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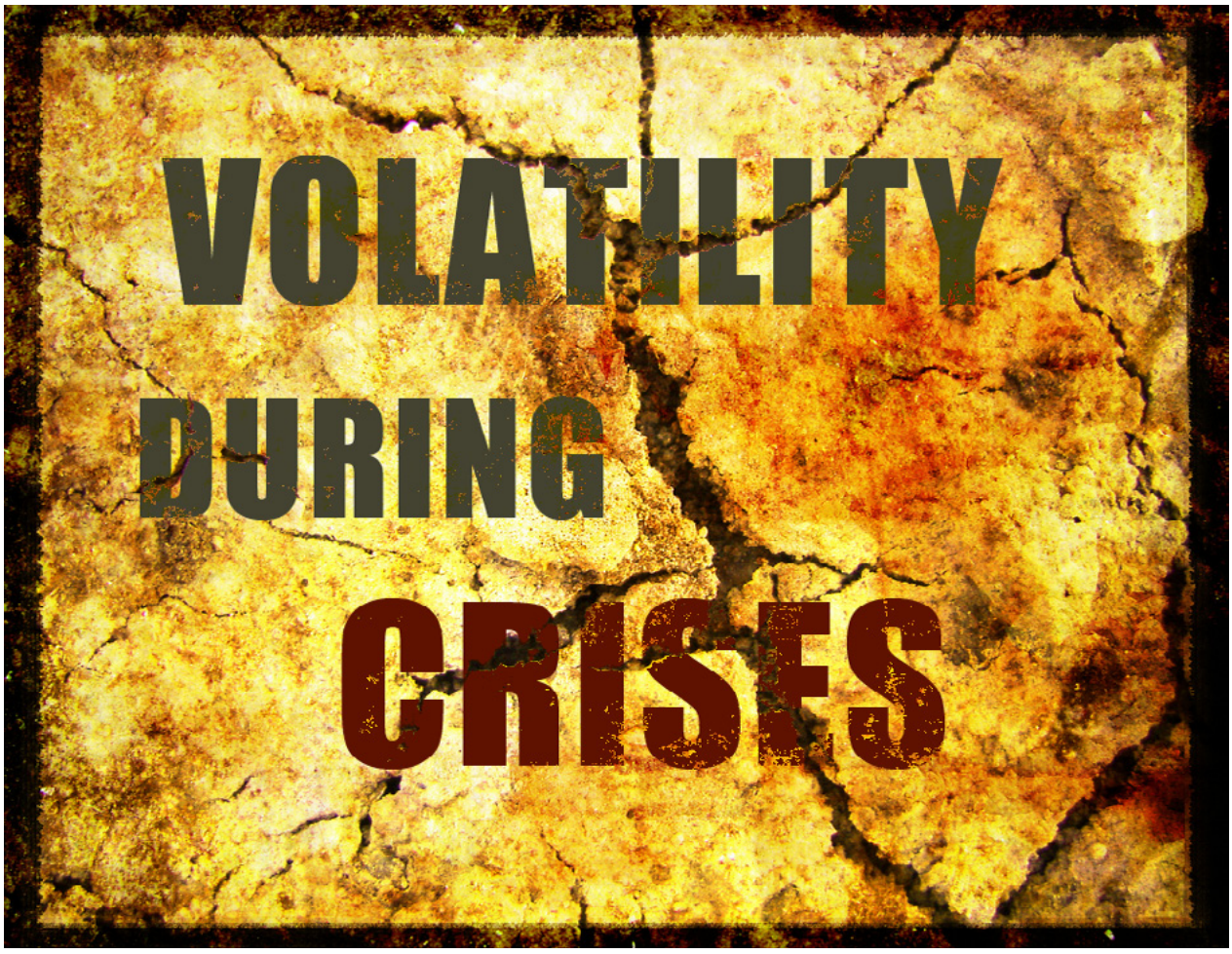

Volatility Cones Come in New Flavors

A Comparison of Fixed-Strike and Dynamic Buy-Write Strategies

AN INTERVIEW WITH Danny Riley

The Mental Side of Volatility

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Bill is a private investor whose research and trading interests focus on volatility, market sentiment, technical analysis, and ETFs. His work has been has been quoted in the Wall Street Journal, Financial Times, Barron's and other publications. A contributor to Barron's and Minyanville, Bill also authors the VIX and More blog and an investment newsletter from just north of San Francisco. He has been trading options since 1998.

