INVESTMENT BRIEF

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Strategic Investment Group®

Volatility Revival

The revival of volatility in February, following an exceptional market calm, has caused investors to reassess risk. This investment brief considers the nature and drivers of volatility, the factors behind the lull in volatility last year and its sudden reawakening in February, and the efficacy of two diametrically opposed volatility strategies.

Volatility Dynamics – Stylized Facts

Analysts have identified a number of stylized facts that capture the dynamics of market volatility and inform the parameters of value-at-risk and volatility forecasting models. Five of these stylized facts are particularly interesting as they put recent developments in context.

First, volatility tends to cluster and demonstrate a degree of serial autocorrelation. If volatility is high today, it is likely to be high tomorrow. Second, volatility reverts to the mean, but the speed of reversion varies. When volatility is unusually low, the pace of mean reversion tends to be slower than in times of unusually high volatility. Third, markets do not respond symmetrically to news. Negative shocks hit harder than positive developments. As a corollary, declining markets tend to be more volatile than rising markets. Fourth, the correlation of the volatility of returns across assets is much higher than the correlation of their returns. The volatility of stocks, bonds, currencies, and commodities all carry sensitivity to common macro shocks. Finally, the implied volatility embedded in an option's price reflects realized volatility, but is typically higher than realized volatility.

Volatility's Ups and Downs

Volatility across equity, bond, and currency markets was exceptionally low in 2017, deepening a trend of the past few years. In the case of the U.S. equity market, realized volatility in 2017 visited lows seen only three times previously in the past 90 years, during bull markets in the 1960s and 1990s, and in the run up to the great financial crisis. Implied equity market volatility, as measured by the VIX, hit an all-time low.

The stylized facts just considered suggest a number of likely contributors to the market calm. In 2017, the U.S. economy was in one of the longest recoveries on record during which fundamentals were unusually stable, the global economy was enjoying synchronized growth, and equity markets around the world were experiencing a massive rally. These favorable economic and market developments contributed to low realized and implied market volatility.

Low realized volatility became incorporated in risk models and investor expectations as investors became lulled into a false sense of security. Combined with low interest rates, the prolonged market calm induced risk taking and boosted asset valuations. Short volatility strategies predicated on the persistence of low volatility gained in popularity.

In February of this year, U.S. equity markets fell precipitously, the VIX spiked, and markets experienced intra-day swings that dwarfed the modest moves of 2017. The apparent proximate cause for the sell-off was an acceleration in wage growth captured in the January U.S. employment report. Whatever the trigger, these developments are emblematic of the Volatility Paradox – the oft-observed phenomenon that periods of low market volatility sow the seeds of their own destruction by inducing risk taking that make markets fragile and more susceptible to reversal.

The Long and Short of Volatility Strategies

Investors in short volatility strategies were hard hit by February's spike in volatility. Trading was suspended in several ETFs that had a payoff that was the inverse of the VIX. After strong gains during the years of market calm, many of these strategies lost virtually all of their value in a day.

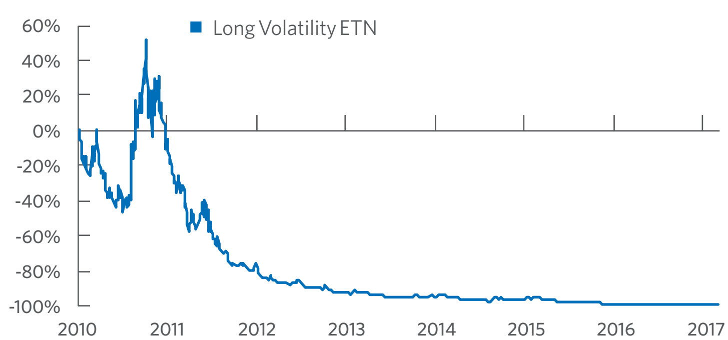
Going long volatility also tends to be a losing strategy. Unlike the short volatility strategies that generate small incremental gains until they crash and burn, the losses on long volatility strategies tend to generate steady losses (Exhibit 1, below). This reflects the tendency of implied volatility to be higher than actual volatility, the financial market variant of overpaying for insurance.

For this reason, we typically avoid option-based hedging strategies, preferring instead to make tactical portfolio shifts when assets appear significantly misvalued. With our defensive tactical posture, our portfolios weathered February's storm well. We expect that the return of volatility will be a boon to active management, as price volatility tends to improve the opportunity set for skilled managers.

EXHIBIT 1:

Cumulative Return to Long Volatility

Source: Bloomberg.



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