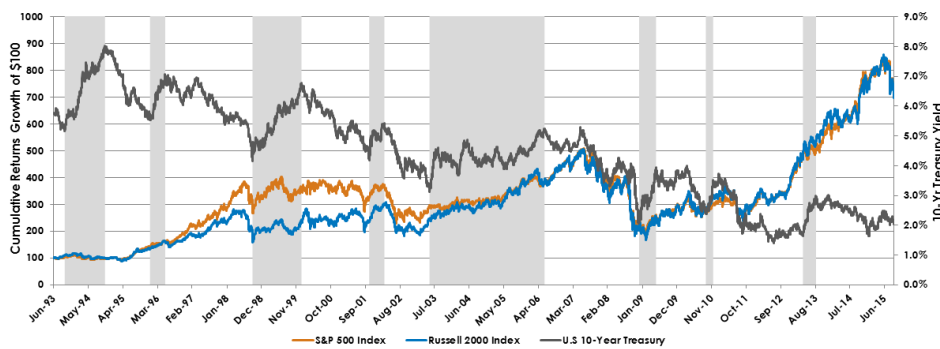


WHAT HAPPENS WHEN INTEREST RATES RISE?

Luciano Siracusano — Chief Investment Strategist
12/15/2015

With December 16 marking the last opportunity for the [Federal Reserve \(Fed\)](#) to raise [interest rates](#) in 2015, market participants now put the odds of a Fed rate hike in December at nearly 80%—up from the 32% probability given to a rate hike just three months ago in September. I believe the Fed will initiate its first rate hike when it meets this week. How have major asset classes in the U.S. performed when interest rates have risen in the past? Going back to July of 1993, the U.S. economy has experienced nine periods when investors pushed interest rates higher on the 10-Year [U.S. 10 Year Treasury Note](#). The table below illustrates the annualized returns for major asset classes going back two decades, as well as their cumulative and average returns during those nine periods when yields on 10-Year Treasuries increased. **Performance during Periods of Rising Rates (10/15/1993 to 9/30/2015)**



Average Annual Total

	10/15/1993 - 11/7/1994	1/18/1996 - 6/12/1996	10/5/1998 - 1/20/2000	11/7/2001 - 4/1/2002	6/13/2003 - 6/14/2006	6/1/2005 - 6/28/2006	12/30/2008 - 6/10/2009	10/7/2010 - 12/15/2010	5/2/2013 - 9/5/2013	Average Return Rising Rates*	Full Period Avg. Ann. Return**
U.S. 10-Year Treasury Return	-12.1%	-7.6%	-9.2%	-6.6%	-0.6%	-4.8%	-13.9%	-8.4%	-9.5%	-8.1%	5.5%
Barclays U.S. Aggregate Index	-4.8%	-3.4%	-1.4%	-2.1%	1.8%	-0.8%	-0.3%	-3.0%	-4.9%	-2.1%	5.6%
BofA Merrill Lynch High Yield Index	0.5%	0.7%	3.0%	4.1%	8.6%	5.4%	33.0%	1.2%	-2.3%	6.0%	7.7%
S&P 500 Index	2.1%	11.4%	34.3%	3.1%	9.1%	6.2%	9.4%	6.9%	5.4%	9.8%	8.7%
Russell 1000 Value Index	-1.6%	8.2%	17.1%	7.8%	13.0%	10.3%	3.7%	5.7%	5.6%	7.8%	9.1%
Russell 1000 Growth Index	3.6%	15.3%	54.0%	0.2%	6.7%	3.4%	18.1%	8.9%	5.9%	12.9%	7.9%
Russell 2000 Index	-1.3%	19.4%	38.9%	14.6%	15.3%	12.0%	13.2%	12.4%	11.8%	15.1%	8.6%

*Average Rising Rates: Average Cumulative Total Return during periods of rising rates shown in the chart
**Full period average annual return: Average annual total return for each index from 10/15/1993 to 9/5/2013.

Source: Bloomberg. Data measured from 10/15/1993 to 9/30/2015. Periods of rising rates are determined by an increase of at least 100 basis points in the 10-Year Treasury note interest rate.

Past performance is not indicative of future results.

You cannot invest directly in an index. Index performance does not represent actual fund or portfolio performance. A fund or portfolio may differ significantly from the securities included in the index. Index performance assumes reinvestment of dividends but does not reflect any management fees, transaction costs or other expenses that would be incurred by a portfolio or fund, or brokerage commissions on transactions in fund shares. Such fees, expenses and commissions could reduce returns.

