



GLOBAL VOLATILITY SUMMIT 2014

July 2014 Newsletter

2014 Event Recap

The Fifth annual Global Volatility Summit ("GVS") took place on April 3rd in New York City. Ten volatility and tail hedge managers hosted an audience of over 370 people.

Keynote speakers.

Malcolm Gladwell, bestselling author and staff writer for *The New Yorker*, presented a keynote speech that was extremely thought provoking.

John Coates, Ph.D., Research Fellow at Cambridge University, gave an insightful talk on the effects of volatility on the body.

Managers. The following managers participated at the event.

BlueMountain Capital
Capstone Investment Advisors
Capula Investment Management
Fortress Investment Group
Forty4 Asset Management
Ionic Capital Management
JD Capital Management
Parallax Volatility Advisors
Pine River Capital Management
Saiers Capital

Questions?

Please contact

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2014 July research piece

The Global Volatility Summit is a dynamic community of managers, investors, and industry experts, with the focused goal of educating the investment community about volatility strategies and the roles they can play in institutional investment portfolios.

The 5th Annual Global Volatility Summit was a great success with an exciting line up of speakers, managers, and investor panelists. We also had an impressive turnout of institutional investors from across the globe representing some of the world's largest pensions, endowments, foundations, insurance companies and banks.

Pravit Chintawongvanich, Risk Strategist at Macro Risk Advisors, authored an enlightening paper that analyzes periods of low volatility over the last century. His piece addresses several questions regarding low volatility patterns over a longer period of time than conventional research. Notwithstanding the inherent danger of an extended period of low volatility, it also illustrates that low volatility phases can persist for long periods of time without ending in a 2008-like disaster.

Cheers,

Global Volatility Summit

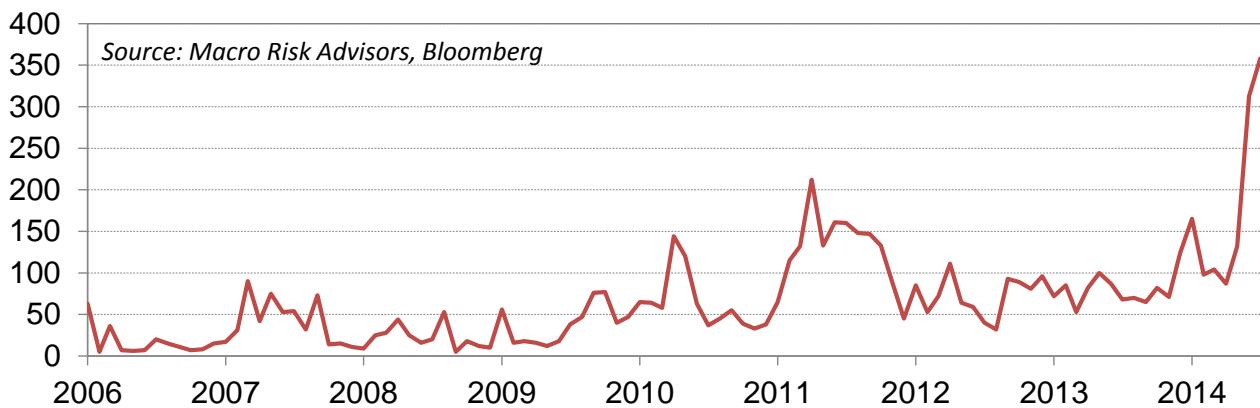
A Century of Low Volatility: The market's most forgettable moments since 1900

Pravit Chintawongvanich, Risk Strategist, Macro Risk Advisors

Introduction

While it is usually crises and turbulent markets that capture the attention of the investment community, today's exceedingly low readings of market volatility have sparked an active debate – even among Fed officials – on the causes and potential implications. In currencies, for example, euro 100-day realized volatility is the lowest in its 15 year history, at 4.3%. In equities, the S&P 500 has gone almost 3 months without a one day move greater than 1%. Below is a chart counting mentions of the phrase "low volatility" in Bloomberg articles, illustrating the recent upsurge in discussion. Bloomberg's Tom Keene referred to this phenomenon as "spikes in quiet".

