

Recognizing Volatility as a Discrete and Uncorrelated Asset Class

Todd Hawthorne, Lead Portfolio Manager of Boston Partners' Redwood Strategy, highlights how investors can capture volatility-derived alpha through an alternative strategy that pairs the construct of equity buy/writes with fundamental, bottom-up analysis.

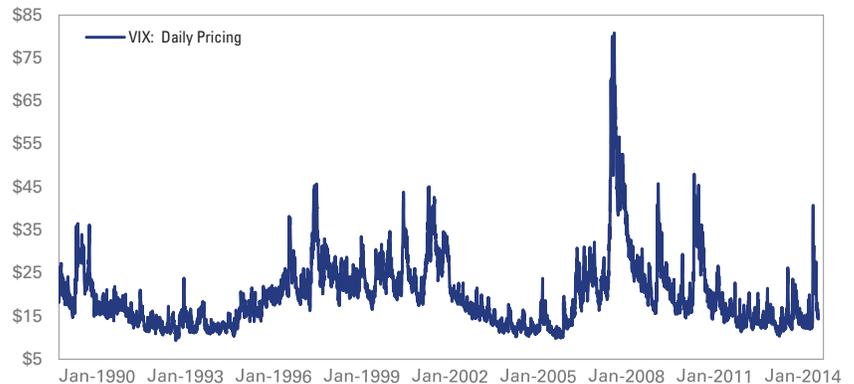
Executive Summary

As seasoned options traders well know, volatility has proven itself throughout history to be one of the most mean-reverting measure in finance. And as volatility can wreak havoc on asset allocations, portfolio managers – even in sanguine conditions – often struggle to find the elusive combination of performance and stability. This mandate only becomes more acute as the equity markets assume a more-skittish and less-predictable trajectory. While asset managers have historically struggled to minimize the impact of volatility on their portfolios and long-term investments, today, they have at their disposal liquid alternative strategies that can benefit from the growing perception of risk in the market and the unpredictable swings in equity prices that tend to follow. These volatility strategies, when viewed as their own discrete asset class, are designed with the goal of delivering returns that are in line with historical assumptions for equities while maintaining a far narrower range of performance (i.e., a substantially higher Sharpe ratio), as well as downside protection that can limit potential losses. In a market in which yield has become difficult to find, the construct of equity buy/writes, coupled with bottom-up fundamental analysis, creates a synthetic yield instrument that delivers uncorrelated returns and manages to capitalize on volatility rather than being subjected to it.

Tracking Volatility

Volatility can be tracked a number of ways. The CBOE VIX Volatility Index, perhaps one of the most well-known gauge, provides a reading of expected volatility through averaging out the weighted prices of put- and call-options on the S&P 500 Index, and imputing an implied one month at-the-money volatility. During normal periods, the VIX will reside at a range of between 22 and 24, with a band whose values extend beyond 30 during periods of higher volatility to 20 and below in a more composed and confident market [See Figure 1].

Figure 1: CBOE Volatility Index® (VIX®)



Source: Bloomberg. Data from January 1, 1990 to October 2015. It is not possible to invest directly in an index. Past performance is not an indication of future results. Please refer to the back page of this booklet for other important information.

Volatility of Volatility, meanwhile, or kurtosis, provides a gauge to track the tails of the distribution. The “vol of vol” essentially measures the likelihood for outsized returns or losses, or the probability for extreme price movements. [See Figure 2]. And then there is skew, which measures the variance of implied volatility between out-of-the-money and in-the-money options, and reflects whether investors are favoring calls or puts at a given point in time [See Figure 3]. Regardless of the measure, the trend lines have been tracking an elevated level of volatility since the third quarter of 2015.

Taken together, these volatility measures effectively track the vacillating market sentiment. Complacency invokes a more sanguine market, reflected by investors’ reluctance to pay for downside protection, while volatility becomes evident in the inverse scenario, as out-of-the-money puts become more expensive as the perception of risk is priced in. For the past two-plus years, an accommodative Fed policy has largely served to mute volatility, as equity investors operated on the belief that the Fed would step in to counter any sharp declines. However, this “Fed Put,” as it has often been referred, has since receded as the market transitioned to account for a potential rising-rate environment.

To be sure, value investors, particularly those with proficiencies around fundamental analysis, will always welcome the re-introduction of volatility and the pricing inefficiencies that surface. Asset managers, however, may be seeking a very specific rate of return during a given period of time, and for many, the financial crisis and the wild swings in the market that ensued still remain fresh in their memories. As such, few are keen to revisit the whipsaw action that characterized trading during that period. Moreover, for investors managing defined benefit plans, insurance assets or endowments, even moderate market volatility can be problematic when it comes to building portfolios or setting asset allocations against benefit distributions, predicted liabilities or forecasted payout rates.

Harvesting Volatility

When retail investors discuss “low volatility” strategies, they are traditionally referring to an approach that combines diversification with systematic and regular rebalancing or investment strategies that are more concentrated around defensive sectors, be it utilities, healthcare or consumer staples. These more common approaches are about circumventing volatility versus actually capitalizing on it with true downside protection and improved return profiles.

