How to Get It Wrong With "Low Volatility" Equity Strategies

By: George Douglas, CFA, Portfolio Manager & Managing Principal

Low volatility strategies serve as a good alternative for investors wanting a tilt in equities, as the lower portfolio volatility often helps the portfolio resist market uncertainty.

"Low Volatility" strategies have attracted significant assets

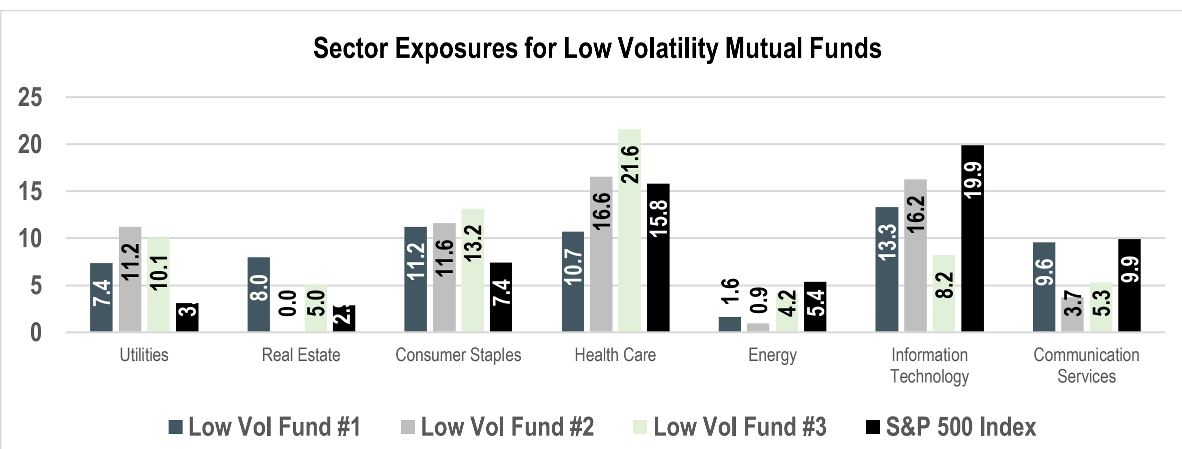
"Low volatility" equity strategies have garnered significant investor attention and growth in assets. Over $100 billion is currently invested in low volatility ETFs alone, with additional investments in open-end mutual funds and institutional separate accounts. It can be reasonably assumed that well over $200 billion in aggregate is currently invested in equity products with a "low volatility" tilt.

Is Low volatility investing a "smart beta" strategy?

Advocates and product providers of low volatility portfolios claim these portfolios provide a source of "smart beta": competitive equity returns with lower risk. They back their claims with data studies demonstrating that over historical periods studied, the returns of stocks with low observed volatility have been comparable to stocks with higher volatility. This in turn is presented as evidence of structural market inefficiency and the existence of what might be described as a permanent market anomaly or an "alternative risk premium." We disagree with this assessment.

Our own research indicates that these products consistently overweight particular economic sectors while underweighting others. The market relative performance of low volatility portfolios will, therefore, be largely determined by the performance of the overweighed and underweighted sectors, which in turn will be influenced by specific macroeconomic sensitivities.

Low volatility ETFs most typically overweight the Utility, Financial, and Consumer Staples economic sectors, while underweighting the Technology, Energy, and Basic Material sectors. Below is a graph from a paper we wrote in 2018 on this subject, illustrating the sector weightings versus the S&P 500 of three low volatility ETFs:



Source: Bloomberg PORT (Portfolio & Risk Analytics) as of 12/4/2018

One would suspect that sector positioning along these lines would produce a portfolio with greater interest rate sensitivity than the broad market, and this turns out to be the case. The first graph below shows the ratio of one of the larger low volatility ETFs to the S&P 500 during the 5 year period of December 31, 2014 to December 31, 2019. Periods when the ratio is rising reflect outperformance versus the S&P 500, while a falling ratio indicates periods of underperformance.

The second graph below depicts the 10 year government bond yield over the same time period. Note the strong inverse relationship between the two.

Source: Bloomberg (12/31/2019)

Outperformance in a period of falling interest rates is not alpha

The low volatility ETF outperforms the S&P 500 when yields are falling, and underperforms when yields are rising. Relative performance is largely determined by the direction of interest rates. An investor in this ETF should understand that the future direction of interest rates will drive the relative performance of this ETF. They should not interpret outperformance during periods of falling interest rates as alpha, and that would be getting it wrong. Instead, underperformance should be expected in periods of rising interest rates, and that would be getting it right.

The "Smart beta" argument for low volatility portfolios – we think the argument is flawed

Does the fact that low volatility portfolios over long periods of time generate returns close to the broader equity market represent some sort of permanent market anomaly or "free lunch"? We think not. The key premise in the alpha argument is that short term security price volatility represents an accurate and complete metric of risk, when in fact short term price volatility is only one element or component of risk.

Quantitative models, and particularly quantitative metrics of risk, are simplifications of reality. The metrics make tacit assumptions about the stationarity of market conditions, when in reality financial markets have been proven to exhibit non-stationary behavior. In real markets, the mix of participants will change over time, the behavior of participants will change over time, and this will cause the behavior of security prices to change over time. The problem of non-stationarity explains the widespread failure of back-tested quantitative models to predict security performance on a go-forward basis. Non-stationarity is a challenge without a readily available solution.

In addition to non-stationarity, security price volatility fails to capture the risk of discrete and infrequent but potentially powerful adverse events, which include economic recessions and major liquidity contractions. Consider the risk present in highly leveraged companies. In supportive economic states with stable interest rates and credit spreads, leveraged companies generate fairly stable earnings and potentially below average short term volatility. In a period of stressed financial conditions and illiquidity, the same companies may be unable to refinance debt, and thus face insolvency. Short term price volatility measured in periods of financial stability will fail to capture this element of risk.

There is nothing wrong with investing in low volatility, just understand what the drivers of return are

In conclusion, there is nothing wrong with investing in low volatility portfolios as long as the investor understands:

- The investment merits of consistently overweighted and underweighted sectors.
- The relative performance of the investment to the S&P 500 will likely be tightly linked to the direction of interest rates.

Investors should not treat these products as alpha-generating investments. They may well have defensive characteristics that are desirable, but will also have specific risks that must be fully understood.