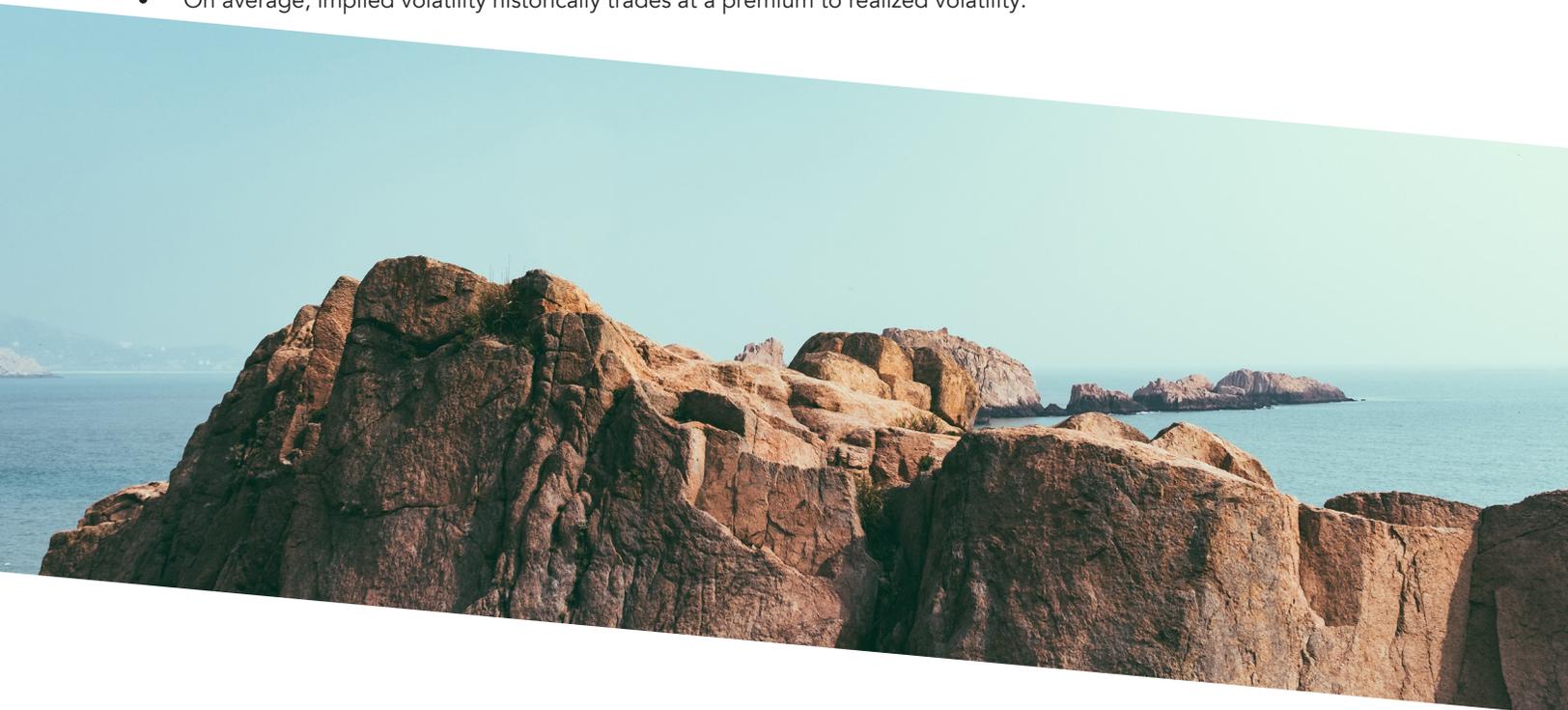


VOLATILITY AS AN ASSET CLASS

Why Selling Volatility Should Matter to Investors

- Volatility is now a measurable asset class that should be considered when constructing a long-term equity investment strategy.
- Volatility describes the speed of change in stock price movements.
- Volatility matters because it provides a way to receive returns from an asset class that is not solely reliant on interest rate policy, dividends, or necessarily price appreciation.
- On average, implied volatility historically trades at a premium to realized volatility.



