Monetizing Volatility Spikes

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This week has been one for the record books…if you are a volatility trading nerd like the three of us, it was also a very active, and sleepless week. As we tell our clients, this is what you pay us for – we stay awake so you can sleep.

One feature of volatility spikes that we have observed is they are getting more intense but at the same time shorter in duration. Observing the spikes and then decay in volatility since the dot-com bust, we can paint the following picture: during the dot-com bust vol spikes would take years to abate; then during the 2008-2010 crisis the spikes would take quarters to abate; during the next decade which would culminate with the “Volmageddon” episode of 2018, it seemed that volatility spikes abated over months; during the COVID period, spikes would abate over a few weeks; finally the vol spike of the past week abated within a day, maybe less if you include after-hours trading. We understand that these are gross generalizations, but being in the trenches we cannot help but notice that the reaction time needed is getting shorter and shorter. Blame it on algos, high-speed traders, networks, social media, or any other such sources that are based on speed, but the fact of the matter is that if you are managing tail risk portfolios or long volatility portfolios in general, the amount of time we have to capture the increase in value of the options is being compressed.

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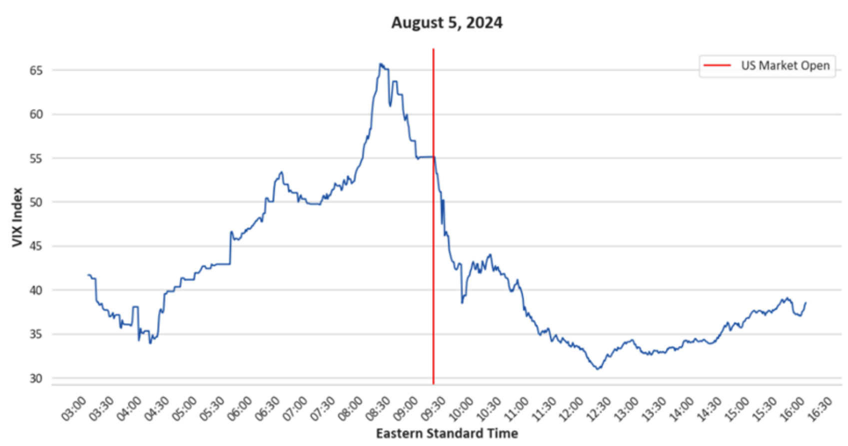
This “monetization” (“profit taking”), which is an active decision for managing tail hedging portfolios, is something that we have studied and published research on (see here). Our key findings were that (1) some rules for monetization are better than none, (2) technology and monitoring have to be matched to the speed at which events now occur, (3) the markets become extremely illiquid during such events, so proper valuation and pricing becomes critical.

The current week was a good example of how these features played out. Starting on Sunday night, as the Nikkei index plummeted close to 12%, our signals indicated that on many of our long options positions, monetization triggers would be reached by the time the markets opened in the US. Quick coordination ensured that the team was fully aware a little after midnight PST that we would have some opportunities for monetization and relative value execution across the volatility term structure and strikes. As a matter of habit, one of us (VB) has been conditioned to check market levels once or twice most nights, and as a 30 year long habit, it is hard to break. We stay awake so our clients can sleep!

Clearly the fact that the bid-ask spreads became wider validated the third point above – markets become very illiquid and quoted prices "on-the-screen" become extremely wide when markets are under stress. The futures markets, which are used for "delta-hedging", lose much of their depth. Indeed, by our estimation they were trading about as thinly as during the middle of the COVID crisis. Memories of the 1987 crash went through the minds of those who were around in the markets then. For deeply out of the money options, a market crisis almost always results in this type of behavior, which today is amplified due to algorithmic market makers who refuse to provide liquidity immediately when markets are under stress. Thus, it is close to impossible for someone without access to real-time pricing models and real-time access to sources of liquidity to monetize the value of the options.



Source: Bloomberg, LongTail Alpha

The deep index options markets and ETF options markets don't start to trade until 6:30 AM PST/ 9:30 AM EST. But in the pre-market, the VIX index was indicating a spiked level of 65. By the time the market opened, this level would quickly recede to below 60, then below 50, then down to the 30s. In other words, if one did not monetize in the pre-market, it would have been impossible to capture the same value after the market opened.

The cost of missing this opportunity can be gigantic. In the past we have had conversations with some investors who have chosen to run large hedging programs themselves, a sort of "do-it-yourself" approach to hedging and monetization. This might be self-serving, but for many (not all, of course) investors we believe the missed opportunity cost can be many multiples of the savings by running hedging programs internally. The options markets are simply too dynamic and non-linear for most investors to monitor on a part-time basis.

Fortunately, our large institutional tail hedging investors had made the wise decision to increase their hedge size significantly in the previous weeks. Their decision to increase hedge size when the cost of hedging was at multi-decadal lows was intelligent and fortuitous. Many of these hedges were now at or above their monetization levels, and following points number 1 and 2 above, we had already decided on our monetization levels and coded them in our trading algorithms. This tactical plan, which was already in place, made it easier to focus on execution in the heat of the battle, so to speak. Of course, monetization comes with its tradeoffs, i.e. if one monetizes too much too early then there is little or no hedge in place for any subsequent selloffs in the markets. If one does not monetize at all, then the increased time value of the hedge, which is a function of both the "delta" (market moves), and "vega" (volatility sensitivity), can quickly decay. This fact highlights that for extremely non-linear positions such as options, a real-time monitoring and management of both valuation and the underlying greeks is important. The objective is to maximize the total return from the hedges, which requires measuring and monitoring the various non-linear, and highly inter-related drivers of the options positions. We have written on this topic in a publication downloadable from our website (here).

In the pre-market, our team was able to submit offers directly into the electronic market and monetize a good portion of the hedges according to that plan. While this forum is not an appropriate one to discuss position level details, the week's events confirmed that having a plan, and being prepared to execute on the plan was critical. We believe that the markets will continue to exhibit frequent bouts of sharp draw-ups and drawdowns, and volatility spikes will occur without warning. It is important in this context to realize that markets today are global, and trading is happening around the clock. In such an environment, management of hedge portfolios has to be just as active and responsive as the underlying markets, and professional access to trading venues and speedy execution algorithms is key. Indeed, it is possible to buy and hold tail hedging portfolios passively; but we believe option trading has matured enough that, principles of active management that investors use in other, linear asset classes are now more applicable than ever to tail risk management.

As we have recently communicated, we might be undergoing a significant regime shift in the markets. A relatively small increase in short terms rates in Japan last week resulted in massive swings in markets this week, and illustrated how precarious levered positions are at the moment. Combining the size of the positions with the small liquidity door through which the elephant may have squeeze through under stress, we can see why bouts of extreme volatility are here to stay. We might get lucky yet again and central banks could curtail such volatility by taking pre-emptive action. But if volatility spikes are here to stay, then active monetization will matter, and there is no substitute for being prepared to act speedily when the opportunity arises.

Important Disclosures

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