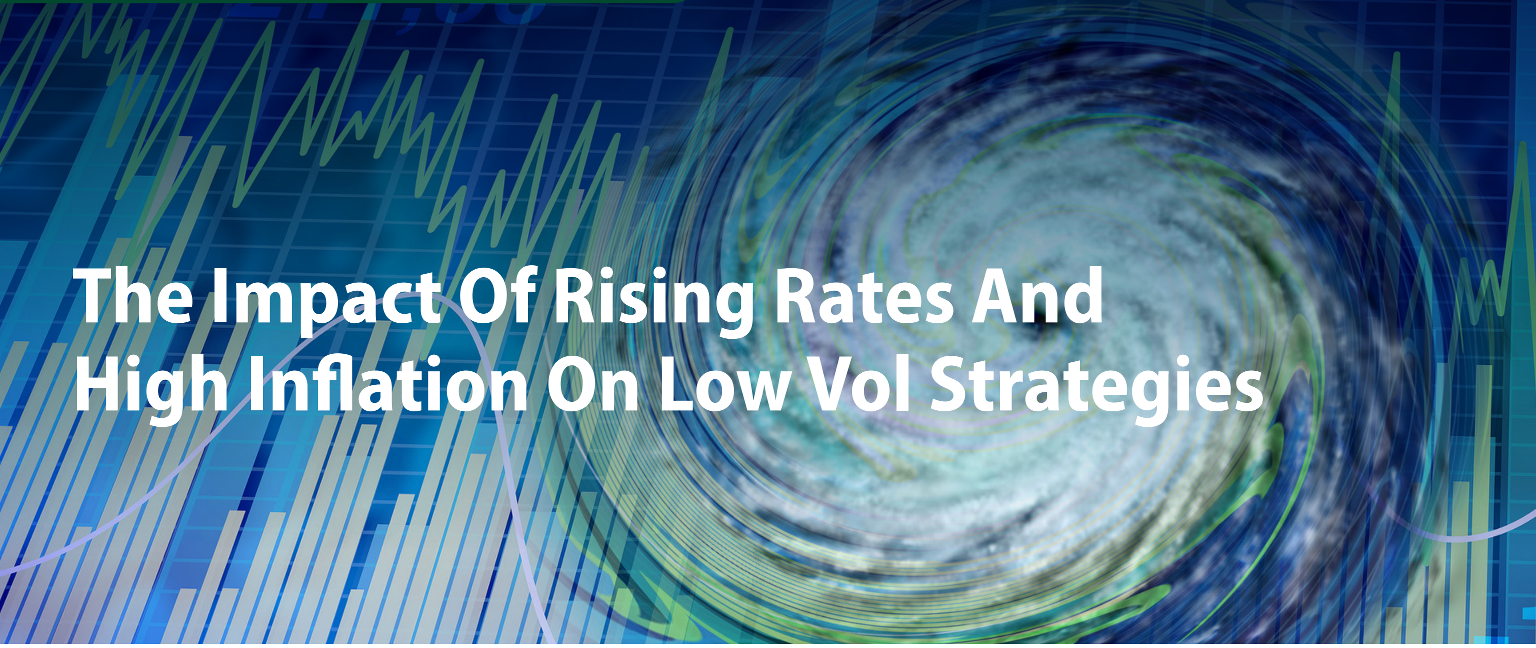

The Impact Of Rising Rates And High Inflation On Low Vol Strategies

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Low volatility equity strategies surged in popularity over the last decade due to their combination of attractive returns with below-average risk. But many observers attribute the strong performance these strategies delivered to the low-rate, low-inflation environment that prevailed during this period. With interest rates and inflation now on the rise, some are worrying that low volatility strategies will underperform. Are these worries justified?

To answer that question, we studied the long-term relative performance of low volatility equities. Our analysis starts in April 1953, soon after the U.S. Federal Reserve finally removed the peg on interest rates imposed during the Second World War. We used the following data series:

- Equity market benchmark: The S&P 500 from 1978 to the present, and the 500 largest U.S. stocks weighted by market cap before 1978
- Generic low volatility strategy: The lowest volatility quintile of 100 equally weighted stocks from the same U.S. equity universe
- Interest rates: Five-year U.S. Treasury yields since April 1953
- Inflation: The U.S. Consumer Price Index (CPI) since 1960
- Historical interest rate cycles

After the Fed allowed U.S. interest rates to float again in April 1953, they increased fairly steadily over the next 28 years, peaking in September 1981. During that period, the annualized return of the simulated low volatility strategy was 10.7 per cent, compared to 9.7 per cent for the benchmark, an outperformance of one per cent. Over the next 40 years, rates moved in the opposite direction, gradually declining to nearly zero at the height of the COVID-19 pandemic. Between October 1981 and June 2022, low volatility stocks returned 12.4 per cent annually, compared to 10.9 per cent for the benchmark, an outperformance of 1.5 per cent. So, over the longer-term, the evidence does not support a relationship between the general direction of interest rates and the relative performance of low volatility equities.

How about the short term? In the last 70 years, there have been 10 episodes when interest rates increased by more than two per cent over a 12- to 18-month period. Low volatility stocks underperformed the market in six periods and outperformed in four. A closer look at the data reveals an interesting pattern. Low volatility strategies underperformed most dramatically during three periods: June to December 1958, July to December 1980, and December 1998 to May 2000. The corresponding benchmark return during these periods ranged between 21.8 per cent and 43.7 per cent. Given its low beta, it is not surprising that low volatility underperformed in such strong market environments.