His first book, *Trading with the VIX*, is scheduled to be published by John Wiley & Sons in 2011.

Prior to becoming a full-time investor, Bill was a business strategy consultant for two decades and advised clients across a broad range of industries on issues such as strategy formulation, strategy implementation, and metrics. When not trading or blogging, he can often be found running, hiking, and kayaking in Northern California.

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Jared is the principal of Condor Options. With over a decade of experience trading options, equities, and futures, he publishes the Condor Options newsletter (iron condors) and associated blog.

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Jared has master's degrees from Fordham University and the University of Edinburgh.

Mark Sebastian

Mark is a professional option trader and option mentor. He graduated from Villanova University in 2001 with a degree in finance. He was hired into an option trader training program by Group 1 Trading. He spent two years in New York trading options on the American Stock Exchange before moving back to Chicago to trade SPX and DJX options For the next five years, he traded a variety of option products successfully, both on and off the CBOE floor.

In December 2008 he started working as a mentor at Sheridan Option Mentoring. Currently, Mark writes a daily blog on all things option trading at Option911.com and works part time as risk manager for a hedge fund. In March 2010 he became Director of Education for a new education firm OptionPit.com.

Editor's Notes

Bill Luby

If you live for volatility, the August expiration cycle was manna from heaven, with a historic drop in stocks and a historic spike in the VIX. That is, of course, unless you were short volatility . . .

In this month's issue of Expiring Monthly, we are all over the subject of volatility, covering the waterfront from volatility indices to implied volatility, historical volatility, volatility exchange traded products and even some metrics for evaluating VIX spikes.

I drew the long straw this month and for my feature article, Volatility During Crises, I put volatility spikes into historical context, looking at how volatility acted during the Great Depression and through the years up to the present. I also examine in more detail the seven major volatility crises of the VIX era (1993–present) and compare and contrast these according to a variety of volatility metrics.

Mark Sebastian also reflects on the current volatility environment and draws upon lessons learned and potential advance warnings when the VIX failed to decline following the U.S. debt ceiling deal.

Guest author Robert Birnbaum tackles the subject of implied volatility and grapples with how to convert insights into low IV situations into profitable trades. His article ends with a handful of questions, which the editors address in the Ask the Xperts section.

Jared Woodard also analyzes the pros and cons of fixed-strike and dynamic buy-write strategies, drilling down on the performance differential in bull and bear markets.

Mark Sebastian is responsible for this month's feature interview with Danny Riley, who discusses how he uses instant messaging services to dissect order flow for customers and provide a platform for institutional traders to communicate within that framework.

Elsewhere, Don Schlesinger is the guest author of an article on volatility cones and how to use them to help evaluate how cheap or expensive the underlying security is.

In this month's Follow That Trade feature, Jared Woodard discusses a bear call spread on VXX and the related issue of the risk of getting short volatility before a volatility spike has peaked.

Finally, Tyler Craig ruminates on the whimsical nature of the talent fairy versus some of the more predictable outcomes associated with a 10,000 hour intensive training program.

As always, readers are encouraged to send questions and comments to editor@expiringmonthly.com.

Have a good expiration cycle,

Bill Luby
Contributing Editor

Are Straddles the Best Way to Trade Cheap Implied Volatility?

Robert Birnbaum, Guest Contributor

I've been trading options for about two years, and after a lot of research, I believe I have a method that identifies stocks for which implied volatility is unusually cheap. Some examples include VMW at 83 on 4/11/11, BBBY at 48 on 2/28/11, CF at 154 on 5/31/11, and GOOG at 543 on 4/29/11. My method works only on individual names, not indices or the VIX, and while the method is obviously important, it's not really the point of this discussion.

Identifying cheap IV seems to me to be a valuable insight, but the question is how to make money from this insight. Buying straddles seemed the obvious answer, but after 6 months of trading, I've found it's harder than it looks.

