QUARTERLY MARKET REVIEW
SECOND QUARTER 2017

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Discipline doesn't consider short cuts, it doesn't take unnecessary risk, and it's not greedy.

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 performance of globally diversified portfolios and features a quarterly topic.

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QUARTER COMMENTARY

Second Quarter 2017

How many new ways are there for the same old market forecasters to twist a timeless truth: **None of us has any idea what the markets will do next.**

Consider the following quote from a recent *Wall Street Journal* article entitled, "Global Stocks Post Strongest First Half in Years, Worrying Investors."

"The question for stock investors is whether the strong first six months [of 2017] heralds a choppier second half or the start of a multiyear upswing. The data on global rallies offers a mixed record." Let's translate that into plain-speak:

"We have no clue whether high-flying markets will go up or down the rest of the year. Heads or tails, we can't call it either way."

The article also reports: "All but four of the 30 major indexes representing the world's biggest stock markets by value have risen this year, a first-half performance unmatched since 2009." What should we make of this data point? Or debates on whether U.S. equities are over-valued? Or the mixed signals on rising versus stay-put interest rates? And by the way, why would strong returns worry investors, as the WSJ article title suggests? Shouldn't we celebrate them?

Rather than try to answer unanswerable questions about a wonderful or worrisome future, here's a more useful question to consider:

Does your low-cost globally diversified portfolio still reflect your goals and risk tolerances?

If the answer is yes, that's great news. There is no sure-fire investment approach that guarantees you'll come out ahead. As *Nobel laureate Eugene Fama* has observed, "The probability that you can lose money never goes away … It's the nature of the beast." That said, you are already doing all you can to capture expected market returns while managing the risks involved.

But what if your portfolio seems off-track from your carefully crafted plans? Perhaps your own goals have changed. Or recent market surges may have shifted your portfolio's target allocations, so you're now holding a little too much of a good thing. That's nice as long as those high-flying assets continue to soar, but it can set you up for an overly hard fall when they stumble.

Because prudent portfolio management calls for maintaining your balance in good markets and bad, we focus on questions of a different sort. Questions like: How can we best employ upfront asset allocation and ongoing rebalancing to keep your portfolio on track toward your personal financial goals?

If you ask us, that's a better question than what the rest of 2017 has in store for us as investors. For all the clever ways there are to phrase a forecast, that's anybody's guess.

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MARKET SUMMARY

Second Quarter 2017 Index Returns

	STOCKS				BONDS	
	US Stock Market	International Developed Stocks	Emerging Markets Stocks	Global Real Estate	US Bond Market	Global Bond Market ex US
	+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.