Volatility has existed since the advent of free markets. However, it was difficult to measure and track due to technological shortcomings. This changed when the Chicago Board Options Exchange® (CBOE®) created the VIX (the CBOE Volatility Index) in 1993. While there were predecessor measures of volatility, the VIX has supplanted all other competitors as the proxy for the S&P 500's market volatility. Since its creation, the VIX has undergone numerous methodology updates to keep up with market realities. Volatility is now a measurable asset class that should be considered when constructing a long-term equity investment strategy.

Realized & Implied Volatility

In order to facilitate a discussion on volatility, it is important to define it in the simplest possible terms. Volatility describes the speed of change in stock price movements. The VIX measures the rate of change of S&P 500 stocks on a 30 day forward basis. The VIX is also described as the fear index or uncertainty present within the market. While the merits of calling the VIX “the fear index” are debatable, its place as a proxy for volatility is well established. Furthermore, volatility impacts the price received for “selling” volatility in the form of options. The greater the implied volatility, the higher the price received for selling options.

The Difference between Realized and Implied Volatility

There are multiple ways to measure volatility. Volatility can be expressed as a measure of the past change in stock prices. This is called realized or historical volatility. Another way to express volatility is as a function of future price movements. This measure is called implied volatility, because it is a number or value derived from a mathematical formula based upon the bid and ask of future options contracts. Volatility can be measured over many different intervals, but the symmetrical way to measure realized volatility is on a 30 day historical basis since the VIX measures 30 days forward. Implied volatility is the expected future rate of change of stock prices. The VIX provides the benchmark measure for implied or expected volatility.

A Common Misconception about Volatility

A significant misconception about the VIX is that it has predictive power over where stocks will trade in the future. For instance, technical analysts will find some correlation, whether statistically significant or not, and make a prediction about the future. There is no academically significant research that suggests the VIX can predict the future of the market. Rather, the VIX can help explain what has occurred within the market when used with other analytical tools and research.

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Why Does Volatility Matter?

Volatility matters because it provides a way to receive returns from an asset class that is not solely reliant on interest rate policy, dividends, or necessarily price appreciation. Essentially, a seller of volatility can gain an alternative source of income. All investors experience volatility. The essential concern is whether or not the investor is being paid for experiencing volatility. While there are many ways to sell volatility, we will focus exclusively on one of the more conservative and practical strategies: covered calls. A covered call involves buying a stock and simultaneously selling a call option, or the right to buy that stock, to another person. Thus, you sell away some of the stock's upside potential in exchange for cash on the date of the transaction.

Besides the fact volatility is experienced by all long-only equity portfolios, there is another reason to sell volatility: implied volatility historically trades at a premium to realized volatility on average. Over time, option sellers receive prices higher than they theoretically should receive from the buyers of options. This is a well-documented and widely observed phenomenon that produces a myriad of explanations as to why it occurs. However, a strategy that sells volatility, like a covered call strategy, can be likened to an insurer who receives premiums in exchange for selling insurance. In a covered call example, the seller of an option gives away a certain level of upside in exchange for a premium. The buyer of the option can be hedging against a certain event or betting that a stock will rise, while paying significantly less than the cost of buying the underlying equity. Thus, the buyer of an option is hedging fear or making a leveraged bet to make large multiples of money. They are likely less price sensitive when buying the option than the seller who is sacrificing potential upside. Thus, the prices of options realized are higher than the theoretical value due in part to the price sensitivity of the seller. Below is a graph that shows the S&P 500's historical monthly volatility, the VIX offset by one month, and the spread between the two.

Spread between Historical and Implied Volatility



From 1990 through 2015, there are 300 monthly observations of the spread between historical volatility and implied volatility. The spread was positive 87.67% of the time and negative for the rest. This means that the price received was greater than the price that should have been received when all else is equal and volatility is the only consideration.

