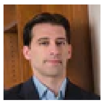
THIRD WAY

REPORT *Published May 22, 2013 • 4 minute read*

The VIX: Measuring Uncertainty in Financial Markets

Lauren Oppenheimer
Deputy Director of the Economic Program



David Hollingsworth
Policy Advisor, Capital Markets Initiative

Is it possible to measure uncertainty in financial markets? While it is impossible to predict the future, there is a market indicator used on Wall Street every day to measure uncertainty in the markets. It's called the Volatility Index, or VIX, and is known as the "fear gauge." In financial markets, there is no such thing as positive volatility. Uncertainty often makes it harder for businesses to raise capital and hedge risk. Since the VIX's creation in 1993, there's been a relationship between higher volatility and lower stock prices. This paper dissects the VIX and explains how policymakers can use this tool to better anticipate volatility in the market on a daily basis.

Fear Itself: The VIX and why it is a good measure of market sentiment

How do investors anticipate the direction of the economy? Investors on Wall Street are in constant communications with the people and institutions that move money around to get a sense of economic conditions on the ground. They continually speak to company management about plans for investments, hires, and sales. They are frequently in touch with banks about lending, credit availability, and consumer behavior. They talk to pension fund and endowment fund managers about their risk appetites and investment strategies. And they pore over data.

This serial gathering of information helps investors determine economic conditions; whether investors are optimistic or pessimistic going forward. That is, do businesses and investors believe that it is the right time to invest, hire, and borrow, or should they hoard cash, conserve resources, and wait for better times?

Options—financial instruments that offer the right to buy or sell an asset in the future at a specific price—are used by investors to hedge risk. The VIX, officially The Chicago Board Option Exchange Volatility Index, is calculated by using the price investors are willing to pay for options tied to the S&P 500—an index of 500 companies representing a wide range of industries in the U.S. economy. [1]

Therefore, the VIX can be used to deduce investor opinion about future market movement—specifically, the volatility of the S&P 500 over the next 30 days.

Here's how it works. If the VIX is 20, it means investors expect the S&P 500 to be 1.67% higher or lower over the next 30 days. [2] The index value is determined by annualizing the 30-day expected volatility (1.67 x 12 months = 20).

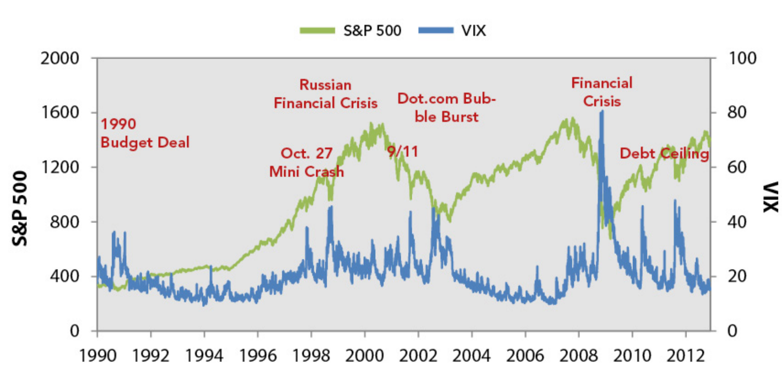
The VIX: Historical performance

Since its creation, the VIX has served as a reliable indicator of market volatility. A high VIX means expectations of a rollicking market; a low VIX means a steady and predictable market. From 1990 [*] to 2008, the average value has been 19. [3]

* Though the VIX began in 1993, market analysts were able to construct what the VIX would have been from 1990 based on options trading.

The graph below shows the historical relationship between higher volatility and lower stock prices.

A Look Back at the S&P 500 and the Volatility Index [4]



In addition, as you can see, the VIX has spiked during times of economic stress over the last 20 years. During the 2008 financial crisis, the VIX reached levels close to 80, the highest on record. The VIX came close to 50 during the dot.com bubble, 9/11, and our debt ceiling debate during the summer of 2011. [5]

Understanding the signals investors send allows policymakers to better interpret the market. The VIX is a powerful tool for policymakers because it provides crucial information about market uncertainty.

Conclusion

Every morning, policymakers fire up their computers and quickly scan the horizon for news and data that situates them for the day. What's on the floor? What are the polls saying? What has the White House announced? This information is second nature to policymakers, but Esperanto to nearly everyone else. The same is true in the world of finance. Leaders in finance pore over data to orient themselves for a day in the market—seeking to uncover short term opportunities and long term trends.

The VIX is an important gauge for financial markets. Investors use a variety of tools when assessing economic conditions, and don't rely on any single measure. However, by using this tool to monitor market uncertainty, policymakers can better anticipate short-term market volatility.

TOPICS

FINANCIAL SERVICES 70

END NOTES

1. John Nyaradi, "Fear Index: What Is The VIX and How Can You Trade Stock Market Volatility?" ETF Daily News, April 27, 2012. Accessed December 17, 2012. Available at: http://etfdailynews.com/2012/04/27/fear-index-what-is-the-vix-and-how-can-you-trade-stock-market-volatility-vxx-xiv-tvix-xvz-vxz/.

2. John Nyaradi, "Fear Index: What Is The VIX and How Can You Trade Stock Market Volatility?" ETF Daily News, April 27, 2012. Accessed December 17, 2012. Available at: http://etfdailynews.com/2012/04/27/fear-index-what-is-the-vix-and-how-can-you-trade-stock-market-volatility-vxx-xiv-tvix-xvz-vxz/.

3. Judy Martel, "Global Market Ups and Downs," Bankrate.com, March 16, 2011. Accessed December 17, 2012. Available at: http://www.bankrate.com/financing/wealth/global-market-ups-and-downs/.

4. The Chicago Board Options Exchange retroactively calculated the VIX dating back to 1990 using the current methodology. "VIX Historical Price Data: New Methodology: VIX data for 2004 to present (Updated Daily)," Chicago Board Options Exchange. Accessed December 17, 2012. Available at: http://www.cboe.com/micro/vix/historical.aspx. See also "S&P 500 Index: Historical Values," Google Finance. Accessed December 17, 2012. Available at: https://www.google.com/finance/historical?cid=626307&startdate=Jun 1, 2009&enddate=Sep 1, 2009&num=30&ei=O6GqUOCqEcy30gGBGA&start=30.

5. "VIX Historical Price Data: New Methodology: VIX data for 2004 to present (Updated Daily)," Chicago Board Options Exchange. Accessed December 17, 2012. Available at: http://www.cboe.com/micro/vix/historical.aspx.