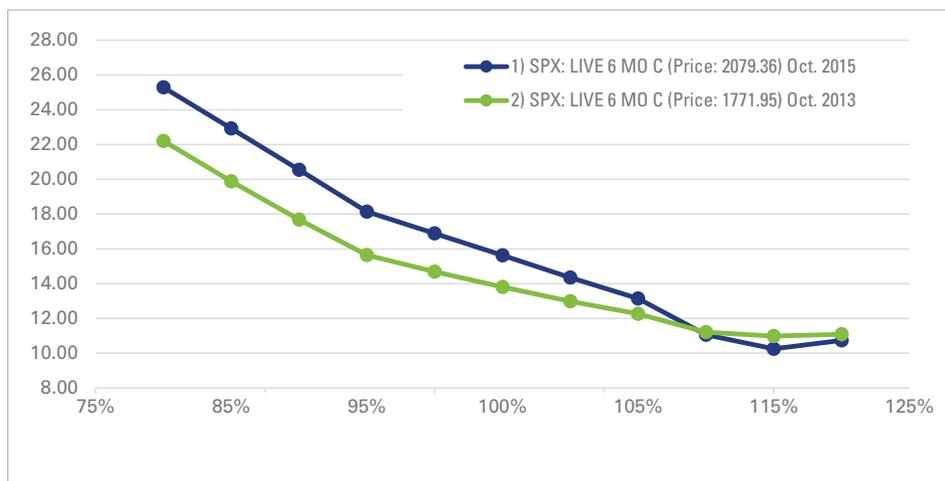
Other strategies, however, that combine both equities and equity call options – or buy/write securities – can more effectively “harvest” returns out of swings in sentiment, while providing more predictable and often better performance even as volatility ramps up. The concept of creating synthetic yield isn’t necessarily new, as portfolio managers will often invest in buy/writes on a basket of stocks tied to an index to generate returns that are often in line with the market over time, but at slightly reduced volatility and with the added benefit of options income.

Figure 2: Volatility of Volatility

Performance Statistics and Risk Management		
	Annualized Return	Standard Deviation
CBOE Volatility Index®	8.60%	10.37%
S&P 500 Index	9.41%	14.63%

Source: Zephyr. Data from January 1, 1990 to October 2015. It is not possible to invest directly in an index. Past performance is not an indication of future results. Please refer to the back page of this booklet for other important information.

Figure 3: Skew



Source: Bloomberg.
 An Explanation: Skew measures the difference between the implied volatility of at-the-money pricing and out-of-the-money pricing. As you move down in strike price, the volatility goes up. This is because fear is more “valuable” than greed, i.e., puts that are out-of-the-money are more expensive on a relative basis than at-the-money puts. Figure 3 shows that six-month skew has picked up since 2013 by about 11%. Interestingly, out-of-the-money skew is less expensive, meaning the expectations for upside are more muted. Please refer to the back page of this booklet for other important information.

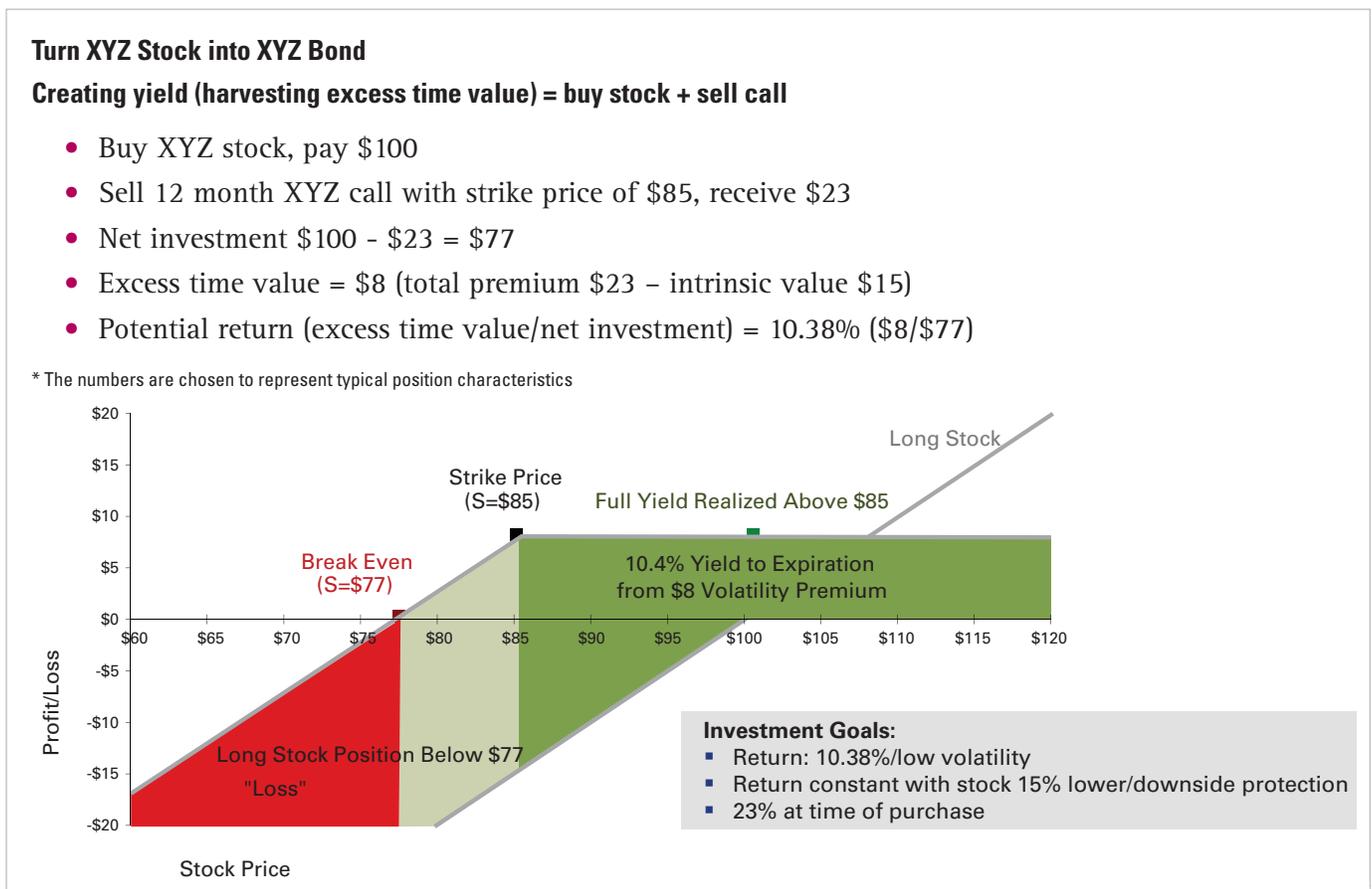
...volatility is one of the most mean-reverting measure in finance...

