

Low Volatility Stocks And Higher Interest Rates

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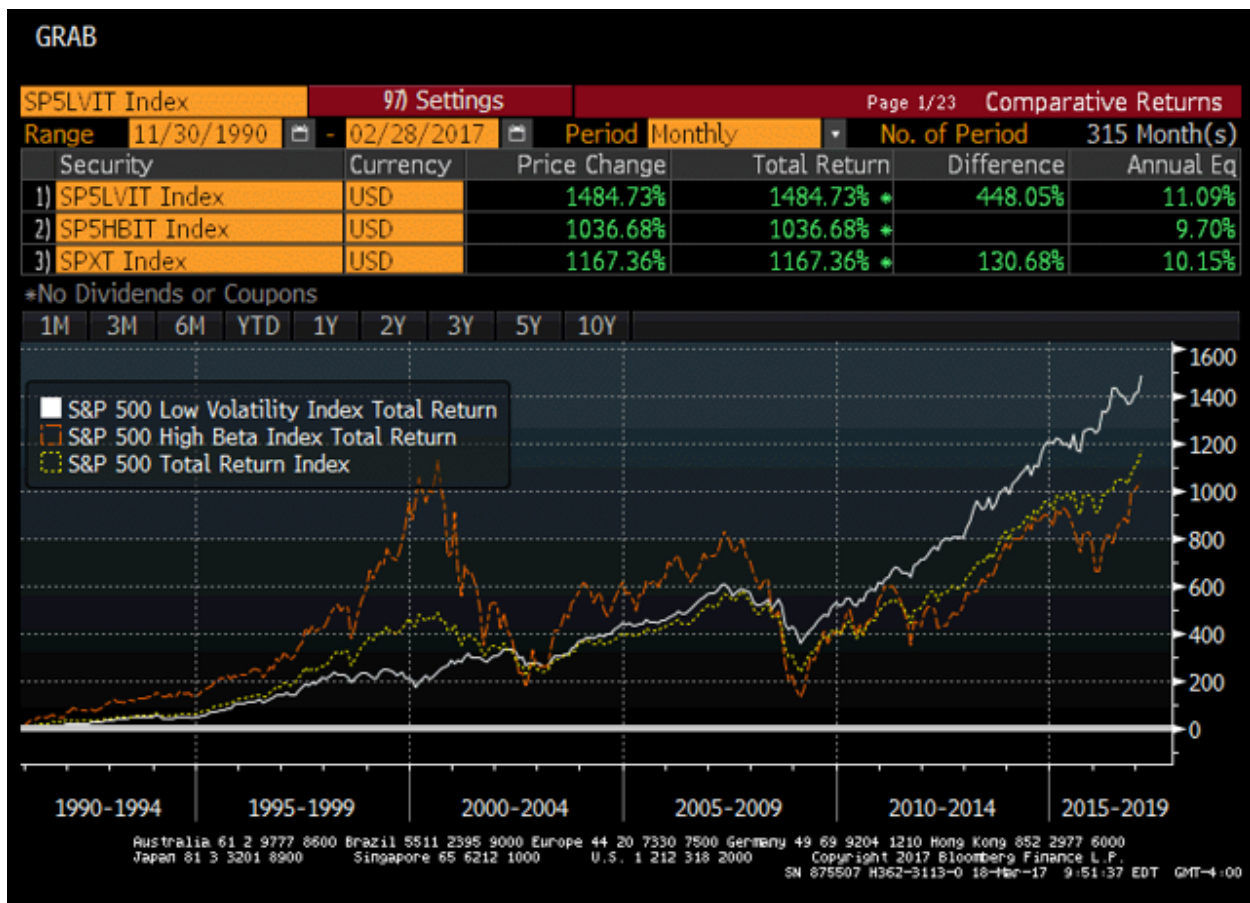
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Summary

- Low volatility stocks have generated market-beating absolute outperformance with lower variability of returns over multiple business cycles.
- While low volatility stocks have outperformed over the past three decades, that period of strength has coincided with a historic bull market in bonds.
- Some investors have expressed concern that higher interest rates could have a disproportionately negative impact on low volatility stocks.
- This article examines the absolute and relative performance of low volatility strategies during periods of higher interest rates.

In a recent article, *Low Volatility and High Beta Stocks Prior to the Last Downturn*, I illustrated the large divergence in performance between high beta and low volatility stocks as the market corrected. Many of the high beta stocks went out of business. Conversely, the low volatility list looks very similar to a low volatility list constructed nearly a decade later.

In that article, I compared the S&P 500 Low Volatility Index (NYSEARCA:SPLV), the S&P 500 High Beta Index (NYSEARCA:SPHB), and the S&P 500 (NYSEARCA:SPY) from 1990 to current in the following chart.



Readers rightfully responded that this period of time coincided with falling interest rates that boosted low volatility stocks with more bond-like characteristics. We need to expand our data set. The table below shows the performance of the U.S. stock market back to 1964 courtesy of data from Dartmouth professor Kenneth French. The table includes geometric average returns and standard deviation of returns for the U.S. stock market, bucketed by 60-day trailing volatility of daily returns.

