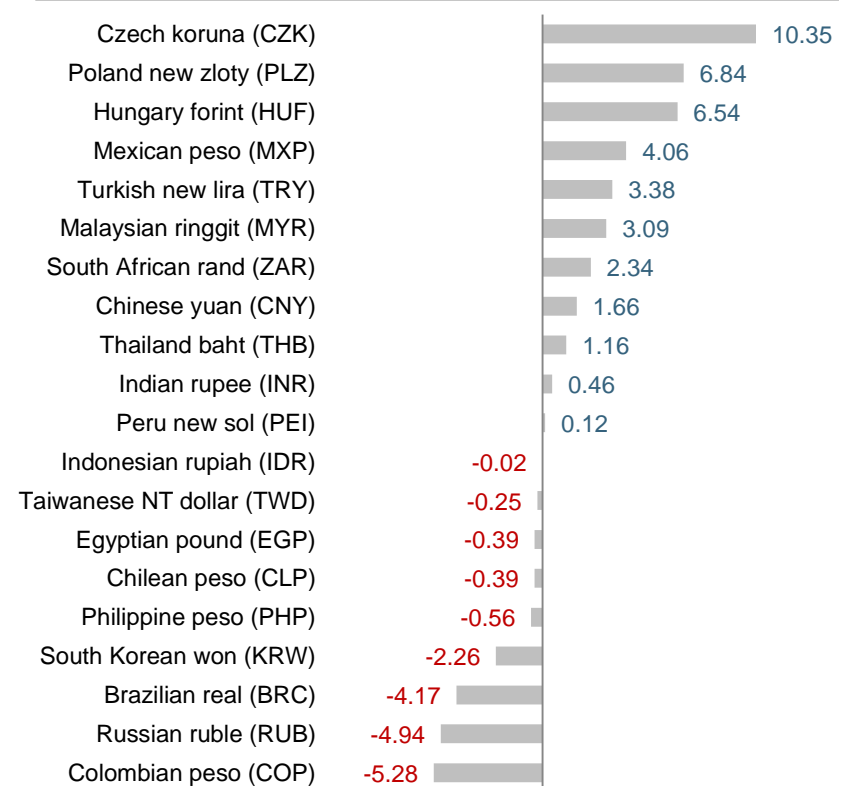
Second Quarter 2017

Most non-US developed currencies appreciated against the US dollar during the quarter, with the Danish krone and the euro experiencing the biggest gains. Emerging markets currencies were mixed vs. the US dollar. The Czech koruna appreciated by more than 10%, while the Russian ruble, Brazilian real, and Columbian peso depreciated by more than 4%.

Ranked Developed Markets (%)



Ranked Emerging Markets (%)

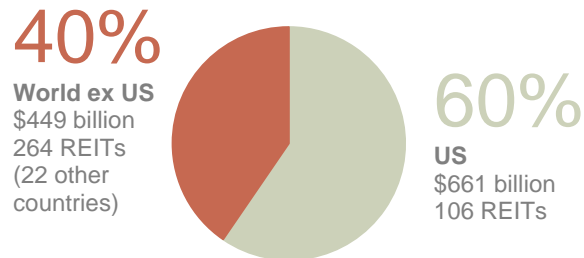


Real Estate Investment Trusts (REITs)

Second Quarter 2017 Index Returns

Non-US real estate investment trusts outperformed US REITs.

Total Value of REIT Stocks



Ranked Returns (%)



Period Returns (%)

| Asset Class | YTD | 1 Year | * Annualized | | |
|----------------------|------|--------|--------------|----------|-----------|
| | | | 3 Years* | 5 Years* | 10 Years* |
| US REITs | 1.36 | -2.43 | 8.04 | 9.00 | 5.42 |
| Global REITs (ex US) | 6.30 | -0.37 | 1.13 | 6.86 | 0.20 |

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 US Select REIT Index data provided by Dow Jones ©. S&P Global ex US REIT Index data provided by Standard and Poor's Index Services Group © 2017.