The Impact of Selling Volatility on a Portfolio

The result of selling volatility, in the form of covered calls, is a lower standard deviation when compared against the underlying asset index or benchmark. Given the spread between realized and implied volatility, selling volatility should provide some positive risk-adjusted returns so long as the underlying assets perform in the same manner as the index. However, there are some unique risks that this type of conservative equity strategy experiences due to the derivatives. First, there is still underlying asset risk even though upside has been sold. Thus the investor still undertakes the risk of a stock price falling to zero. There is also something known as the “price-gap risk.” This risk explains how the seller of an option takes a risk that a stock does not rise in price in an orderly fashion, but rather spikes on a positive event.

On the other hand, selling volatility generates cash flow for portfolios. It also reduces the standard deviation of the portfolio. Thus, its performance varies less than the underlying assets over time both upwards and downwards. This provides a long equity alternative for investors who seek cash flow and want less overall risk than a long-only portfolio.

Composite Risk vs. Return (Since Inception 10-01-05)



Takeaways

Selling volatility changes the risk profile of a portfolio and provides cash flow not solely dependent on factors such as interest rate policy, dividend yield, or price appreciation. In volatile market environments, such as a bear market, premiums received by sellers of volatility rise with spikes in the VIX. During times of uncertainty, the benefits of selling volatility are that the strategy provides an alternative source of return other than price appreciation or dividends. In essence, volatility can become an asset class that provides the portfolio with a more diverse return profile in exchange for giving up upside for a specified time period. Contact a Crossmark representative to discuss how volatility plays within your portfolio.

About Crossmark's 30 Year History

Crossmark, previously Capstone Asset Management Company, is an independent investment advisor headquartered in Houston, Texas. Founded in 1987, Crossmark is in its 30th year of providing portfolio solutions for financial advisors and institutional investors with values-based, SRI and ESG values and factor-based strategies. Additionally, Crossmark is the exclusive manager of the Crossmark Steward Funds, which is a fund family that applies an overarching values-based screening methodology to its suite of equity and fixed income funds, including its award-winning Global Equity Income Fund- named Lipper's "Best Global Equity Income Fund" for the last three consecutive years. Crossmark manages approximately \$5 billion in assets with clients nationwide.

This brief statement does not disclose all of the risks and other significant aspects of trading options. In light of the risks, you should undertake such transactions only if you understand the nature of the contracts (and contractual relationships) into which you are entering and the extent of your exposure risk. Trading in options is not suitable for many members of the public. You should carefully consider whether trading is appropriate for you in light of your experience, objectives, financial resources and other relevant circumstances.

Transactions in options carry a high degree of risk. Purchasers and sellers of options should familiarize themselves with the type of option (i.e. put or call) which they contemplate trading and the associated risks. You should calculate the extent to which the value of the options must increase for your position to become profitable, taking into account the premium and all transactions costs.

The purchaser of options may offset or exercise the options or allow the options to expire. The exercise of an option results either in a cash settlement or in the purchaser acquiring or delivering the underlying interest. If the option is on a future, the purchaser will acquire a futures position with associated liabilities for margin. If the purchased options expire worthless, you will suffer a total loss of your investment which will consist of the option premium plus transaction costs. If you are contemplating purchasing deep-out-of-the-money options, you should be aware that the chance of such options becoming profitable ordinarily is remote.

Selling ("writing" or "granting") an option generally entails considerably greater risk than purchasing options. Although the premium received by the sellers is fixed, the seller may sustain a loss well in excess of that amount. The seller will be liable for additional margin to maintain the position if the market moves unfavorably. The seller will also be exposed to the risk of the purchaser exercising the option and the seller will be obligated to either settle the option in cash or to acquire or deliver the underlying interest. If the option is on a future, the seller will acquire a position in a future with associated liabilities for margin. If the option is "covered" by the seller holding a corresponding position in the underlying interest or a future or another option, the risk may be reduced. If the option is not covered, the risk of loss can be unlimited.

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The U.S. Lipper Fund Awards recognized The Fund on March 31, 2015, March 22, 2016 and March 23, 2017 for delivering consistently strong risk-adjusted performance, relative to its peers, for the 5-year period. Chosen out of 66 others in 2015, 80 others in 2016, and 22 others in 2017, the Fund achieved the highest Lipper Leader for Consistent Return (Effective Return Net of Expenses) value over an individual time period in its classification.

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