Returns

For definitions of indexes in the chart, please visit our [glossary](#). Generally, stocks and [high-yield bonds](#) have done well, while U.S. [Treasury notes](#) have struggled in such environments. On the fixed income side, not surprisingly, in each and every one of the nine rising rate periods, the U.S. 10-Year Treasury lost value. On average, Treasuries lost 8.1% over the rising rate periods. Similarly, we see that the [Barclays U.S. Aggregate Index](#) lost 2.1% on average when rates rose back to 1993. Historically, higher-yielding [corporate bonds](#) have been the place to be when rates have risen. The [BofA Merrill Lynch High Yield Index](#) for example, generated positive returns in eight of the nine rising rate periods, posting an average gain of 6.0% during rising rate periods. Generally, a good time to hold high-yield bonds is when the economy is strengthening, as an expanding economic pie normally lowers default risk for individual corporate issuers. Interestingly, the only period when high-yield bonds did not advance was in 2013. It's quite possible that the backup in rates that year was not a prelude to a stronger

period of economic growth, but merely a reaction, a “taper tantrum,” to signals from the Fed that it would begin winding down [quantitative easing \(EQ\)](#) later that year. On the equity side of the equation, history provides us with some key takeaways. We see that the [S&P 500 Index](#) advanced in all nine rising rate periods and that its average return over those periods, 9.8%, was about 110 [basis points \(bps\)](#) higher than its annualized return over the entire period. Also noteworthy, [growth stocks](#) beat [value stocks](#) in six of the nine periods. Moreover, unlike value, growth stocks (as measured by the [Russell 1000 Growth Index](#)) generated an average return in rising rate periods that was higher than its annualized returns over the entire period. During these nine previous rising rate environments, of all the asset classes tested, the one that outperformed all others was small caps. Small caps, as measured by the [Russell 2000 Index](#), have historically returned 15.1% on average over the last nine rising rate periods—650 bps higher than its annualized return over the entire period. This significant outperformance during rising rate environments debunks the myth that small-cap companies are best owned when the economy is just emerging from recession. But while this historical data in rising rate environments is certainly compelling for equities, and especially for small caps, the \$64,000 question is whether “history will rhyme” this time around. Put another way, is the U.S. economy as strong as it was in past cycles when the Fed rose rates and investors pushed up long-term yields? Or are there forces afoot in the U.S. and global economy that will make this time different? I will explore that question in a future blog post. With respect to what has transpired in the recent past, the record shows that equities generally have performed well during rising rate environments and those investors who have tilted toward growth and small caps during such periods have been rewarded for doing so.

Important Risks Related to this Article

Investments focusing on certain sectors and/or smaller companies may be more vulnerable to any single economic or regulatory development.

For more investing insights, check out our [Economic & Market Outlook](#)

Federal Reserve : The Federal Reserve System is the central banking system of the United States.

Interest rates : The rate at which interest is paid by a borrower for the use of money.

U.S. 10 Year Treasury Note : A debt obligation issued by the United States government that matures in 10 years.

High-yield Bonds : A high yield bond is a debt security issued by a corporation with a lower than investment grade rating. It is a major component of the leveraged finance market.

Treasury notes : A debt obligation issued by the United States government that matures in less than 30 year.

Barclays U.S. Aggregate Bond Index, 1-3 Year : This index is the 1-3 Yr component of the U.S. Aggregate index.

Corporate Bonds : a debt security issued by a corporation.

BofA Merrill Lynch High Yield Index : The index is an unmanaged index comprised of U.S. dollar denominated below investment grade corporate debt securities publicly issued in the U.S. domestic market.

Quantitative Easing (QE) : A government monetary policy occasionally used to increase the money supply by buying government securities or other securities from the market. Quantitative easing increases the money supply by flooding financial institutions with capital, in an effort to promote increased lending and liquidity.

S&P 500 Index : Market capitalization-weighted benchmark of 500 stocks selected by the Standard and Poor's Index Committee designed to represent the performance of the leading industries in the United States economy.

Basis point : 1/100th of 1 percent.

Growth stocks : Stocks whose share prices are higher relative to their earnings per share or dividends per share. Investors are willing to pay more because of their earnings or dividend growth expectations going forward.

Value stocks : Stocks whose share prices are lower relative to their earnings per share or dividends per share. Investors pay less for these stocks because their earnings or dividend growth expectations going forward are lower.

Russell 1000 Growth Index : A measure of the large-cap growth segment of the U.S. equity universe, selecting from the Russell 1000 Index.

Russell 2000 Index : Measures the performance of the small-cap segment of the U.S. equity universe. The Russell 2000 is a subset of the Russell 3000 Index representing approximately 10% of the total market capitalization of that index. It includes approximately 2000 of the smallest securities based on a combination of their market cap and current index membership.