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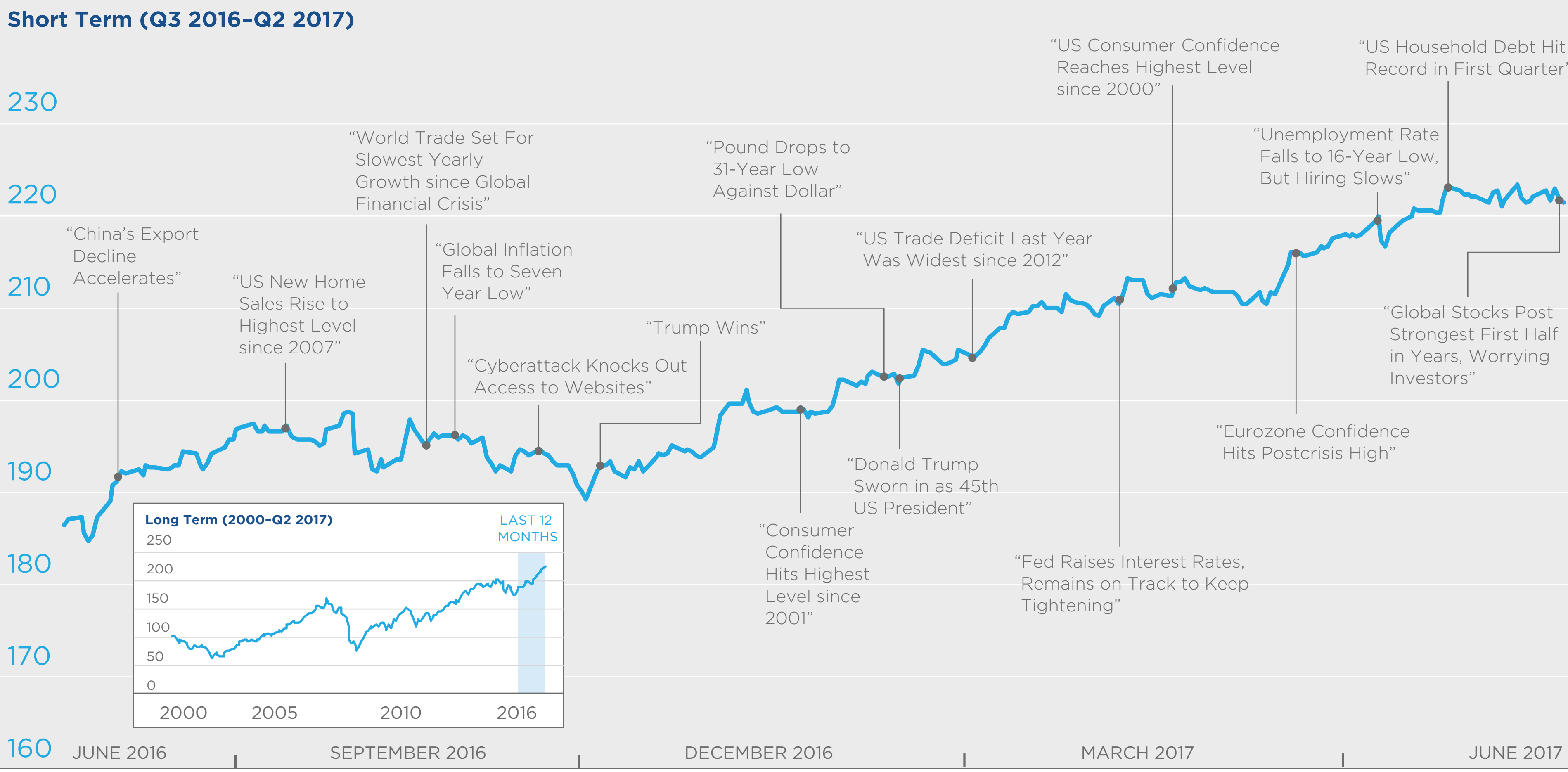
WORLD STOCK MARKET PERFORMANCE

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 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.

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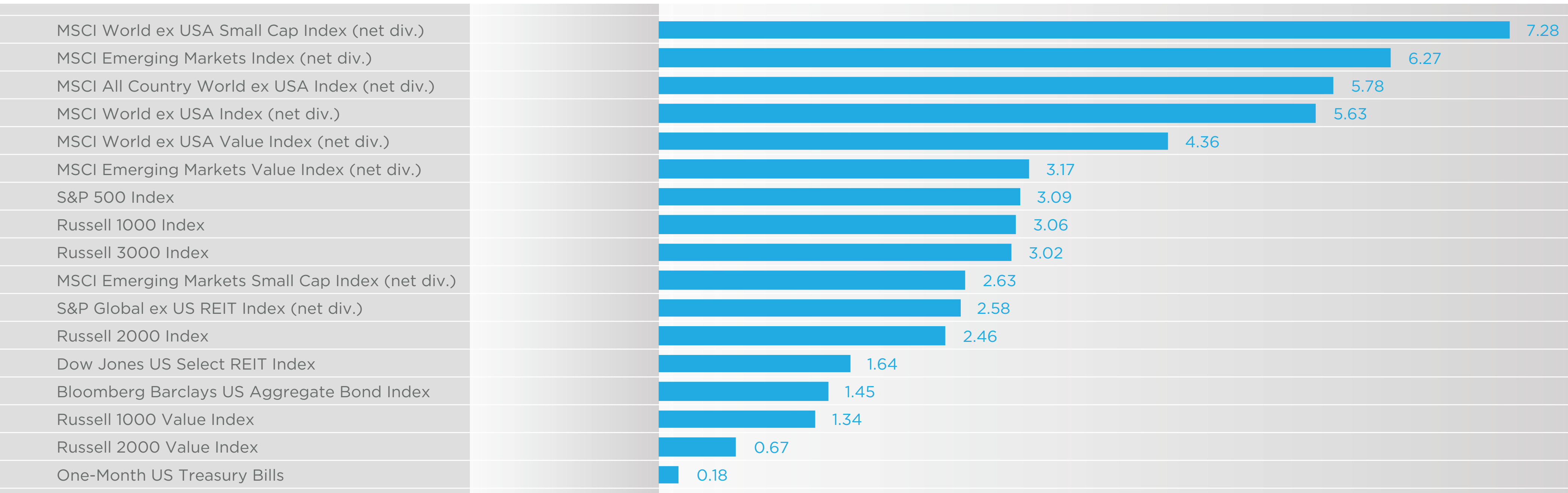
WORLD ASSET CLASSES

