

## Financial Insurance is Not Like Hurricane Insurance

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The periodic review of past market stress events is an important risk management discipline. Armed with an understanding of the fabric of these periods, an investor can overlay the facts and circumstances of them on today's risk climate. Market fragility rises and falls through different cycles. It also moves around, traversing geographies and asset classes, as risk taking and leverage are sponsored through the unique incentive structures on offer as a result of the monetary policy and regulatory regime. In this note, amidst improbably low realized volatility, we share thoughts on today's market risks. We emphasize that successful trades like selling volatility attract capital and, if sufficiently well sponsored, may ultimately amplify market instability should a risk-off event materialize.

In evaluating the potential for a protracted risk off episode and incorporating past experience, we should always ask "what's the same and what's different?" Ten years ago, for example, as Spring '07 came into view, the very early stages of a financial tidal wave were already in motion. The risk climate then was remarkably different from that of today. Many of the characteristics of the pre crisis period that ultimately facilitated the destabilization are not now present to nearly the same degree. Wall Street banks are no longer running at 35x leverage and relying so much on overnight repo financing. Today, OTC derivatives, once transacted, are increasingly cleared, reducing the daisy chain of risk that resulted from the non transparent, bilateral trades that were huge a decade earlier.

Today's risks are different, but to be clear, are real. First, there is China. The growth of global credit outstanding post the GFC has been greatly underpinned by a China debt binge that is excessive by most every metric. The BIS calculates that the credit-to-gross domestic product "gap" in China was north of 30% as of early 2016, suggesting that readings above 10 percent signal elevated risks of crisis. While Current CNH Implied volatility readings show calm, we should keep the violent US risk off in August 2015 a fresh memory of market fragility.

How else are today's risks different? In place of a massive sell-side is a massive buy-side. From 2005 to 2015, the AUM of the asset management sector grew by 40%, reaching \$77 trillion by the end of 2015. It can be argued that risks posed by the buy-side, acting as agent for its end investors, are fundamentally different than those of a sell-side firm warehousing substantial exposures on top of a leveraged balance sheet. Still, the sheer size of assets at a handful of large buy-side firms is a consideration, especially given the resulting concentration of ownership that results. In its Global Financial Stability Report ([LINK](#)), the IMF shows that there has been increasing ownership concentration among bonds held by mutual funds. Given what we know about scant bond market liquidity and that fixed income paper has been consumed at incredibly low nominal yields, this is worthy of some deep thought. We've asked this question before, "who will buy when enough people want to sell?"

The present day market risk profile also reflects an astounding move towards passive investing. GS reports that nearly 40% of US equity asset AUM is passive, double the amount a decade earlier. Vanguard is taking in more than \$1 billion per day in new assets. Its size and its indexation mandate means that it must own 337mln shares and \$47.5 bln worth of shares in Apple. There are no iPhone channel checks or management team evaluation done here, just an agnostic approach that requires the index and its parts to be owned through thick and thin. Passive, capitalization based management is vulnerable to buying yesterday's winners. Assets that are bought and sold based not on valuation but merely on flows are acutely beholden to the directionality of such flows.

Today's passive environment is about much more than Vanguard's old school indexation. 2017 brings an ever robotic approach to harvesting risk premia. This is being packaged and delivered in an increasingly consumable and low cost format. One component of the risk premia family is that of systematically harvesting volatility. The 2008 surge in the VIX notwithstanding, there are few back-tests that look as consistently appealing as being short implied volatility. The realized volatility shortfall in the SPX is well documented. Like Seinfeld's George Costanza, VXX holders would more profitability do "the opposite" and avoid losing 99% since inception by selling volatility.

Which brings us to the notion that capital flows to winning trades and leaves those that impose loss. In a low return world, the cost of hedging has proven especially challenging to absorb. Our regular dialogue with institutional investors leaves us with a palpable sense of the difficulty here. Option prices may be nominally inexpensive, but weighed against the non-realization of volatility, downside hedges have been jettisoned. Our mix of execution flow on the option side along with observations of prints in the listed market tell the same story: there's not a lot of long convexity in portfolios to serve as a buffer should the market run into some trouble.

In fact, at least in equities, quite the opposite increasingly seems likely: the profits generated by selling volatility have encouraged more investors to pursue them. These profits have resulted from a realized volatility shortfall that has been nothing short of dramatic. The ratio of 3 month ATM implied volatility to 3 month realized volatility recently reached 1.9, putting it in the 99<sup>th</sup> percentile of observations over the past 10 years. To gather some appreciation of the profit implications of this, look at the performance of the Nomura Equity Volatility Risk Premium Fund (NEVRIUS on Bloomberg). This short variance swap strategy is running a one year Sharpe Ratio north of 3.2 and thus far in 2017 is annualizing a 29% return with 3.5% realized volatility.

Investors have a consistent history of chasing returns and the breath-taking performance of being short volatility is unlikely to be different. It is certainly difficult to quantify, but the extent to which volatility has been so low recently argues for the potential that some factor is at work. The additional pension fund that, on the advice of its consultant, takes on a short volatility "alpha strategy" is adding to the incremental sale of optionality into the marketplace. All else equal, this serves to further depress option prices. It may also mute realized volatility as the collective hedging of long gamma positions creates selling into rising markets and buying into falling ones. A somewhat self reinforcing cycle of low volatility can result: the success of the trade attracts capital that further depresses volatility and leads to more profitability.

In discussing this dynamic with clients, I am reminded of a quote from LTCM partner Victor Haghani. In commenting on the demise of the portfolio, Haghani said,

*"the hurricane is not more or less likely to hit because more hurricane insurance has been written. In the financial markets this is not true. The more people write financial insurance, the more likely it is that a disaster will happen, because the people who know you have sold the insurance can make it happen. So you have to monitor what other people are doing."*

Hurricane insurance is not like financial insurance. Pinpointing the "positioning" of equity derivative markets – across listed and OTC options, VIX futures, variance swaps and structured products globally – is elusive. But it is difficult to avoid the conclusion that the success of these trades along with today's ease of implementation may be leading to over consumption. Coupled with the lack of defensive protection positioned in portfolios, the sponsorship of short volatility trades leaves the market particularly unprepared to absorb the next risk event.