Articles on Bloomberg mentioning "Low Volatility"
Monthly count, 2006-2014



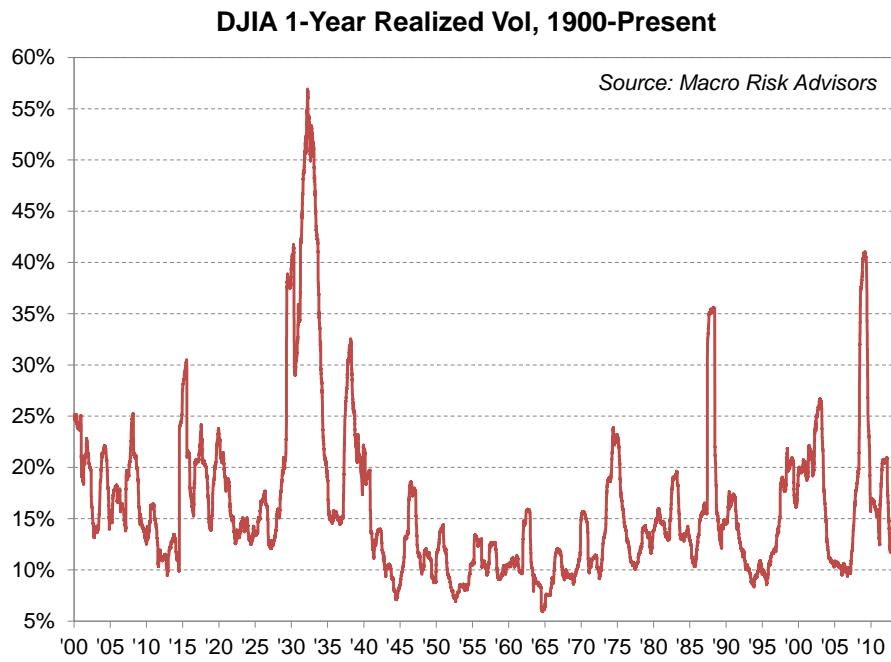
Are today's quiet markets the result of a more resilient financial system? Or, less optimistically, is volatility artificially suppressed by stimulative central bank policy? A common notion is that because volatility was similarly low in the years preceding 2008, today's low risk premium environment represents "the calm before the storm."

With the VIX dipping below 10 in 2007 only to skyrocket past 80 in 2008, there is certainly historical precedent to the belief that exceedingly quiet periods are followed by dramatic bouts of volatility. But has low volatility always been immediately followed by high volatility? In the next two sections we will look back beyond the single data point of 2007, analyzing low volatility periods over the past century. This longer view of market behavior illustrates that low volatility periods are common throughout history, can last for years, and occur in both bull and bear markets – but rarely end in a 2008-like disaster.

When drawing conclusions based on this longer data set, of course, we must do so with caution. The financial system has undergone vast change over the years as a result of credit and derivative product growth, greater interconnectedness of the financial counterparty system, and more central bank intervention. Still, the analysis of this longer time series provides fresh insights that we share below.

It's the End of the World, and Realized Volatility is 6%

While the last 20 years have seen many episodes of market turbulence, low volatility periods are certainly not unprecedented in history. Below is a chart of 1-year realized volatility in the Dow Jones Industrial Average back to 1900.



For the 34 year period between 1940 and 1974, one year volatility never rose higher than 20% – and reached a low of 6% in 1964. This is especially amazing considering that two of the greatest geopolitical crises of the modern era happened during this period – World War II and the Cuban Missile Crisis. Were our investing forbears exhibiting extreme complacency, despite the perpetual risk of nuclear war with the Soviet Union? Perhaps, but the DJIA rallied 31% in the next year following the Cuban Missile Crisis. The market learned to live with the risk.

