

## February 2019 Newsletter

Dear Investor,

The Global Volatility Summit (“GVS”) brings together volatility and tail hedge managers, institutional investors, thought-provoking speakers, and other industry experts to discuss the volatility markets and the roles volatility strategies can play in institutional investment portfolios. The GVS aims to keep investors updated on the volatility markets throughout the year, and educated on innovations within the space.

OptionMetrics has provided the latest piece in the GVS newsletter series.

Cheers,  
Global Volatility Summit

## Event

The tenth annual Global Volatility Summit (“GVS”) is scheduled for Wednesday, March 13<sup>th</sup>, 2019 at Chelsea Piers in New York City. This year’s event will feature fresh panel topics, manager discussions, keynote speakers, and a new US Politics panel. Space is limited, so we encourage you to register as soon as possible.

### 2019 Manager Participants

36 South Capital Advisors  
Argentière Capital  
Artemis Capital Management  
BTG Pactual  
Capstone Investment Advisors  
Capula Investment Management  
Dominicé & Co  
GCI Asset Management  
Graticule Asset Management

III Capital Management  
Ionic Capital Management  
Lake Hill  
Man  
Parallax Investment Advisors  
Penso Advisors  
Pine River Capital Management  
TPRV Capital  
True Partner

### 2018 Event Recap

The 9th Annual Global Volatility Summit was held on March 14, 2018 at Chelsea Piers in New York City. 14 hedge fund managers were joined by senior professionals from hedge fund consultants, the institutional investor community, and leaders in the industry to discuss volatility, tail hedging, macro and quant strategies within the investment context. Three keynote speakers, Lance Armstrong, David Gallo, and Ryan Holiday temporarily drove the conversation away from the central content to speak to volatility across other contexts including athletic competition and underwater astonishments. The event hosted the first-ever GVS Think Tank Panel, which featured three industry experts across East Asia policy studies, macro quantitative and derivatives strategies, and US politics. Among these panelists included Ryan Hass, Marko Kolanovic, and Demetri Sevastopulo.



# Long Vol Losses: Where Do They Come From?

Garrett DeSimone, Ph.D.

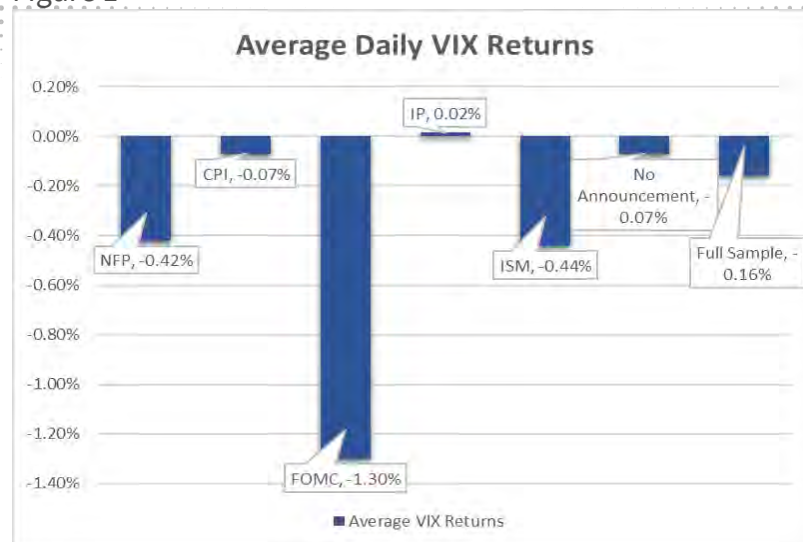
Head of Quantitative Research, OptionMetrics

# Long Vol Losses: Where Do They Come From?

It is well established that long volatility trades are losing positions. Risk-averse investors dislike increases in market volatility because it erodes their risk-return tradeoff, incentivizing them to pay a premium for securities that hedge against changes in volatility. However, the source of these losses is not evenly distributed across the calendar. An important notion is that a prime source of market volatility is news regarding macroeconomic fundamentals. If this information is systematically released on macro announcement days, it follows that the volatility premium should vary substantially surrounding scheduled news events.

I test this idea by comparing the performance of volatility sensitive assets on news days versus non-news days. The two popular trades I investigate are the SPX delta-neutral straddle and CBOE VIX futures. VIX futures are highly liquid and provide direct exposure to volatility. In Figure 1, the daily average returns of a long synthetic 30-day VIX future from Jan 2007 to June 2017 are analyzed. Positions are held for a single day, close-to-close. A 30-day synthetic future is formed by creating a weighted portfolio of two VIX front-month contracts.