Fixed Income

Second Quarter 2017 Index Returns

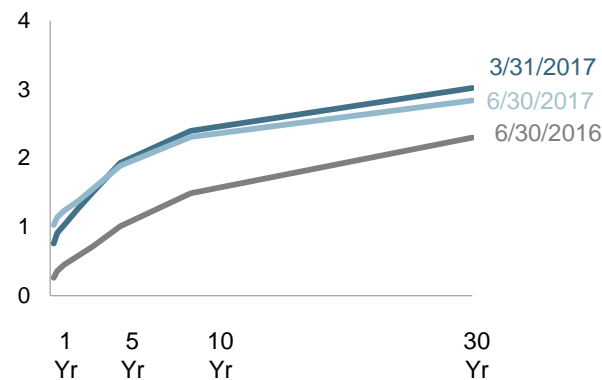
Interest rates were mixed across the US fixed income market during the second quarter. The yield on the 5-year Treasury note decreased 4 basis points (bps) to 1.89%. The yield on the 10-year Treasury note decreased 9 bps to 2.31%. The 30-year Treasury bond yield decreased 18 bps to finish at 2.84%.

The yield on the 1-year Treasury bill rose 21 bps to 1.24%, and the 2-year Treasury note yield rose 11 bps to 1.38%. The yield on the 3-month Treasury bill climbed 27 bps to 1.03%, while the 6-month Treasury bill yield increased 23 bps to 1.14%.

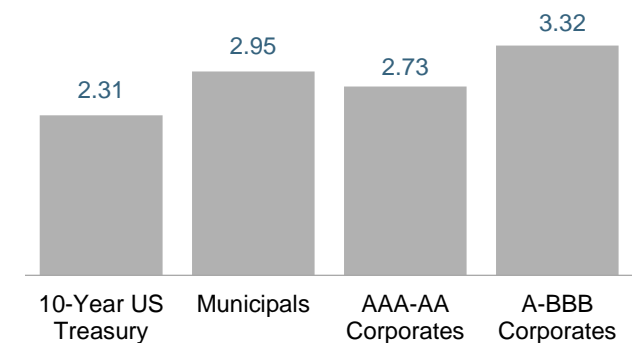
In terms of total returns, short-term corporate bonds gained 0.59% and intermediate corporates gained 1.49%.

Short-term municipal bonds gained 0.56%, while intermediate-term municipal bonds returned 1.97%. Revenue bonds gained 2.19%, outperforming general obligation bonds by 39 bps.

US Treasury Yield Curve (%)



Bond Yields across Issuers (%)



Period Returns (%)

| Asset Class | YTD | 1 Year | 3 Years* | 5 Years* | 10 Years* |
|--|------|--------|----------|----------|-----------|
| Bloomberg Barclays Long US Government Bond Index | 5.44 | -6.96 | 5.54 | 2.82 | 7.27 |
| Bloomberg Barclays Municipal Bond Index | 3.57 | -0.49 | 3.33 | 3.26 | 4.60 |
| Bloomberg Barclays US Aggregate Bond Index | 2.27 | -0.31 | 2.48 | 2.21 | 4.48 |
| Bloomberg Barclays US Corporate High Yield Index | 4.93 | 12.70 | 4.48 | 6.89 | 7.67 |
| Bloomberg Barclays US TIPS Index | 0.85 | -0.63 | 0.63 | 0.27 | 4.27 |
| BofA Merrill Lynch 1-Year US Treasury Note Index | 0.30 | 0.40 | 0.41 | 0.37 | 1.21 |
| BofA Merrill Lynch Three-Month US Treasury Bill Index | 0.31 | 0.49 | 0.23 | 0.17 | 0.58 |
| Citi World Government Bond Index 1-5 Years (hedged to USD) | 0.65 | 0.28 | 1.30 | 1.37 | 2.52 |

* 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 Bank of America Merrill Lynch 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 (S&BBI) Yearbook™, Ibbotson Associates, Chicago (annually updated work by Roger G. Ibbotson and Rex A. Sinquefeld). Citi fixed income indices copyright 2017 by Citigroup. The BofA Merrill Lynch Indices are used with permission; © 2017 Merrill Lynch, Pierce, Fenner & Smith Incorporated; all rights reserved. Merrill Lynch, Pierce, Fenner & Smith Incorporated is a wholly owned subsidiary of Bank of America Corporation. The S&P data are provided by Standard & Poor's Index Services Group.

Impact of Diversification

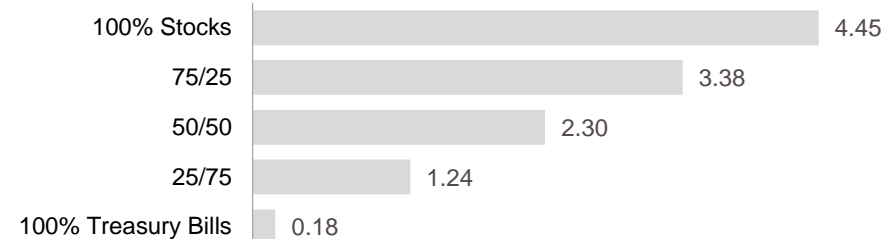
Second Quarter 2017 Index Returns

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.