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.



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US STOCKS

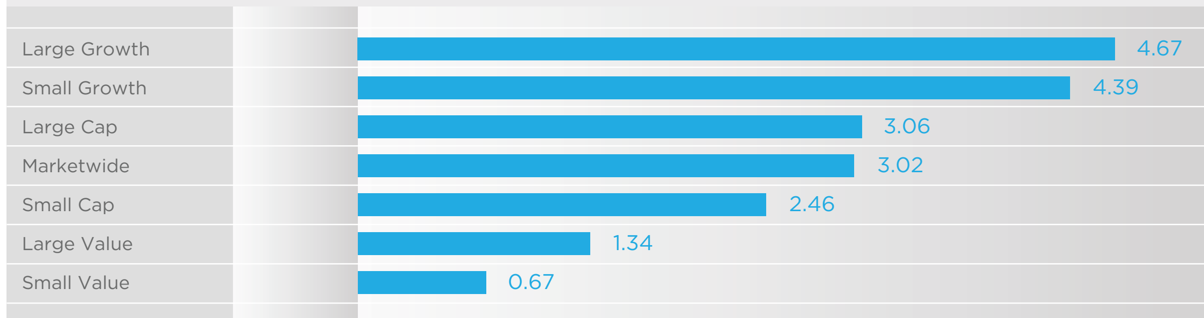
Second Quarter 2017 Index Returns

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.

Ranked Returns for the Quarter (%)



World Market Capitalization—US

52%

US Market
$25.1 trillion

Period Returns (%)

Asset Class	YTD	1 Year	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

* Annualized

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INTERNATIONAL DEVELOPED STOCKS

Second Quarter 2017 Index Returns

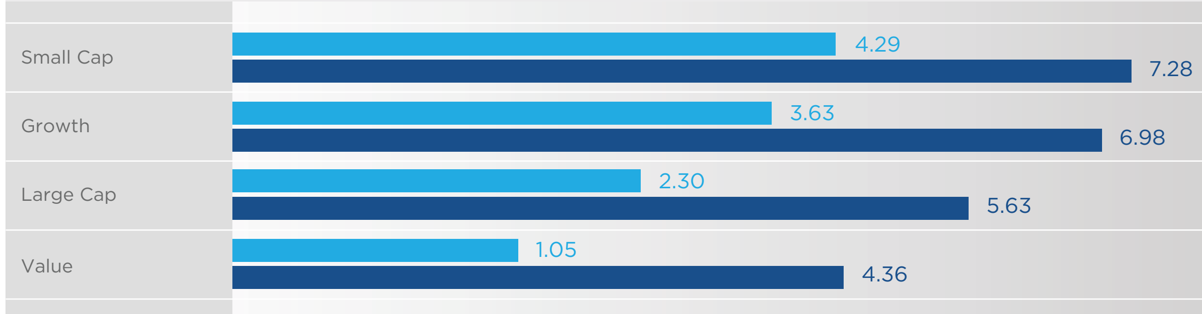
In US dollar terms, developed markets outperformed the US equity market and had similar performance to emerging markets indices during the quarter.