A Value Strategy for Options

I am confident that I have insight about when IV is cheap, but I have no comparable confidence that I can forecast direction or timing. So, in a way, this is a "value" strategy for options. Chances are good that if I buy IV cheaply enough, when stuff happens, which seems to be every few months, actual vol realized volatility over some period will exceed IV and/or IV will rise. (My research tends to confirm this, but I don't know over *which* period—next 30 days, next 90 days, next year—this will occur.)

Longer-Term Straddles

Given that I wanted to buy straddles, I had to decide on the term structure—that is, the expiration date of the straddle. After buying some front month straddles (because they cost less), and then watching the stock move *after* expiration, I settled on buying longer term straddles—buying Jan straddles, for example, in April. My rationale was:

a. Even though they cost considerably more, most of the cost is really time value. I felt I wouldn't lose too much in theta during the early months of owning the straddle.

b. Although IV could drop further, I'm already buying it low (in my opinion), so I'm willing to take that risk.

c. I would be buying 2 or more earnings cycles. I'm buying straddles for which the market obviously isn't expecting news prior, otherwise 30 day IV would be higher and would not show up on my screens.

d. But, if the move comes early, let's say in the first six weeks, the long term straddle isn't profitable (there isn't enough Gamma in the long dated options), so the straddle requires adjustments.

Case Study: The GOOG Straddle

April 29: I bought a GOOG 540 Jan 12 straddle for $94.22. GOOG was $543, 30 day IV was 20.1%, and IV of the Jan ATM options was 25%. It seemed worth it to pay the extra 5 pts in IV to get 2 earnings cycles—IV going into earnings for GOOG is typically above 40%. But, I could have bought a Jun 11 or a Sep 11 straddle instead.

The overall market started to dive in May, more so in June. By June 17, GOOG had dropped $55. 30-day IV had risen to 32%, and on the Jan 540s to 28%. Here's how my Jan 12 straddle, as well as the Jun 11 and Sep 11 straddles, performed.

Obviously, had I known a move of $55 would take place by Jun 17, I would have bought the Jun straddle. But I didn't, and I believe couldn't, know that. So given that I own a Jan straddle that has moved but not moved enough, my instinct was to make adjustments by some form of gamma scalping, so at least I take some money out of the trade. But traditional gamma scalping using stock seems risky—I have no insight as to whether the stock at a given point is more likely to reverse towards the original price than it is to keep trending. (At this writing on Jun 24, GOOG has fallen further,

so I'd be long maybe 40 shares per straddle, tying up maybe $20,000 and showing a loss). What I've actually done is rolled down puts, as the next lower strike becomes ITM. By Jun 17, I'd take out $14.11 this way, lowering my cost to $78.51 and eliminating some short deltas. However, this has left me with a pretty wide strangle (490/540), worth about $70 (a loss) and I'm still short delta. And if I roll down the call to get nearer the put, which would add delta, I'm putting money in, which will be a loser if the trend continues. In every case, it seems that I'm making some form of directional bet.

Another option would be at the point that I buy the straddle would be to spread them out—buy one 2 months out, one 4 months out, one 9 months out, etc. But I don't have a sense of the optimal term structure—equal number of straddles in each month (which would dollar weight the out months more heavily)? Equal dollars at risk in each month?

How would you approach the above investment problem?

1. Do you agree that identifying cheap IV is an insight that can be traded?
2. If so, is a straddle the right structure? What expiration cycle (or cycles) would you select, and why? What kind of adjustments would you make? Or, would you just wait for the straddle to be profitable and then close it?
3. By the way, I don't believe that selling the wings to form an Iron Butterfly is a solution—I don't think you get adequate compensation for the profit potential you give up. (You either have to go out so far that you don't get much from the sale, or you come in close and lose most of the upside from the straddle.) Do you agree?
4. If not a straddle, what other strategies for taking advantage of cheap IV might you suggest?
5. What would you do with my GOOG position today? EM

Ask the Xperts

The Expiring Monthly Editors

This month's Ask the Xperts is a series of responses to Guest Contributor Robert Birnbaum's article (see previous pages).

First, I want to thank Robert for such a thought-provoking submission.

If I claim that implied volatility on some stock is cheap based on current option prices, I am, by definition, claiming that some option or set of options expiring at a specific time is/are cheap. In other words, every judgment that IV is low, high, or fairly valued is always a judgment related to some particular time horizon.

