



Larchmont resident Ian A. Post, is the Principal of Fifth Set Investment Advisors LLC. Fifth Set is the result of his evolution of thought in regard to conventional investment management. His experience and education led to research for a smarter approach to portfolio management and financial planning. Prior to Fifth Set, Ian conducted fundamental equity research at Citigroup, Credit Lyonnais and CIBC Oppenheimer. Ian earned a BS in Engineering and Public Policy from Washington University and an MBA with concentrations in Finance and Statistics from NYU and is a holder of the Chartered Financial Analyst designation, a member of CFA Institute and a CERTIFIED FINANCIAL PLANNER™ certificant.

# When Interest Rates Go Up, *Do Stocks Go Down?*

By Ian A. Post, CFA, CFP®

With the Federal Reserve likely to continue to raise short-term interest rates<sup>1</sup>, I thought this would be a good time to review how interest rate changes might impact stock prices. While stock price and interest rate changes are inherently unpredictable<sup>2</sup>, investors may still be curious about what might happen to stocks if interest rates continue to go up.

Interest rate changes may impact stock prices in two, potentially, opposing ways. First, higher interest rates cause future cash flows to be discounted at a higher rate, which would cause stock prices to drop. However, higher interest rates might also be accompanied by expectations for higher future cash flows thereby offsetting the effect of a higher discount rate.

So, if theory doesn't tell us what the overall effect should be, the next question is what does the historical data say?

## RECENT RESEARCH

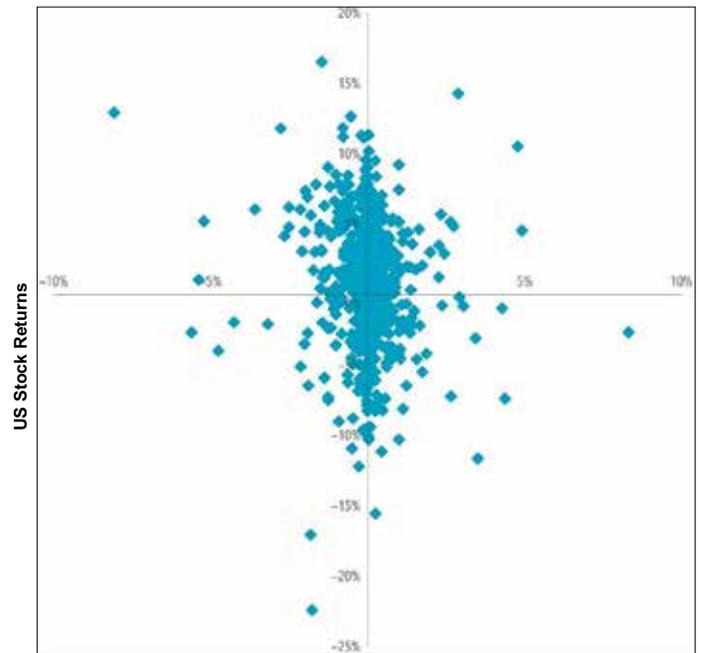
Recent research performed by Dimensional Fund Advisors helps provide insight into this question<sup>3</sup>. The research examines the correlation between monthly US stock returns and changes in interest rates<sup>4</sup>. The chart shows that while there is a lot of noise in stock returns and no clear pattern, not much of that variation appears to be related to changes in the effective federal funds rate<sup>5</sup>.

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, Dimensional also examined changes in longer-term interest rates and found similar results.

## CONCLUSION

So to address our initial question: when rates go up, do stock prices go down? The answer is sometimes. The split between positive and negative monthly returns was about the same when examining all

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



Monthly Changes in Effective Federal Funds Rate

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.

months, not just those in which rates went up. In other words, there is no clear link between stock returns and interest rate changes. Even if one had perfect knowledge of what will happen with future interest rate changes, this information would provide little guidance about subsequent stock returns. Instead, investors are best positioned for success by staying invested and avoiding the temptation to make changes based on short-term predictions.

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<sup>1</sup>As of 10/25/17, the CME Group estimates a 96.7% chance that the Federal Reserve increases the federal funds rate at the December 13th, 2017 meeting. <sup>2</sup>See, for example, Fama 1976, Fama 1984, Fama and Bliss 1987, Campbell and Shiller 1991, and Duffee 2002. <sup>3</sup>Wei Dai, "Interest Rates and Equity Returns" (Dimensional Fund Advisors, April 2017). <sup>4</sup>US stock market defined as Fama/French Total US Market Index. <sup>5</sup>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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**Ian A. Post, CFA, CFP®**

Fifth Set Investment Advisors LLC • 2065 Boston Post Road • Suite 200 • Larchmont, NY 10538  
Email: [ipost@fifthsetinvestment.com](mailto:ipost@fifthsetinvestment.com) • Web: [www.fifthsetinvestment.com](http://www.fifthsetinvestment.com) • Phone: 646-783-9717