Market Perspective

Nov. 2017

2017 may well go down as one of the lowest volatility years in the history of the S&P 500® Index. The year-to-date annualized standard deviation of the S&P 500® Index as of November 30th was just 6.9%. That is not only nearly 60% lower than the average annual volatility of the equity market index (16.7% from 1928 to 2016), but also on pace to tie for the second lowest year since 1928.

Though there were many new record-low volatility readings in 2017, it is not at all unprecedented for the equity market to go through extended periods of well below-average volatility. In fact, the 25 lowest volatility years include at least one representative year from each decade going back to the 1940s (Figure 1). Volatility is a cyclical phenomenon and frequently goes through multi-year phases when readings are consistently above or below average. The typical phase lasts about four-and-a-half years. 2017 is on track to be the sixth consecutive calendar year of below average volatility.

Figure 1

25 Lowest Volatility Years for the S&P 500® Index Since 1928

Year	Annualized Standard Deviation
1964	5.3%
1965	6.9%
2017*	6.9%
1995	7.9%
1952	8.0%
1972	8.1%
1961	8.2%
1967	8.4%
1963	8.7%
1993	8.7%
1954	9.0%
1958	9.2%
1968	9.2%
1944	9.2%
1977	9.3%
1959	9.3%
1992	9.8%
1994	10.0%
1960	10.2%
2006	10.2%
1969	10.2%
1985	10.3%
1971	10.3%
2005	10.4%
1951	11.0%

*YTD through November 2017
Source: Bloomberg, L.P.

Implied volatility levels priced into the S&P 500® Index options market have also been at historic lows this year. The Cboe® Volatility Index (VIX®) set new records for low closing value (9.14 on November 3), low intra-day value (8.56 on November 24) and lowest monthly average (10.13 in October). As Figure 2 shows, the year-to-date average for VIX® is also on track to be the lowest yearly average in the history of the measure going back to 1990. The chart also shows that, like realized volatility, implied volatility is cyclical and the two measures tend to rise and fall together. Despite many articles in the financial press this year highlighting option writing and other 'volatility selling' strategies as the cause of the low volatility environment, our view has been, and continues to be, that fundamental drivers of low realized volatility provide the best explanation for the overall volatility environment.

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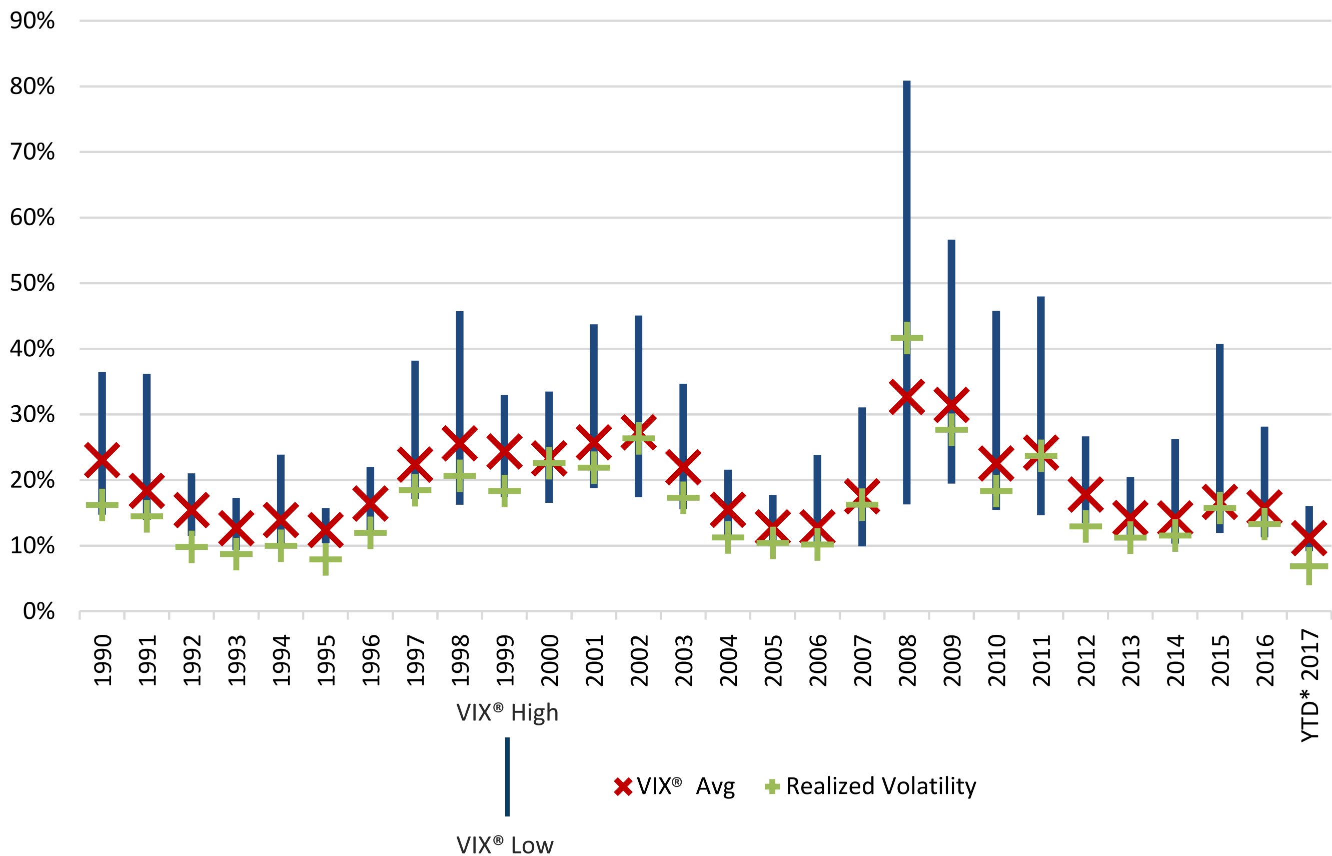
Figure 2