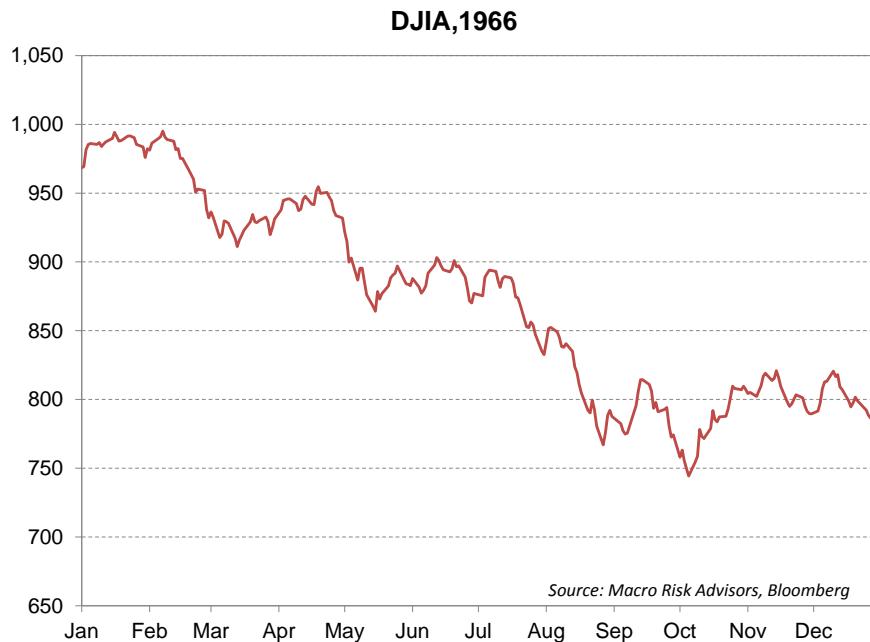
A Century of Low Volatility

Since 1900, there have been 20 periods where 60 day realized volatility never exceeded 15% for over 252 consecutive business days. The current period, starting on August 8th 2012, is only the 10th longest in history. The top 10 periods are shown in the table below. These periods, by definition, were followed by a period of higher volatility, but in the majority of cases there was no spectacular '08-like crash. In fact, after the longest low volatility period in history from 1992-1997, the DJIA subsequently drew down only 5% over the next 2 years and rallied 48.5%.

DJIA - Continuous Periods of 60-day realized below 15%									
Start	End	# Days	DJIA Return over period	Realized volatility over period	Volatility over next 1 year	DJIA Return, next 1 year	DJIA Drawdown, next 1 year	DJIA Return, next 2 years	DJIA Drawdown, next 2 years
2/12/1992	3/27/1997	1296	105.7%	10.4%	18.6%	30.5%	-5.2%	48.5%	-5.2%
2/26/1951	9/23/1955	1162	92.5%	9.0%	13.0%	0.6%	-10.0%	-3.9%	-10.0%
1/21/1958	5/25/1962	1107	37.0%	10.0%	15.1%	17.9%	-12.4%	34.0%	-12.4%
8/13/2003	8/8/2007	1004	47.3%	10.6%	19.5%	-16.3%	-19.7%	-31.4%	-52.1%
12/21/1962	10/11/1966	971	17.4%	8.8%	9.9%	22.1%	0.0%	25.2%	0.0%
7/10/1942	2/18/1946	907	85.6%	9.8%	18.1%	-9.8%	-19.1%	-16.7%	-19.1%
11/23/1966	5/14/1970	856	-14.1%	10.2%	13.8%	36.9%	-7.8%	36.3%	-7.8%
12/15/1975	10/31/1978	733	-5.3%	11.8%	13.1%	4.0%	-0.9%	17.7%	-4.2%
9/16/1970	5/23/1973	682	18.7%	10.8%	19.1%	-9.6%	-11.9%	-6.4%	-35.5%
8/8/2012	7/8/2014	480+	28.3%	10.3%	???	???	???	???	???

Source: Macro Risk Advisors

A Smooth Line Down



Stock selloffs and high volatility are inextricably linked in the minds of most investors, with long periods of low volatility rallies punctuated by sudden high volatility selloffs. The “skew”, or the premium of put implied volatility versus calls, reflects this collective market knowledge. But the market has not always behaved like this. From February 9th, 1966 to October 7th, 1966, the Dow sold off by 25%, yet realized volatility was only 12.3% over the period, and 20-day realized never exceeded 19%. The largest single day move was -2.1% - the only move greater than 2% for the entire period.

History tells us that stocks can indeed self-correct from overvalued levels without cataclysmic events that bring the entire financial system to its knees à la 2008. In fact, long periods of declining equity values without excessive volatility have occurred multiple times throughout history, as the following table shows.