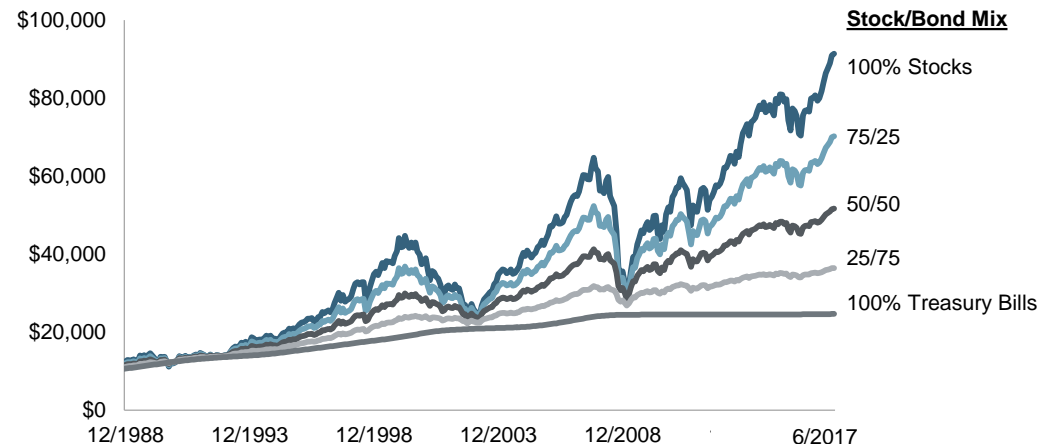
Period Returns (%)

| Asset Class | YTD | 1 Year | 3 Years* | 5 Years* | 10 Years* | * Annualized |
|---------------------|-------|--------|----------|----------|-----------|----------------------------|
| | | | | | | 10-Year STDEV ¹ |
| 100% Stocks | 11.82 | 19.42 | 5.39 | 11.14 | 4.27 | 16.96 |
| 75/25 | 8.84 | 14.41 | 4.17 | 8.38 | 3.60 | 12.71 |
| 50/50 | 5.93 | 9.57 | 2.89 | 5.62 | 2.73 | 8.46 |
| 25/75 | 3.08 | 4.90 | 1.56 | 2.87 | 1.68 | 4.22 |
| 100% Treasury Bills | 0.29 | 0.40 | 0.17 | 0.12 | 0.45 | 0.29 |

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 2017, 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).

When Rates Go Up, Do Stocks Go Down?

Second Quarter 2017

Should stock investors worry about changes in interest rates?

Research shows that, like stock prices, changes in interest rates and bond prices are largely unpredictable.¹ It follows that an investment strategy based upon attempting to exploit these sorts of changes isn't likely to be a fruitful endeavor. Despite the unpredictable nature of interest rate changes, investors may still be curious about what might happen to stocks if interest rates go up.