I'm not certain, then, how to interpret these remarks: "I am confident that I have insight about when IV is cheap, but I have no comparable confidence that I can forecast direction or timing . . . I don't know over *which* period—next 30 days, next 90 days, next year—high realized volatility] will occur." If you think IV is cheap, that means you already have a time frame in place.

Assuming that even long-dated options look relatively cheap, the challenge, as Robert points out, is to maintain exposure without losing too much money in the interim due to a) time decay or b) path dependency. In my mind, path dependency is the crucial thing: no stock is going to completely flatline for weeks on end, so the real worry is that the stock will move too soon, or will make large swings but keep reverting to the mean. He mentions avoiding gamma scalping because of a lack of clarity about future prices, but I think the point of gamma scalping is to keep delta out of the equation altogether, not to engage in ersatz market-timing.

The thesis of this trade is that, no matter what else happens, the realized volatility over the next *n* days is likely to be higher than the volatility for that period currently implied by options. For that thesis, the ideal product would be a variance or volatility swap: you want to buy the implied vol and sell the realized vol. To replicate that kind of payout, you need to buy those cheap options—and a long straddle or strangle is suitable for that—and then sell the underlying in such a way that you replicate the cash flow of the straddle, but using the underlying. In other words, delta hedge your straddle consistently over time. Ultimately, if your volatility thesis is correct, you will have lost $y in your delta hedging trades, you will have made $x on your long straddle, and x > y.

—Jared

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Robert,

You seem to find yourself at that frustrating intersection of where good research and analysis meets questions of strategy and execution.

Specific to your questions:

1) Being able to identify cheap IV is a huge insight that not only should be traded, but should also be profitable. What I cannot determine from your description is whether your insight is that overall IV is cheap for a particular stock or whether you have identified specific strikes and expirations where IV is cheap. I am guessing it is the former.

2) Straddles should be an appropriate way to take advantage of the opportunities you identify. If you have already identified a specific strike and expiration, then your trades should almost suggest themselves. Instead, if you have a broad sense that GOOG IV is cheap, then you have a lot more work ahead of you. Specifically, I think you need to spend some time analyzing the GOOG skew and determining if your insights are correct because the entire skew is moving up or if GOOG IV is changing just because the underlying is moving up and down the

(relatively stable) skew curve. This first insight is more advantageous and easier to trade.

Trade adjustments are partly personal preference. I am not big on adjustments. I think the more important issue is your strategy for how to take some profits with your winners, yet still leave some opportunity to capitalize on large moves that go in your favor.

3) Regarding iron butterflies and positions that entail buying the wings, if you have identified a recurring edge, then these hedges will be a significant drag on your profitability (thought they will enhance your risk management.)

4) You might want to review some of your historical data and determine whether your straddle winners are the result of primarily bullish or bearish movement in the underlying. If indeed you are identifying cheap IV, then a large gain in IV is likely to come in conjunction will a decline in the underlying—and perhaps your insight is at least partly directional. If this is the case, purchases of puts or put spreads might be a more attractive alternative.

5) Given where the markets are right now and that you are sitting on a nice profit, I would probably take profits on 50–75% of the position and let the balance ride for a while as a cheap lottery ticket—at least until technology stocks give a better sense that they have formed a bottom.

Thanks for an excellent guest article and some thought-provoking questions.

Good trading,
—Bill

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Robert,

I think you might have been missing one part of the equation when you were looking at low volatility. Because it's not just about whether implied volatility is low, but *where* implied volatility is low. While the Jan case study is somewhat frustrating, I would be interested to see what you were looking at when you decided IV was low. One thing to remember, when IV is 'low' there is a high chance of IV contango within the product. That could make your January straddle, less 'cheap' than you think it is. The longer the time to expiration, the greater this affect is likely to be. My guess is that is what snagged the straddle, not IV being wrong, but the trade placement. I would check exactly *what* vols you are analyzing.