Annual Implied Volatility Range and Average vs. Realized Volatility Since 1990



Source: Bloomberg, L.P.
*YTD through November 2017

Some recent fundamental drivers of low volatility include a positive market backdrop featuring expanding global economic growth and strong corporate earnings as well as low correlation across individual stocks. This positive backdrop has helped propel the stock market higher and rising equity markets tend to have lower volatility levels than falling equity markets. In addition, correlation levels across individual stocks have been well below their 10-year average throughout 2017. Low correlation is evidence of a diversification effect that lowers realized volatility for the market as a whole. In other words, in 2017 the market has behaved like a 'market of stocks' rather than a 'stock market' with individual companies taking their own 'random walk' rather than the market acting as a single entity, with its constituent parts responding the same way to changes in economic and financial variables. Correlation was particularly low in October and November when the VIX® was setting new all-time lows.

Longer-term forces like post-crisis monetary and regulatory policies have also made a significant contribution to the low volatility environment of recent years. With the exception of an extreme, but brief, volatility spike in August of 2015, volatility levels have been persistently subdued since mid-2012, when the Federal Reserve (the Fed) announced plans for the third round of quantitative easing (QE). In Gateway's July 2017

Market Perspective, we noted that during each of the three rounds of QE, volatility levels declined as the Fed's balance sheet grew. Moreover, the few spikes in volatility that have occurred during the post-crisis equity market recovery occurred in between rounds of QE when asset purchases had paused. Over the same period, new banking and financial market regulations which focused on reducing systemic risk in capital markets were implemented. In this new regulatory regime, systemically important financial institutions have less leverage and higher capital quality. These changes, combined with a higher level of transparency, have also likely had a dampening effect on equity market volatility.

Though both realized and implied volatility have been low recently, implied volatility has not been underpriced, or 'cheap'. Figure 2 shows that implied volatility averages tend to exceed the realized volatility of the S&P 500® Index. This creates the opportunity for index option contract sellers to sell 'expensive' volatility. In 2017, the spread between implied and realized volatility has been wider than usual, creating opportunity for risk-adjusted return enhancement for investors who combine stock market exposure with index option writing. Low volatility levels have also provided option *buyers* a relatively low-cost source of upside leverage and downside protection in 2017. Option buyers this year have paid lower premiums than in higher volatility periods. But their index calls and index puts have delivered similar levels of upside participation and downside protection as more expensive contracts would have delivered in a higher volatility environment. In short, recent low volatility has not materially reduced the effectiveness of many types of index option strategies.

Volatility is a cyclical phenomenon and the current low phase of the cycle will come to an end at some point. A return to persistently elevated volatility may happen gradually as the forces keeping volatility low erode, or it could happen suddenly through an external shock to the system. As always, Gateway will avoid incorporating forecasts into its investment approach, nor will it attempt to anticipate how events will unfold. Gateway will maintain a vigilant watch on market conditions and apply judgement and experience in an effort to manage risk while seeking return for its clients.