DJIA Drawdowns without 20-day realized vol above 20%					
Start	End	DJIA Return	Length (Days)	Realized Vol over period	Max 20 Day Realized over period
2/9/1966	10/7/1966	-25.2%	240	12.3%	19.0%
3/16/1977	2/28/1978	-23.3%	349	11.5%	17.1%
4/27/1981	3/8/1982	-22.3%	315	12.7%	17.9%
5/14/1969	1/26/1970	-20.6%	257	12.1%	19.9%
12/31/1976	11/2/1977	-20.3%	306	10.5%	14.5%
12/13/1968	12/9/1969	-20.1%	361	11.4%	19.9%
1/5/1960	9/28/1960	-17.0%	267	11.1%	16.2%
6/19/1911	9/25/1911	-16.2%	98	12.8%	18.4%
11/29/1983	7/24/1984	-15.6%	238	13.7%	19.8%
2/6/1924	5/20/1924	-12.8%	104	14.3%	17.6%

Source: Macro Risk Advisors

Readers might point out that the majority of selloffs in the table above happened in the 1960-1980 period, an environment of increasing inflation and declining GDP. While this exact outcome is unlikely to happen in the near future, it is not impossible to imagine a scenario in which equities gradually reprice lower as central banks cautiously increase rates in the face of rising inflation.

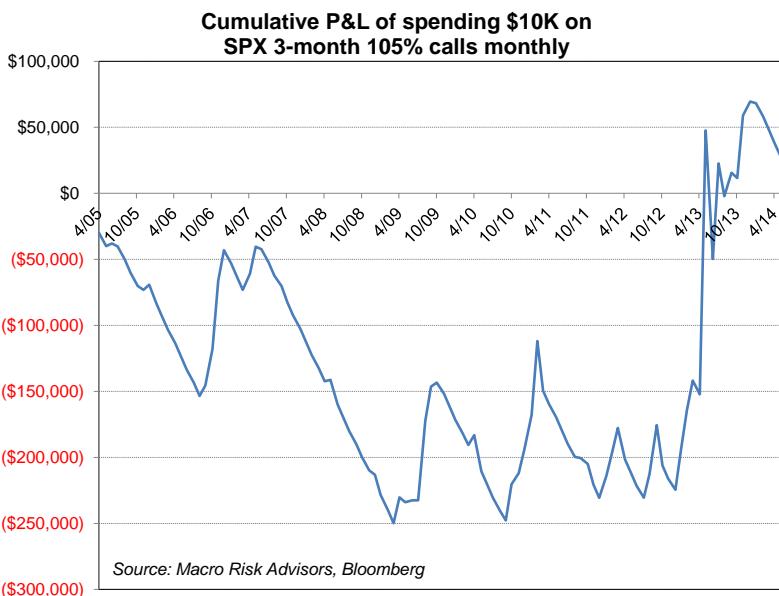
When a Black Swan isn't Black

A black swan is by definition an outcome that is completely outside of expectations. It is an “unknown unknown”, or a scenario that is widely dismissed as unlikely. Many would argue that a 2008 or 2011 style crash is no longer a black swan, because it is the exact event that the majority of investors hedge against.

Besides the “low volatility selloff” described above, another black swan that investors may be overlooking is the right tail – not necessarily a hyperinflation scenario, but the simple risk of underperformance. The DJIA’s 2013 return of 26.5% ranked in the 84th percentile of 1 year returns since 1897. While this is high, it is by no means unprecedented. Yet equity index calls going into 2013 were pricing in low breakevens – for example, on December 31st 2012, the 1-year at-the-money SPX call was pricing at only 6.4% of spot, in the 3rd percentile since 2006. With low volatility and low rates, 1-year at-the-money calls are now in the 0th percentile, pricing even cheaper than the lowest volatility periods of 2006.