—Mark

A Comparison of Fixed-Strike and Dynamic Buy-Write Strategies

Jared Woodard

Buy-write strategies are among the simplest to learn and implement, but they consistently offer better risk-adjusted returns than their underlying benchmarks. For example, the PowerShares S&P 500 Buy-Write Index (PBP) is down about 12% since its 2008 inception—virtually identical to S&P 500 returns, with dividends reinvested, over the same period. But the buy-write fund has been less volatile to the tune of 600 basis points, with a maximum drawdown over the period of 43%—much better than the S&P 500's 53% decline.

Most buy-write strategies pursue a "fixed strike" approach, meaning that they regularly sell a call option or a series of call options some fixed percentage out of the money (OTM), e.g. selling the call every month with a strike price that is 4% out of the money (the first call with moneyness of 1.04). The fixed strike approach is therefore agnostic about market expectations of future returns or future volatility. Alternatively, Hill et al. propose a "dynamic" approach that regularly sells calls with some specified probability of exercise, e.g. selling the call every month with a market-implied probability of exercise of 20%.

In a forthcoming paper in the Journal of Futures Markets, Che and Fung expand on the Hill article by comparing the performance of conventional buy-write strategies to a dynamic approach, using data from the options on Hang Seng Index futures. For the fixed-strike approach, they test strategies selling calls ranging from the at the money (ATM) strike to the strike that is 6% OTM.

For the dynamic approach, they test strategies selling calls with implied exercise probabilities ranging from 49% (roughly, the ATM strike) to 17%. Because the implied exercise probability is sensitive to changes in market expectations, the moneyness of the calls being sold will rise and fall with implied volatility. Fig. 2, taken from the paper, illustrates the empirical relationship between volatility and the moneyness of options at specific levels of exercise probability. Note that during the global financial crisis in 2008, the 17% exercise probability strategy was selling calls fully 20% out of the money; the same strategy was selling calls just 2% OTM during the calmest period of 2005.

The biggest problem with conventional buy-write strategies is that they can severely underperform their benchmarks during very strong bull markets. Intuitively, the dynamic approach can be expected to only exacerbate this problem in some environments, since low implied volatility tends to be associated with bullish markets, meaning that the dynamic approach would have us sell nearer to the money options precisely when the odds are greater of positive stock