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.

Ranked Returns for the Quarter (%)

Local Currency | US Currency



World Market Capitalization—International Developed

36%

International Developed Market
$17.5 trillion

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.

FIXED INCOME

Second Quarter 2017 Index Returns

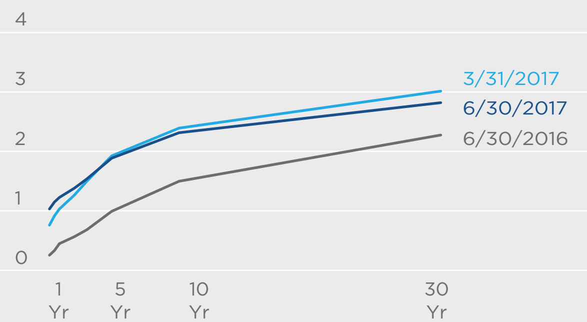
Interest rates were mixed across the US fixed income market during the second quarter. The yield on the 5-year Treasury note decreased 4 basis points (bps) to 1.89%. The yield on the 10-year Treasury note decreased 9 bps to 2.31%. The 30-year Treasury bond yield decreased 18 bps to finish at 2.84%.

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%.

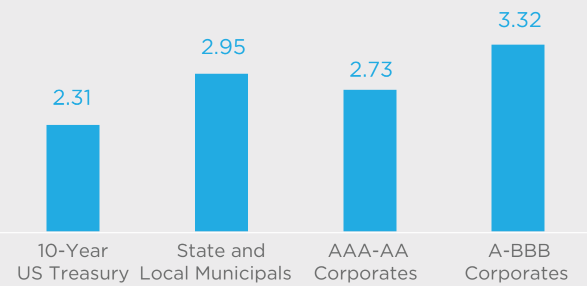
In terms of total returns, short-term corporate bonds gained 0.59% and intermediate corporates gained 1.49%.

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

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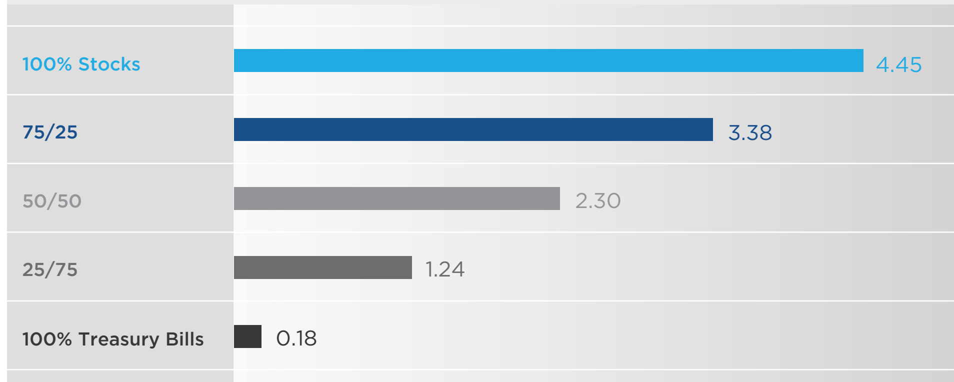
IMPACT OF DIVERSIFICATION

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.