The return potential available to this concept becomes amplified when it's applied to individual stocks and combined with fundamental, bottom-up research. When it is done right, incorporating rigorous and faithful valuations of a stock's intrinsic value, this strategy can allow investors to isolate volatility as an alpha generator, which is where the concept of volatility as its own distinct and uncorrelated asset class really begins to take shape.

The strategy begins with an estimate of a stock's intrinsic value, which is the price at which potential bad news is fully baked into the valuation. Calls are then sold against the stock at this "in the money" level (referring to a strike price that is lower than the current stock price). The resulting structure provides downside protection, a greatly reduced volatility of returns and an implied yield that is typically commensurate with equities over time.

Consider, for example, a hypothetical scenario in which a stock is purchased at a \$100 valuation, and 12-month call is written with a strike price of \$85 that pays back \$23 over the life of the options contract. That investment, assuming shares don't fall below \$85, would produce a potential return of 10.38% if held to expiration [See Figure 4]. Shares can fall to as low as \$77 before the investment realizes any losses.

Figure 4: Volatility-Derived Alpha: Hypothetical Example



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As this example demonstrates, the benefit of the volatility asset class is three pronged. First, just to reiterate, volatility is one of the most mean-reverting measure in finance, so when it can be isolated and harvested as part of portfolio construction, it can deliver a consistent return stream that is unmatched by other asset categories. Second, beyond its consistency, the category traditionally performs better than both equities and fixed income during periods marked by market turmoil, and the uncorrelated nature of the asset class provides obvious diversification benefits. Finally, as the perception of risk is factored into the market, volatility strategies will benefit from higher call prices, which translates into higher expected returns and even more downside protection.

Given the accommodative Fed policy that came out of the financial crisis and the unprecedented bull market that followed, most institutional investors have not had to reconsider how their allocations are best optimized for the traditional vacillations in stock prices that occur from year to year. But there are a number of ways to introduce the volatility asset class into a portfolio, and even small allocations can go a long way toward smoothing out both short- and long-term performance.

The discussed strategy, which creates synthetic bonds through combining equities and deep-in-the-money calls, has been shown to produce returns in line with equities, but at half of the volatility, which essentially doubles the return on the investment per unit of risk assumed. Even in small doses, this can have a very positive impact on risk reduction across an entire portfolio. Investors are left with an asset class that delivers low volatility, downside protection, and both a short- and long-term return profile that is in line with historic assumptions for equities.

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* As of September 30, 2015.

About the Author



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Mr. Hawthorne is the lead portfolio manager and creator of Boston Partners' Redwood Strategy. He joined the firm from Allianz Global Investors, where he was a senior portfolio manager and director. Previously he worked at RS Investments as the head of equity derivative strategy; he also provided stock analytics for the mid- and small-cap growth team, focusing on the alternative energy and energy sectors. Prior to that, Todd was a vice president of equity derivatives trading at Deutsche Bank. He has a B.A. degree from The Colorado College and an M.B.A. degree from the Anderson School at the University of California, Los Angeles. Todd has eighteen years of investment-industry experience, including extensive experience in both equity derivatives and in fundamental equity analysis.

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