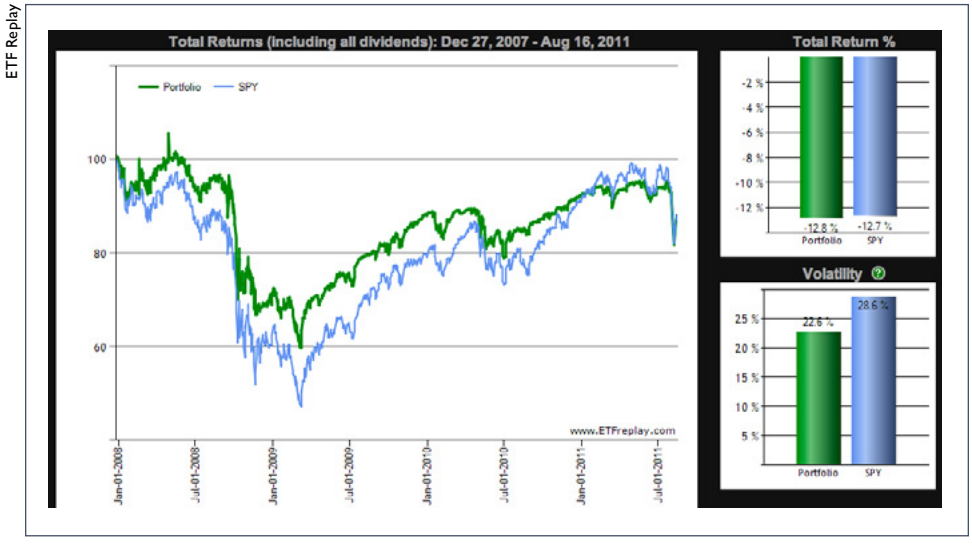


FIGURE 1 *Comparison of PBP and SPY Returns, 2008–2011*

Che and Fung 2011

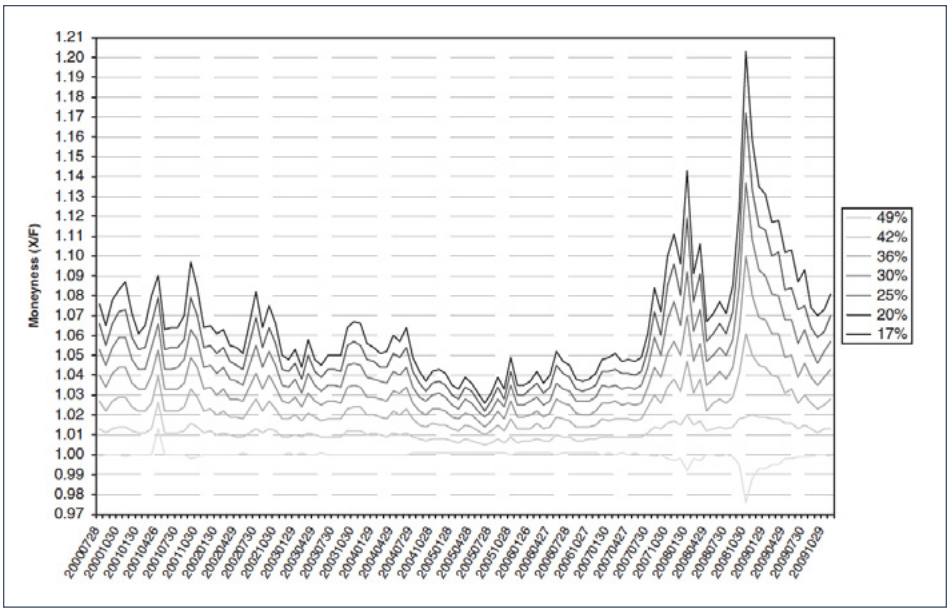


FIGURE 2 *Moneyness of the Dynamic Buy-Write Portfolios, 2000–2009*

returns. One area where the dynamic approach would be expected to outperform a fixed-strike approach is after a severe market decline, when high implied volatility persists even as sharp rallies become more likely.

The performance of the two approaches is shown in Tables 1 & 2, using selected statistics from the paper. The dynamic approach offered worse returns and risk-adjusted returns at low exercise probabilities, but bested the fixed-strike approach at higher probabilities. In plain terms, the best returns available for buy-write investors were achieved by selling ATM calls nearly all of the time, but switching to 1% or even 2% in the money calls during periods of market stress.

Average monthly returns below 1% with Sharpe ratios under 0.20 are nothing to get particularly excited about, but the authors note that these returns were low partly due to the poor overall performance of the Hang Seng Index during the period studies. Buy-write strategies still have a very substantial bullish bias, after all. They add that average monthly returns for the strategies as applied to the S&P 500 and Russell 2000 were 1% and 0.81%, respectively.

What about the matter of performance under different market environments? As expected, the fixed strike approach achieved better returns in moderately rising markets, and it also performed better than the dynamic approach in sharply falling markets, since the

(continued on page 27)

Che and Fung 2011

Monthly Performance of Fixed-Strike Portfolios				
	% OTM			
	ATM	1	3	5
Return	0.67	0.73	0.83	0.85
Standard dev.	4.05	4.35	4.94	5.43
Sharpe	0.165	0.168	0.168	0.157
Sortino	0.209	0.214	0.222	0.213

Monthly Performance of Dynamic Portfolios				
	Implied Exercise Prob.			
	0.49	0.42	0.3	0.2
Return	0.7	0.73	0.77	0.71
Standard dev.	4.05	4.42	5.14	5.63
Sharpe	0.172	0.165	0.15	0.127
Sortino	0.219	0.212	0.199	0.171

TABLES 1 & 2 *Performance of Fixed-Strike and Dynamic Buy-Write Portfolios, 2000–2009*

The Mental Side of Volatility

Mark Sebastian

There are a lot of statistics out there on volatility. Implied volatility is right 48% of the time, historical volatility is right 24% of the time (I pulled those out of a hat those are not real stats), when this happens to volatility 83% of the time this happens, the other 17% of the time this happens. Traders try to use it in so many ways it can make your head spin. Yet I think volatility, as an indicator may have more value as an indicator in scenarios where it doesn't move than situations where it does.