Ranked Returns for the Quarter (%)

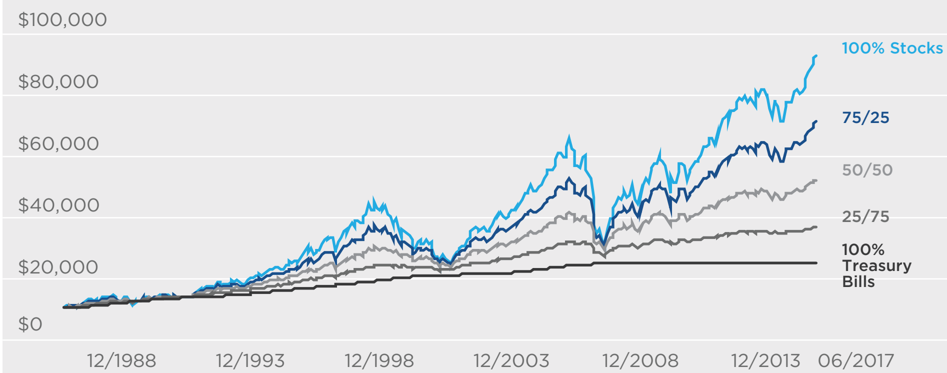


Period Returns (%)

Asset Class	YTD	1 Year	3 Years*	5 Years*	10 Years*	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

• Annualized

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.

WHEN RATES GO UP, DO STOCKS GO DOWN?

Topic Of The Quarter

Should stock investors worry about changes in interest rates?

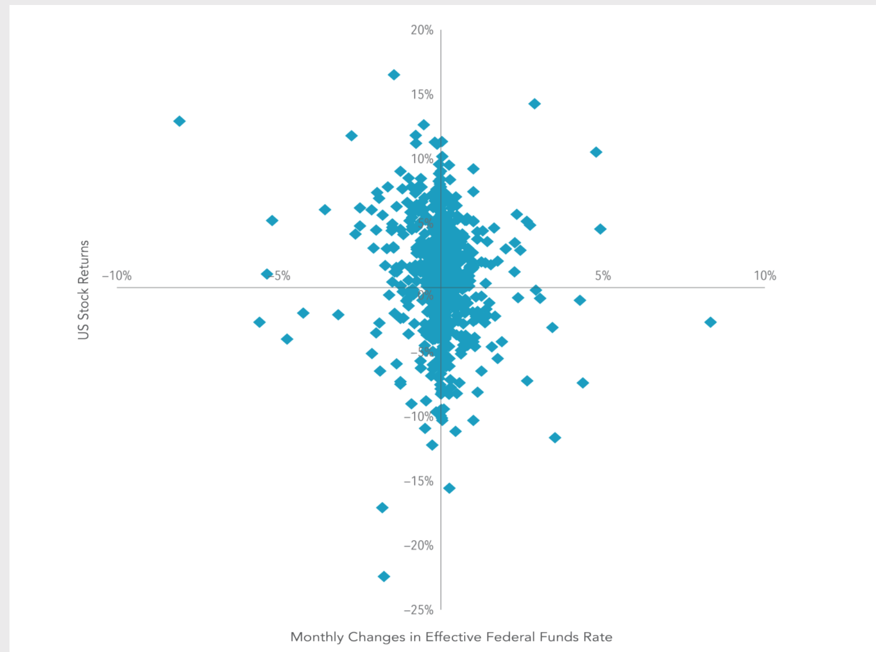
Research shows that, like stock prices, changes in interest rates and bond prices are largely unpredictable.[1] It follows that an investment strategy based upon attempting to exploit these sorts of changes isn't likely to be a fruitful endeavor. Despite the unpredictable nature of interest rate changes, 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.

See, for example, Fama 1976, Fama 1984, Fama and Bliss 1987, Campbell and Shiller 1991, and Duffee 2002.
Wei Dai, "Interest Rates and Equity Returns" (Dimensional Fund Advisors, April 2017).
US stock market defined as Fama/French Total US Market Index.
The federal funds rate is the interest rate at which depository institutions lend funds maintained at the Federal Reserve to another depository institution overnight.

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WHEN RATES GO UP, DO STOCKS GO DOWN?

Topic Of The Quarter Continued

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).

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At BetterWealth, we're about asking the right questions for the right reasons to achieve the right outcomes that are unique to each client. Our team is dedicated to taking the steps to helping each of our clients become informed and educated on key financial matters and life events as well as engaged in pursuing better wealth based on what's important in their lives.