Figure 1

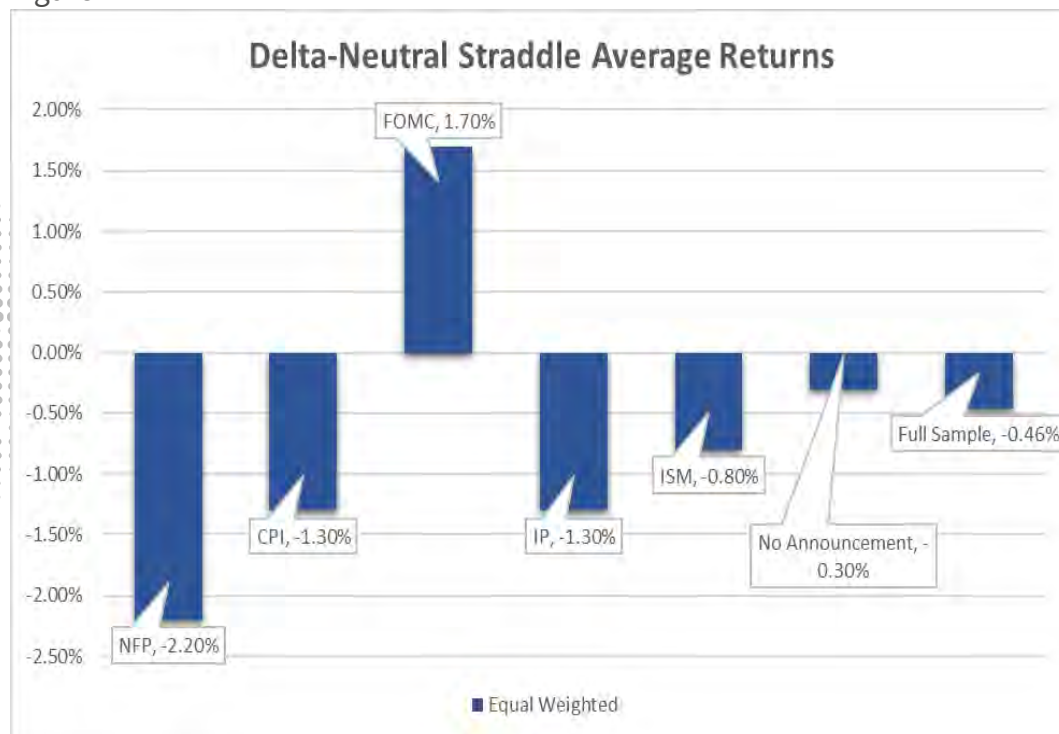


Source: Garrett DeSimone, OptionMetrics

The announcements selected for this study are Non-Farm Payroll (NFP), Consumer Price Index (CPI), Federal Open Market Committee (FOMC), Industrial Production (IP) and Industrial Manufacturing (ISM). These news releases are selected because they provide investors with valuable information regarding the state of the real economy. For several announcements, VIX futures display large average losses. During NFP and ISM days VIX futures perform particularly poorly, with returns of -0.42% and -0.44%, respectively. However, VIX futures experience their largest losses during FOMC announcements (-1.3%). The vastly different return patterns indicate it is substantially more expensive to hedge against volatility on news days.

In Figure 2, we explore the same concept using the delta-neutral straddle for a period between January 2001 and June 2017. The straddle is an options position formed by buying a call and put at the same strike and maturity which are at-the-money. Figure 2 displays the daily average holding returns to straddles.