I think a prime example was the events leading into the current market correction we are currently experiencing right now. While discussion of the debt ceiling debate was going on for weeks in the media it was not until July 25th that option-implied volatility began to price in market fear of no deal being done. On that day the VIX 'popped' almost 2% in one day. Leading into that weekend the VIX hit its highest level since Japan closing at 25.25, higher than the austerity vote in Greece.

Like the Greek Parliament, our congress figured out a deal to get a bill passed and signed. That is where the two events diverged. This is also the spot at which traders could learn a valuable lesson on implied volatility. In Greece, once the vote passed, implied volatility plummeted with the VIX falling to 18.5% in two days and dipping below 16% on several occasions over the next several weeks.

Many traders (myself included) assumed that a deal in congress that would ensure that the US didn't default on its debt would relieve all of the pent up volatility in the market place. However, that didn't happen. At first many assumed there

Livevol Pro

FIGURE 1

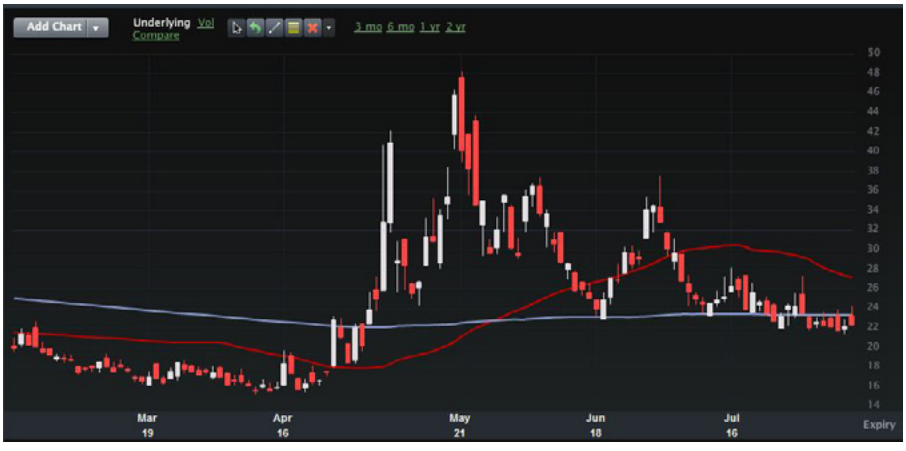


FIGURE 2

was fear the bill wouldn't pass the House of Representatives. It did and volatility did not fall. Then some thought, well maybe this won't pass the senate, again it did and the VIX did not fall. The VIX failure to fall should have been the major warning to traders. The theory much of Wall Street was trading on was wrong. There was something more to volatility than a vote passing the senate. It turned out to be S&P downgrading debt in the United States and a major renewal of fears in Europe.