Performance of Portfolios Formed on Variance (1964-2016)					
	Lowest Volatility Quintile	2nd Lowest	Median	Second Highest	Highest Volatility Quintile
Mean	10.45%	11.04%	11.44%	11.83%	4.25%
Std. Dev.	14.53%	16.82%	19.45%	23.68%	32.69%
Sharpe	0.278	0.275	0.258	0.229	-0.066

* Sharpe subtracts average yield of 10-yr Treasury yield over sample period (6.41%)

The lowest volatility quintile produced the highest risk-adjusted return, and the highest volatility quintile produced the lowest and most volatile returns.

To see how low volatility stocks performed in a rising rate scenario, I have extracted solely the returns from 1964 to 1981. At the beginning of 1964, the 10-year Treasury yield was 4.1%. It would peak at 15.8% in September 1981 before being forced lower by the Volcker-led disinflation.

Performance of Portfolios Formed on Variance (1964-1981)

	Lowest Volatility Quintile	2nd Lowest	Median	Second Highest	Highest Volatility Quintile
Mean	6.90%	8.10%	10.09%	10.82%	4.91%
Std. Dev.	14.97%	18.36%	22.56%	28.97%	35.49%
Sharpe	0.033	0.092	0.163	0.164	-0.042

* Sharpe subtracts average yield of 10-yr Treasury yield over sample period (6.41%)

In this scenario, the low volatility quintile still outperformed the highest risk segment of the market on both an absolute and risk-adjusted basis. However, the lowest volatility cohort produced lackluster returns relative to the broader market.

To further describe the returns of volatility-based portfolios in rising and falling rate environments, I have split the 50-plus year data set into two camps. The first has the annual returns of these portfolios in years where the 10-year Treasury yield ended higher than it began the year. The second cut is the opposite - falling rate years.

Performance of Portfolios Formed on Variance: Rising Rates

	Lowest Volatility Quintile	2nd Lowest	Median	Second Highest	Highest Volatility Quintile
Mean	8.62%	11.31%	12.55%	14.43%	11.25%
Std. Dev.	13.11%	16.41%	19.79%	24.57%	35.36%
Sharpe	0.169	0.298	0.310	0.326	0.137

* Sharpe subtracts average yield of 10-yr Treasury yield over sample period (6.41%)

In years that featured higher rates, the lowest volatility portfolios produced lagging returns. This lowest volatility quintile still produced higher returns relative to the highest volatility quintile when adjusted for risk.

Performance of Portfolios Formed on Variance: Falling Rates					
	Lowest Volatility Quintile	2nd Lowest	Median	Second Highest	Highest Volatility Quintile
Mean	12.53%	10.74%	10.20%	8.98%	-3.06%
Std. Dev.	15.95%	17.61%	19.40%	22.80%	27.91%
Sharpe	0.384	0.246	0.195	0.113	-0.339

* Sharpe subtracts average yield of 10-yr Treasury yield over sample period (6.41%)

In years that featured falling rates, the lowest volatility portfolios produced the highest absolute and risk-adjusted returns. In these years, the high volatility quintile actually produced a negative return. Returns for the five quintiles fall as risk rises in these years. Historically, lower Treasury yields have been driven by a combination of subdued expectations for economic growth and a "flight-to-quality" to bonds - negative scenarios for risky assets.

Over this 50-plus year period, which has featured periods of rising and falling rates, low volatility investments have outperformed on a risk-adjusted basis. As I wrote in *Buffett and Low Volatility Investing*, adding low-cost investment leverage to low-risk stocks has historically produced higher returns than simply buying riskier stocks un-levered.

From this article, there is a pretty clear impact of the rate regime on the performance of the volatility-sorted portfolios. Low volatility stocks underperform on an absolute basis in higher interest rate environments. From this analysis, I believe that underperformance might be less than some readers were expecting. Low volatility portfolios still produced positive returns in rising rate markets, and produced higher risk-adjusted returns than the most risky quintile in all scenarios.

For investors fearing the impact of higher interest rates, one should also ascertain what environment is the driver of higher rates. If higher interest rates are a function of increased expectations for economic growth and a strong business environment, I would expect low volatility stocks to underperform higher volatility companies characterized by higher financial and/or operating leverage. As we move later in the business cycle, a return to above-trend growth seems like a less likely outcome unless you are bullish on the prospects of pro-growth economic policies from the new administration. In a sluggish economic environment, lower volatility stocks might offer a benefit of lower downside in a further slowdown.

Low volatility stocks outperform in risky market environments. These lower returns in strong economic scenarios typically accompanied with higher rates can be viewed as a downside protection cost. How much investors should pay for that downside protection in the form of higher multiples for low volatility stocks is the open question... and what makes markets.

I hope this article frames the performance of low volatility stocks against the specter of higher interest rates using the longest data set I have available. Acknowledging that part of the gains from low volatility strategies has been a function of lower interest rates, I still expect low volatility stocks to outperform on a risk-adjusted basis over long forward periods as we enter into a halting pace of marginally higher long-term interest rates over time.

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Disclosure: I am/we are long SPLV, SPY.

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