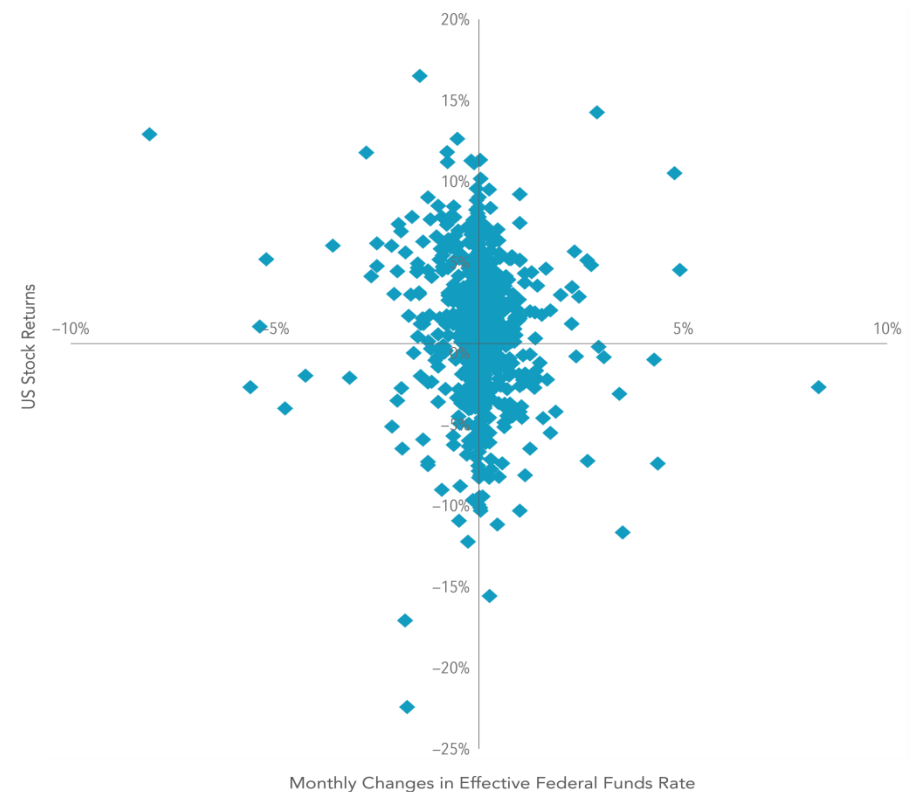
Unlike bond prices, which tend to go down when yields go up, stock prices might rise or fall with changes in interest rates. For stocks, it can go either way because a stock's price depends on both future cash flows to investors and the discount rate they apply to those expected cash flows. When interest rates rise, the discount rate may increase, which in turn could cause the price of the stock to fall. However, it is also possible that when interest rates change, expectations about future cash flows expected from holding a stock also change. So, if theory doesn't tell us what the overall effect should be, the next question is what does the data say?

Recent Research

Recent research performed by Dimensional Fund Advisors helps provide insight into this question.² The research examines the correlation between monthly US stock returns and changes in interest rates.³

Exhibit 1 shows that while there is a lot of noise in stock returns and no clear pattern, not much of that variation appears to be related to changes in the effective federal funds rate.⁴

Exhibit 1. Monthly US Stock Returns against Monthly Changes in Effective Federal Funds Rate, August 1954–December 2016



Monthly US stock returns are defined as the monthly return of the Fama/French Total US Market Index and are compared to contemporaneous monthly changes in the effective federal funds rate. Bond yield changes are obtained from the Federal Reserve Bank of St. Louis.

1. See, for example, Fama 1976, Fama 1984, Fama and Bliss 1987, Campbell and Shiller 1991, and Duffee 2002.

2. Wei Dai, "Interest Rates and Equity Returns" (Dimensional Fund Advisors, April 2017).

3. US stock market defined as Fama/French Total US Market Index.

4. The federal funds rate is the interest rate at which depository institutions lend funds maintained at the Federal Reserve to another depository institution overnight.

When Rates Go Up, Do Stocks Go Down?

(continued from page 16)

For example, in months when the federal funds rate rose, stock returns were as low as -15.56% and as high as 14.27%. In months when rates fell, returns ranged from -22.41% to 16.52%. Given that there are many other interest rates besides just the federal funds rate, Dai also examined longer-term interest rates and found similar results.

So to address our initial question: when rates go up, do stock prices go down? The answer is yes, but only about 40% of the time. In the remaining 60% of months, stock returns were positive. This split between positive and negative returns was about the same when examining all months, not just those in which rates went up. In other words, there is not a clear link between stock returns and interest rate changes.

CONCLUSION

There's no evidence that investors can reliably predict changes in interest rates. Even with perfect knowledge of what will happen with future interest rate changes, this information provides little guidance about subsequent stock returns. Instead, staying invested and avoiding the temptation to make changes based on short-term predictions may increase the likelihood of consistently capturing what the stock market has to offer.

GLOSSARY

Discount Rate: Also known as the “required rate of return,” this is the expected return investors demand for holding a stock.

Correlation: A statistical measure that indicates the extent to which two variables are related or move together. Correlation is positive when two variables tend to move in the same direction and negative when they tend to move in opposite directions.

INDEX DESCRIPTIONS

Fama/French Total US Market Index: Provided by Fama/French from CRSP securities data. Includes all US operating companies trading on the NYSE, AMEX, or Nasdaq NMS. Excludes ADRs, investment companies, tracking stocks, non-US incorporated companies, closed-end funds, certificates, shares of beneficial interests, and Berkshire Hathaway Inc. (Permco 540).

Source: Dimensional Fund Advisors LP.