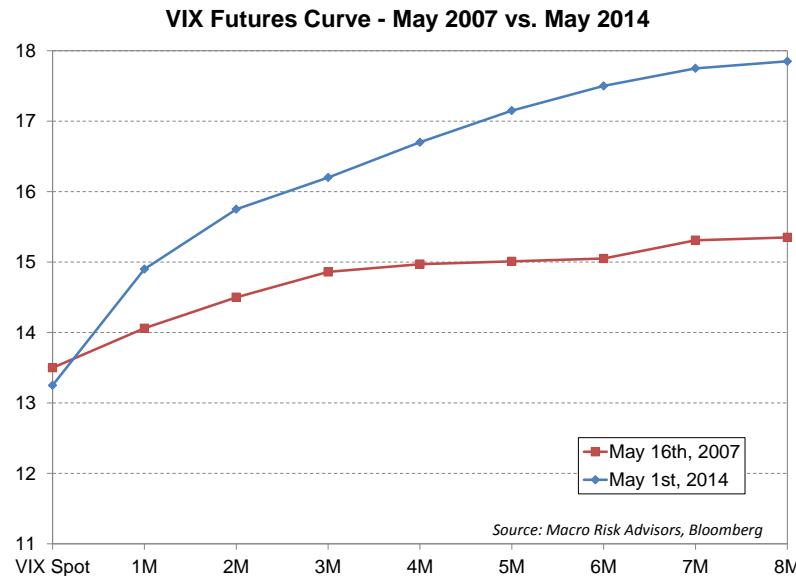


Below is the P&L of spending \$10K per month to buy SPX 3-month, 105% of spot calls. Although these calls mostly expire worthless, the chart does not look like the one-way bet of always buying puts. In the initial rally back from the 2009 trough, the strategy stops losing money as the profit from calls expiring in the money offsets the (very high) premium paid. In 2013, the calls offered a convex upside payout as premiums compressed and the market enjoyed a strong, linear rally.

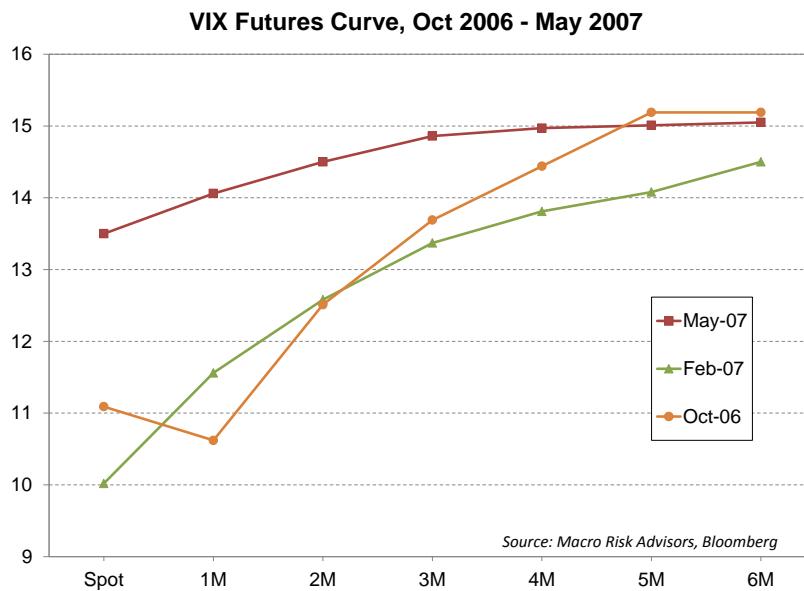


Some Perspective from 2007

Many commentators have compared the recent low realized volatility to “the calm before the storm” in 2007. But the 2008 crisis did not happen overnight. There were some early warning signs that reflected themselves in prices (and not just vague doomsday predictions) over a year in advance of the Lehman bankruptcy. Firstly we look at the VIX curve from May 16th, 2007. Compared to the May 1st, 2014 curve from our current low volatility regime, the first thing we notice is that it is even lower and flatter, with very little risk premium in the back month futures. If back month futures could be owned at basically no premium to the front month futures (and hence minimal decay), why weren’t investors snapping these up left and right?

