What's Up With Volatility

By Vineer Bhansali | March 18th, 2025

The current selloff in the S&P 500 started around February 19, 2025 from a level of approximately 6150, which was a record high. In a matter of less than a month the S&P 500 dropped to its level as of this writing of 5625, i.e. an 8.5% decline. The bottom of the recent decline was exactly 10% from the peak. Over the same period the VIX rose from just under 15 to a current value of 22, and a recent peak of 28. In other words, volatility has behaved very "nicely", and there have been no panics (yet). For all practical purposes the "volatility beta", i.e. a rough measure of how the VIX responds to the selloff in the equity markets has been very close to its rule of thumb of around 1, i.e. for each 1% decline in the S&P 500, the VIX rises about 1%.

Is this volatility move normal? Are there ways to implement tail hedging where for the same premium there are structures that respond more instantaneously and don't depend on implied volatility as much as a put option. Of course, the most direct hedge against a selloff would be to short the market via futures contracts. But futures contracts can result in unlimited losses, so in our view should not be considered a tail hedge in the same way options should be. The whole idea of tail hedge is asymmetry – to gain disproportionately from large moves for a small, known-in -advance premium. Futures contracts do not let us create this type of asymmetry.

Let us start with a put option. On February 19, the price of a 3-month 10% out of the money put was 37 S&P points, or 0.60%, corresponding to an implied volatility (for that moneyness) of 20%. Now, about 30 days later this same put is worth 128 points or about 2.29% of the current value of the S&P 500 index. Hence, the put roughly tripled its value in point terms.

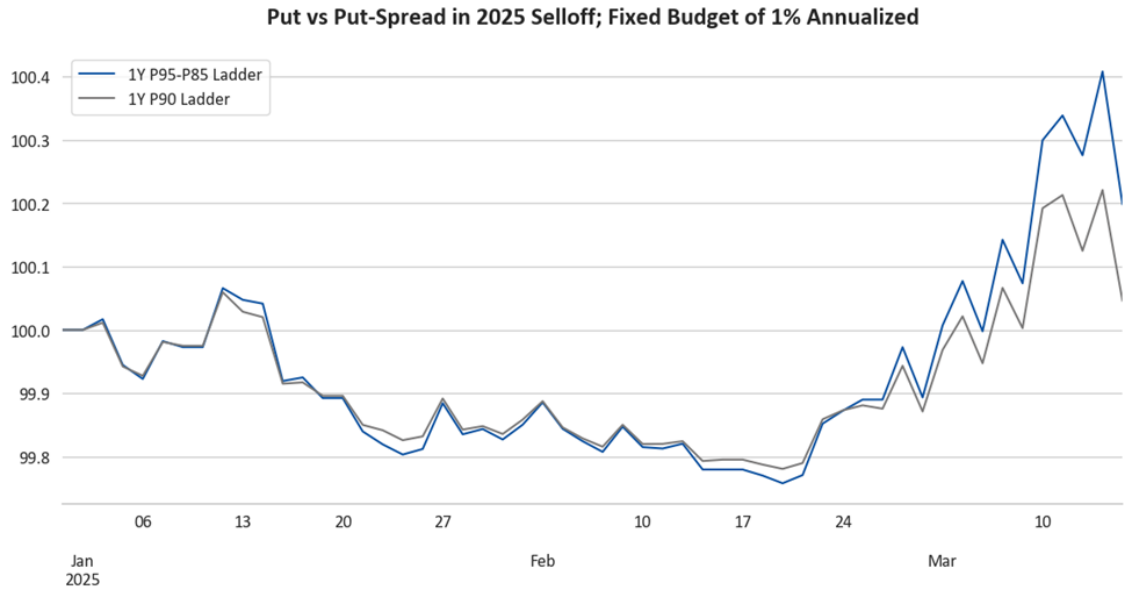
Compare this with a put-spread implemented at the same time. On Feb. 19, buying a 5% OTM put and selling a 15% OTM put would have cost 44 S&P points or 0.72%. The same spread would be priced at approx. 195 S&P points after the decline of 8.5% in the index. So the put-spread has fared much better than the vanilla put over the current decline. The starting delta of the 10% out of the money put above was about -0.15, while the starting delta of the put-

spread was just a little bit higher.

So the fact that the put-spread has done better than the put is primarily because implied volatility has not risen much, and time-decay has resulted in a little bit more drag for the put than the put-spread. As a general rule, puts tend to do better than put-spreads when implied volatility rises sharply, and put-spreads tend to do better when the market declines sharply but implied volatility does not rise sharply. We can thus paint scenarios in which the puts do much better than put spreads, i.e. one where there is a rapid selloff and volatility spikes at the same time, for instance during the XIV meltdown in 2018, and more recently during the August 6th Nikkei crash.

So far we have just used a three month put for illustration. What if we did the same exercise for a 12-month quarterly ladder of puts vs. put-spreads, where the tail hedge consists of quarterly expiration puts, four in total, for the next 12 months, or its alternative, a ladder of put-spreads?

In exhibit 1 we show that indeed this year the put-spread ladder with strike of 90 (10% out of the money) has kept up with the put for rallies in the markets, but outperformed the put ladder for declines. Again, this is because volatility has been quite subdued even as the market has sold off in a relatively straight line.



The recent experience leads to the natural question: "What's Up With Volatility?" which is a rhetorical way of asking – why has volatility not gone up much even though the US equity market is in a free-fall with very little solace from the Fed or the White House (so far). Here are some possible explanations that are being used to explain the lack of a volatility spike:

1. The market is still romancing a Fed and/or a White House pivot soon, so there is no reason for investors to buy volatility and protection. This view is accompanied by the corollary that given the apparent experience and expertise of the decision makers in the administration, the current bleeding of the market is pre-planned and well-orchestrated.
2. There has been a re-allocation of equity dollars from the US equity market to the international markets, especially Germany, and from large cap US momentum stocks to other sectors. Thus, there is no reason to panic, since the rotation is natural and should have been expected as a natural reversion to the mean.
3. The current selloff does not indicate an impending recession, since the US economy is still strong. Thus, there is no reason for volatility to rise, especially in the long end of the volatility curve. A corollary to this view is that credit spreads have not widened much at all so far, and they are close to their all-time tight levels.
4. There is a large amount of systematic volatility selling from structured products and yield-enhancement strategies. Add to this the systematic monetization of tail hedges and we can see why volatility is not being allowed to rise (yet).
5. This current selloff has been quite liquid as compared to the recent illiquid crashes (such as the August 5th 2024 Japan carry trade unwind), which means that there has been enough time and liquidity for investors to rebalance their books during US market hours. Thus, there has been no reason to have to buy options since liquid markets allow for dynamic risk management.

We believe that all of these reasons have some validity. But the big question is not what happened in the rear-view mirror, but whether these explanations will continue to hold value over the next few weeks and months. Recalling the experience of 2008, the first wave of credit spread widening was accompanied by many investors doubling down, i.e. betting on mean-reversion of spreads and volatility. As many of them found out, doubling down on losing positions may work most of the time, but when it does not, the consequences can be brutal. Like the proverbial rubber band stretched too far, sometimes the band can snap.

From our experience, it takes very little for investor psychology to turn to panic and illiquidity. While the current low volatility might mean that there is little trouble ahead, alternatively it could also mean that the market is collectively wrong about the possibilities.

"In other words, the low volatility environment could actually be a great opportunity to add to downside protection in a world of continued uncertainty and changing policy goalposts."

Important Disclosures

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