Figure 2



Source: Garrett DeSimone, OptionMetrics

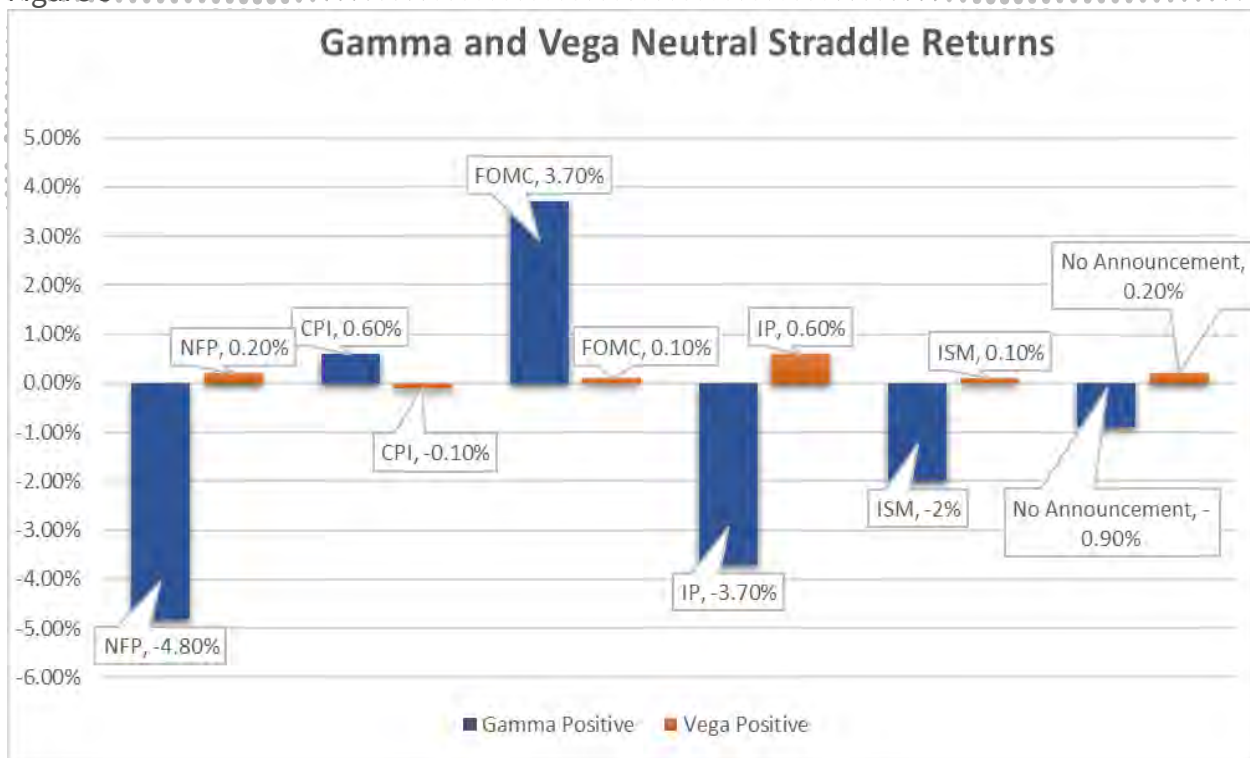
Our findings indicate that several news days generate highly negative holding period straddle returns. On days when the Consumer Price Index, Nonfarm Payroll, ISM Manufacturing, and Industrial Production are announced, average returns are significantly negative. However, an interesting finding is that returns for straddles are positive during FOMC announcement periods. On average, straddles held through the FOMC earn 1.7%, which contrasts to the negative return of VIX futures. How can two assets sensitive to volatility realize such opposing returns?

*“However, an interesting finding is that returns for straddles are positive during FOMC announcement periods. On average, straddles held through the FOMC earn 1.7%, which contrasts to the negative return of VIX futures.”*

The answer resides in differentiating the risks of a delta-neutral straddle, namely vega and gamma risk. Option vega is a measure of the impact of a change in volatility of the underlying security on the option price. Since straddles have high sensitivities to market variance on average, they deliver low expected returns. Straddle holders are also exposed to jump risk. If the underlying asset experiences a sharp move in price, the straddle will be exposed to directional movements of the underlying asset. Option gamma is the rate of change of the portfolio’s delta with respect to the price of the underlying asset.

In order to test these risks, we form two more complex straddles. Creating the vega sensitive option portfolio involves purchasing one distant maturity straddle and selling multiple short-term straddles. To form a gamma sensitive option portfolio, one short maturity straddle is purchased, and multiple longer-term straddles are sold. Figure 3 displays the returns of each type of straddle.

Figure 3:



Source: Garrett DeSimone, OptionMetrics

When days are separated based on announcement, it is apparent that the gamma portfolio has much lower returns on most news days. Vega straddles only have small positive returns, which demonstrates this is not the primary risk for options on news days. In other words, the options market is more concerned with macro news triggering sharp increases in underlying asset prices compared to increases in broader volatility.

However, the outperformance of the gamma portfolio on FOMC days remains puzzling. A plausible explanation for the FOMC result focuses on the forward-looking nature of the committee's disclosure, which makes these announcements inherently different than others. FOMC meetings are scheduled periods that allow the committee to intervene during times of high uncertainty by providing policy protection to falling prices. This resolution leads to decreases volatility, which explains the losses to VIX futures. The market usually experiences a sharp rebound as a result of this intervention, causing strong performance to gamma straddles.

This research makes a clear argument that the losses to long vol positions are highly systematic and predictable. The important subtle implication is it is generally cheap to insure against exogenous changes to volatility with straddles and futures on days when there is no news. They are a result of days that have scheduled news events which relay important information about macro fundamentals. An investor should also be cautious about short positions in near maturity straddles prior to FOMC news, as the committee's actions are not fully priced in by options markets.

*Garrett DeSimone, PhD, is Head of Quantitative Research at [OptionMetrics](#), an options database and analytics provider for institutional and retail investors and academic researchers that has covered every U.S. strike and expiration option on over 3,000 underlying stocks and indices since 1996. It also offers historical options databases for Canada, Europe, Asia, and global indices. DeSimone can be reached at [gdesimone@optionmetrics.com](mailto:gdesimone@optionmetrics.com)*

**See the full paper on "The Timing of Variance Risk Premia Around Macroeconomic News Events" [here](#).**