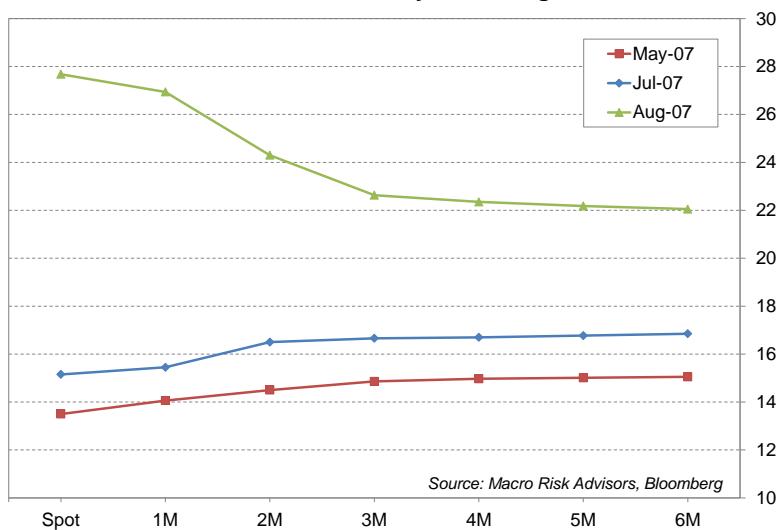
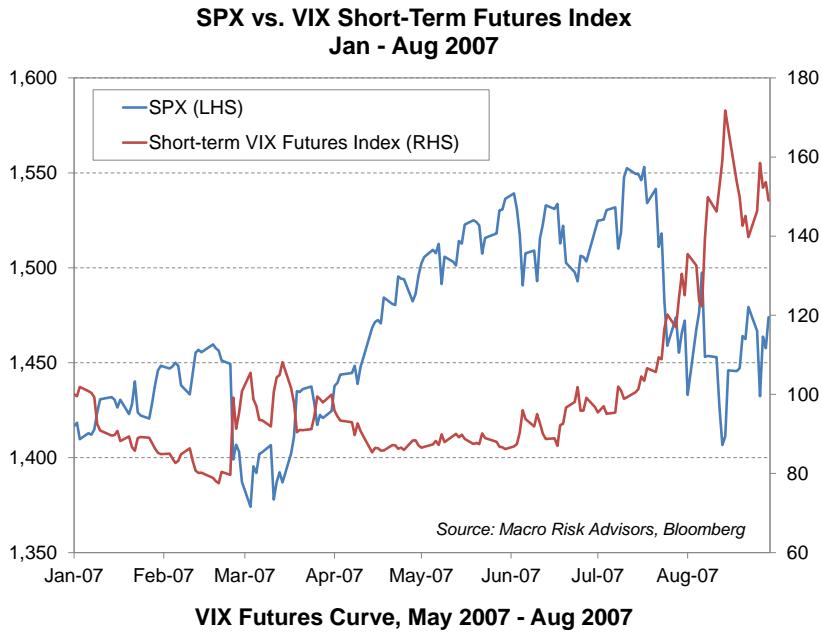


To answer this question we must look at the context leading up to 2007.



Immediately preceding this “low and flat” line, the front end of the curve was even lower, and the entire curve had remained in roughly the same position for months. For the months leading up to May 2007, buying VIX futures was a losing proposition as futures rolled down the curve and settled near 11. Thus the “low and flat” line of May ’07 actually reflected fear – a bid to front end volatility and the beginning of curve inversion. We also notice that the first part of the curve to react was the front end. Indeed, had the VXX existed back then, it did something that would be very unfamiliar to those nowadays who short VXX to earn the “rollover” premium. It went up steadily over a long period even as the SPX continued higher. Looking at the VIX futures

curve over three months from May to August 2007, the entire curve made a parallel shift up and eventually inverted.



Concluding Thoughts

The 2008 experience illustrates some of the dangers inherent in periods when volatility is exceedingly low for a long period of time. Still, low volatility is not in itself a sign of imminent crisis. To some, the argument that extreme volatility in the future will somehow “compensate” for today’s low volatility is appealing. Our analysis, however, shows that low volatility periods can go on for much longer than investors expect, and do not always end in disaster. If there is a “Minsky Moment” of stability bringing about instability in the works, then investors should be on the lookout for signs of excessive leverage, not just low volatility readings.

A low VIX should be viewed less from a complacency standpoint than in the context of supply and demand for options when realized volatility is low. The low levels of implied volatility simply reflect a fair premium over the low level of realized volatility that has persisted for the past few years (and can conceivably continue persisting). Options can provide insurance both against crashes and against underperformance. But binary outcomes are rare in markets – between the spectacular crashes and rallies that stay in our collective memory, long “forgettable” periods of low volatility are common. In addition to bracing for a sudden crash event, investors should be prepared for other outcomes, such as a secular “grind lower” bear market, or a continued multi-year rally.