Results shown during periods prior to each Index's index inception date do not represent actual returns of the respective index. Other periods selected may have different results, including losses. Backtested index performance is hypothetical and is provided for informational purposes only to indicate historical performance had the index been calculated over the relevant time periods. Backtested performance results assume the reinvestment of dividends and capital gains.

Eugene Fama and Ken French are members of the Board of Directors for and provide consulting services to Dimensional Fund Advisors LP.

There is no guarantee investment strategies will be successful. Investing involves risks including possible loss of principal.

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.

Getting What You Don't Pay For

Second Quarter 2017

Costs matter. Whether you're buying a car or selecting an investment strategy, the costs you expect to pay are likely to be an important factor in making any major financial decision.

People rely on a lot of different information about costs to help inform these decisions. When you buy a car, for example, the sticker price tells you approximately how much you can expect to pay for the car itself. But the sticker price is only one part of the overall cost of owning a car. Other things like sales tax, the cost of insurance, expected routine maintenance costs, and the potential cost of unexpected repairs are also important to understand. Some of these costs are easily observed, and others are more difficult to assess. Similarly, when investing in mutual funds, different variables need to be considered to evaluate how cost-effective a strategy may be for a particular investor.

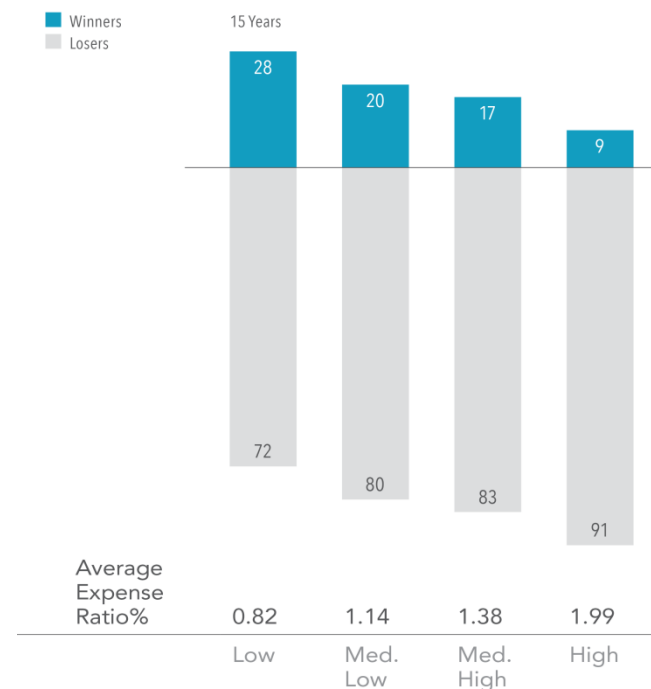
EXPENSE RATIOS

Many types of costs lower the net return available to investors. One important cost is the expense ratio. Similar to the sticker price of a car, the expense ratio tells you a lot about what you can expect to pay for an investment strategy. **Exhibit 1** helps illustrate why expense ratios are important and shows how hefty expense ratios can impact performance.

This data shows that funds with higher average expense ratios had lower rates of outperformance. For the 15-year period through 2016, only 9% of the highest-cost equity funds outperformed their benchmarks. This data indicates that a high expense ratio is often a challenging hurdle for funds to overcome, especially over longer horizons. From the investor's point of view, an expense ratio of 0.25% vs. 0.75% means savings of \$5,000 per year on a \$1 million account. As **Exhibit 2** helps to illustrate, those dollars can really add up over longer periods.

While the expense ratio is an important piece of information for an investor to evaluate, what matters most when gauging the true cost-effectiveness of an investment strategy is the "total cost of ownership." Similar to the car example, total cost of ownership is more holistic than any one figure. It looks at things that are readily observable, like expense ratios, but also at things that are more difficult to assess, like trading costs and tax impact. It is important for investors to be aware of these and other costs and to realize that an expense ratio, while useful, is not an all-inclusive metric for total cost of ownership.