Conversely, low volatility strategies outperformed most dramatically during periods of significant broad market declines. Thus, over shorter time periods the evidence does not point to interest rates as a key driver of their relative performance. In both rising and falling interest rate environments, the direction and strength of the broad market appears to be a more important factor. Consistent with this, over the full 70-year period, the correlation between the change in interest rates and the relative performance of low volatility stocks was close to zero.

Historical Inflation Cycles

Investors have also wondered about the impact of inflation on low volatility strategies. Since 1960, there have been five periods of high inflation when the annual U.S. CPI stayed above six per cent, with an average of 9.02 per cent. In every single period, low volatility stocks outperformed the market and the average monthly outperformance was 0.35 per cent.

As for shorter-term spikes, over the last 62 years, there have been only three episodes when inflation increased by more than eight per cent over a short period: May 1972 to November 1974, March 1978 to March 1980, and the present period.

The 1972-74 episode coincided with the first global oil crisis, when OPEC imposed an embargo on oil exports in response to the Yom Kippur War. In 1973, the three largest sectors in the U.S. stock market were consumer discretionary, technology, and energy. The first two sectors had slightly above-average volatility. The energy sector was not considered risky, being dominated at the time by oil producers.

The other key low volatility sectors during this period were utilities and consumer staples. As the oil crisis unfolded, the weight of the energy stocks in the benchmark increased and their volatility increased by a third. The composition of the low volatility portfolio shifted in response, with its allocation to energy falling. Between May 1972 and November 1974, the broad market fell by 27.7 per cent and inflation rose sharply. Underweight energy and overweight utilities and staples, the low volatility portfolio outperformed by 2.8 per cent.

> DUE TO THE RISK OF HIGH INFLATION BECOMING ENTRENCHED – RATHER THAN JUST A TRANSITORY PHENOMENON – CENTRAL BANKS ABRUPTLY TURNED HAWKISH

In 1979 to 1980, the Iranian revolution precipitated a second oil crisis. The benchmark weight of the energy sector increased again, while consumer discretionary, especially auto stocks, decreased as high gasoline prices reduced demand for cars. The low volatility portfolio shifted again to reflect these changes: from having a neutral weight in energy, it became significantly underweight, while its weighting in consumer staples and utilities more than doubled. Between March 1978 and March 1980, the S&P 500 rose 31.3 per cent, while the low volatility strategy returned 12.1 per cent, underperforming by 19.2 per cent.

Those two seemingly similar inflation spikes resulted in different outcomes. The dichotomy in the relative performance of low volatility stocks resulted from the market reaction to each crisis. While markets dropped significantly during the first crisis, they soared during the second one. The impact of inflation was again dwarfed by the low beta factor.

The Current Cycle

As the above discussion has demonstrated, concerns that higher interest rates and/or higher inflation could adversely impact the relative performance of low volatility stocks are not grounded in long-term empirical evidence. But is there any reason to believe that this time it might be different? So far, the data suggests not. In the current cycle, far from hindering the performance of low volatility stocks, the sharp rise in interest rates and inflation is helping low volatility strategies outperform broad market averages.

The outperformance is mainly the result of a lower exposure to overvalued growth stocks, which were heavily represented in broad market benchmarks at the onset of the current bear market. Today's growth stocks are found in the information technology (IT), digital media, and consumer discretionary sectors, all of which have been disproportionately impacted by rising interest rates and inflation.

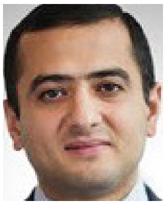
This trend is a reflection of the unique nature of the COVID-19 pandemic. The early stages of the pandemic created fertile ground for high duration, high beta, and highly leveraged growth stocks in the IT, digital media, and consumer discretionary sectors. This happened because work-from-home policies drove a spike in demand for these products and services and aggressive rate cuts lowered debt servicing costs for more highly leveraged growth stocks, while boosting the present value of their (often distant) future profits. Growth stock valuations surged, with broad market indices becoming more concentrated in these areas.

However, these same trends reversed just as quickly when widespread vaccination began to ease the health crisis. As restrictions on various activities were lifted, marginal demand for tech products abated. And when economic growth recovered, inflation flared and the interest rate picture shifted rapidly. After two years of unprecedented monetary policy stimulus, central banks found themselves behind the curve in the spring of 2022, with robust demand, supply chain pressures, semiconductor shortages, and the war in Ukraine conspiring to drive up consumer prices.

Due to the risk of high inflation becoming entrenched – rather than just a transitory phenomenon – central banks abruptly turned hawkish, front-loading interest rate increases at a pace not seen since the 1970s. By mid-June of 2022, the U.S. 10-year Treasury yield had climbed to 3.5 per cent, its highest level in a decade, and up more than 300 basis points from its 2020 low. The fallout was swift for global fixed income and equity markets, with the S&P 500 and Nasdaq diving deep into bear market territory. Growth stocks were hit particularly hard, reflecting their higher leverage. Meanwhile, low volatility stocks and defensive sectors outperformed massively.

Looking Ahead

Over the last 70 years, low volatility equities have outperformed in rising and falling interest rate environments. They have consistently outperformed during periods of sustained high inflation and they have variously outperformed and underperformed during short-term interest rate and inflation shocks. Although investors might want a simple answer, forecasting the relative performance of low volatility stocks is a complex exercise. It requires an understanding of the macroeconomic forces driving changes in interest rates and inflation, as well as the shifting composition of low volatility portfolios and broad market benchmarks through changing market environments. **BPM**



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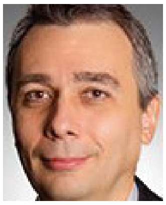

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