Exhibit 1. High Costs Can Reduce Performance, Equity Fund Winners and Losers Based on Expense Ratios (%)¹



Getting What You Don't Pay For

(continued from page 17)

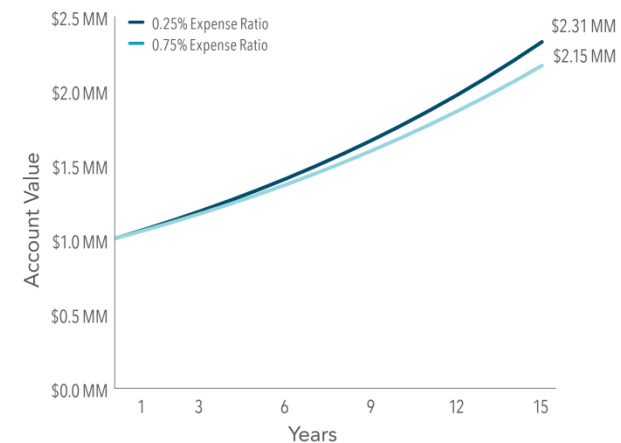
TRADING COSTS

For example, while an expense ratio includes the fund's investment management fee and expenses for fund accounting and shareholder reporting (among other items), it doesn't include the potentially substantial cost of trading securities within the fund. Overall trading costs are a function of the amount of trading, or turnover, and the cost of each trade. If a manager trades excessively, costs like commissions and the price impact from trading can eat away at returns. Viewed through the lens of our car analogy, this impact is similar to excessively jamming your brakes or accelerating quickly. By regularly demanding immediacy like this when it may not be necessary, the more wear and tear your car is likely to experience and the more fuel you will end up using. These actions can increase your total cost of ownership. Additionally, excessive trading can also lead to negative tax consequences for the fund, which can increase the cost of ownership for investors holding funds in taxable accounts. The best way to try to decrease the impact of trading costs is for funds to avoid trading excessively and pay close attention to effectively minimizing cost per trade. Employing a flexible investment approach that reduces the need for immediacy, thereby enabling opportunistic execution, is one way to potentially help accomplish this goal. Keeping turnover low, remaining flexible, and transacting only when the potential benefits of a trade outweigh the costs can help keep overall trading costs down and help reduce the total cost of ownership.

CONCLUSION

The total cost of ownership of a mutual fund can be difficult to assess and requires a thorough understanding of costs beyond what an expense ratio can tell investors on its own. A good advisor can help investors look beyond any one cost metric and instead evaluate the total cost of ownership of an investment program—and ultimately help clients decide if a given strategy is right for them.

Exhibit 2. Hypothetical Growth of \$1 Million at 6%, Less Expenses²



¹ The sample includes funds at the beginning of the 15-year period ending December 31, 2016. Funds are sorted into quartiles within their category based on average expense ratio over the sample period. The chart shows the percentage of winner and loser funds by expense ratio quartile; winners are funds that survived and outperformed their respective Morningstar category benchmark, and losers are funds that either did not survive or did not outperform their respective Morningstar category benchmark. US-domiciled open-end mutual fund data is from Morningstar and Center for Research in Security Prices (CRSP) from the University of Chicago. Equity fund sample includes the Morningstar historical categories: Diversified Emerging Markets, Europe Stock, Foreign Large Blend, Foreign Large Growth, Foreign Large Value, Foreign Small/Mid Blend, Foreign Small/Mid Growth, Foreign Small/Mid Value, Japan Stock, Large Blend, Large Growth, Large Value, Mid-Cap Blend, Mid-Cap Value, Miscellaneous Region, Pacific/Asia ex-Japan Stock, Small Blend, Small Growth, Small Value, and World Stock. For additional information regarding the Morningstar historical categories, please see "The Morningstar Category Classifications" at morningsstardirect.morningstar.com/clientcomm/Morningstar_Categories_US_April_2016.pdf. Index funds and fund-of-funds are excluded from the sample. The return, expense ratio, and turnover for funds with multiple share classes are taken as the asset-weighted average of the individual share class observations. For additional methodology, please refer to Dimensional Fund Advisor's brochure, The 2017 Mutual Fund Landscape. Past performance is no guarantee of future results.

² For illustrative purposes only and not representative of an actual investment. This hypothetical illustration is intended to show the potential impact of higher expense ratios and does not represent any investor's actual experience. Assumes a starting account balance of \$1,000,000 and a 6% compound annual growth rate less expense ratios of 0.25% and 0.75% applied over a 15-year time horizon. Taxes and other potential costs are not reflected. Actual results may vary significantly. Changing the assumptions would result in different outcomes. For example, the savings and difference between the ending account balances would be lower if the starting investment amount was lower.

Source: Dimensional Fund Advisors LP.

There is no guarantee investment strategies will be successful. Diversification does not eliminate the risk of market loss. Mutual fund investment values will fluctuate and shares, when redeemed, may be worth more or less than original cost. The types of fees and expenses will vary based on investment vehicle. Investments are subject to risk including possible loss of principal.

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.