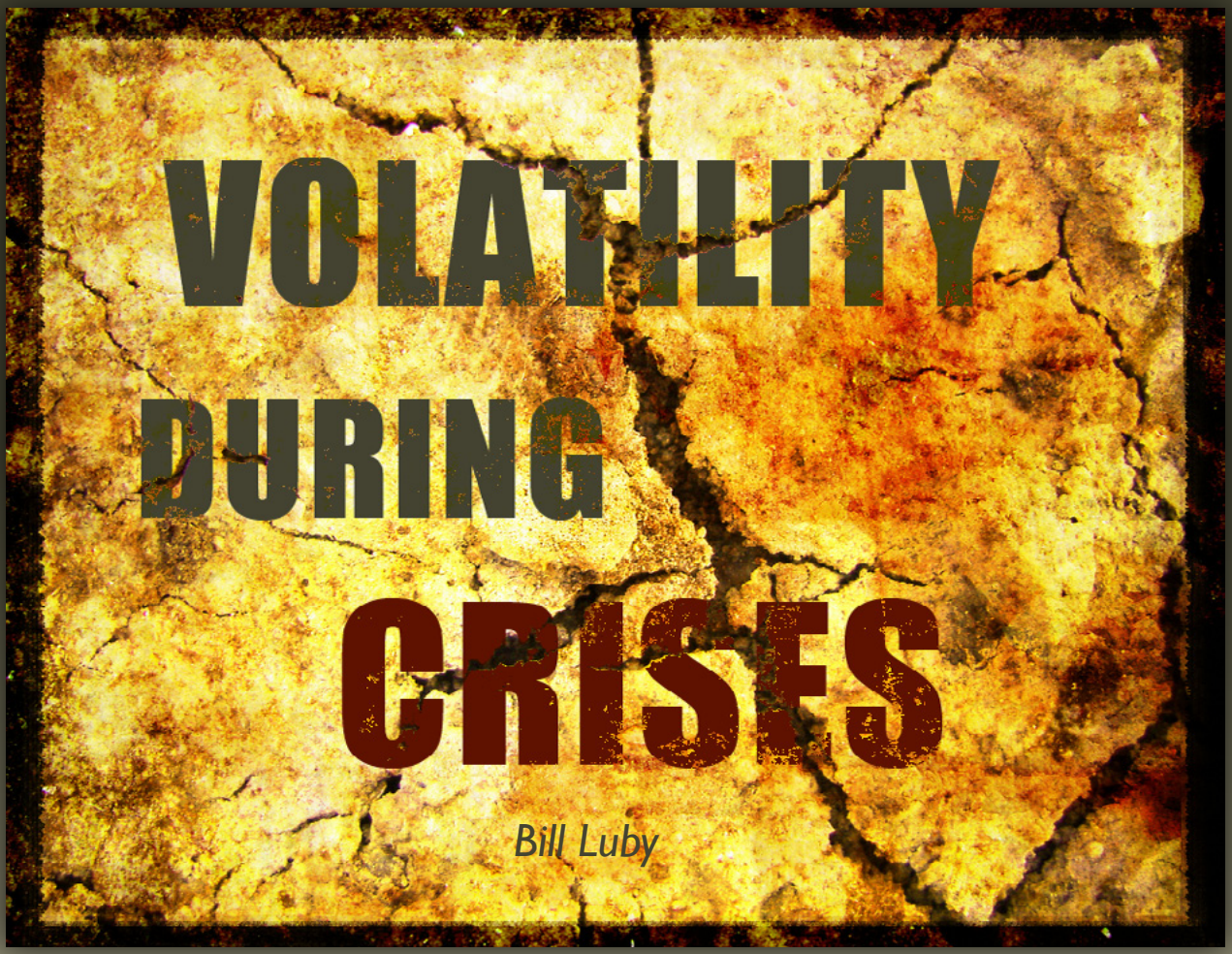
FIGURE 3

There is a lesson to be learned here, by me and just about every other trader (except those that S&P leaked info to, I guess). When one enters an event expecting a certain outcome to produce a specific volatility occurrence and something completely different happens that should raise a major red flag. When the events that many traders thought would make volatility, drop didn't make volatility drop, that was the 'smart guys' tipping off the world that something bad was about to happen. . . . And it did.

There are many other cases where volatility can be predictive of troubling times. Most traders are well aware of the date of the flash crash. However, many do not remember that May 6th was not the begging of spring 2010 sell off. That actually began in late April. By the morning of May 6th the VIX was already touching 26%. It had actually rallied about 10% in less than two weeks. While I don't think anyone expected a fat finger to send the market crashing, I don't think anyone should have been surprised that the VIX reach 45% by May 21st, the market was already foretelling danger well before that.

There are of course times where the opposite holds true. Earnings announcements can be a prime example. For instance, if one were to review AAPL earnings announcements over the last two years one would notice that the only case in which there wasn't a major bid up in AAPL 30 day implied volatility was the one earnings announcement in which AAPL went down on its earnings announcement. Anecdotally, anytime a high flier doesn't see a pop in volatility ahead of its earnings that is a sign that the stock is not going to rally.

Volatility itself is not that great at predicting the future. However, in times where one expects an event to cause volatility to move a certain way, and it doesn't, that trader should take it as a sign that he or she was likely wrong in his or her hypothesis this can be tough to do. No one likes to admit that he or she is wrong. However remember this, when the market tells you that you are wrong, it is almost always right. **EM**



The events of the last three weeks are a reminder that financial crises and stock market volatility can appear almost instantaneously and mushroom out of control before some investors even have a chance to ask what is happening. A case in point: on August 3rd investors were breathing a sigh of relief after the United States had finalized an agreement to raise the debt ceiling; at that time, the VIX stood at 23.38, reflecting a relative sense of calm, yet just three days later, the VIX jumped to 48.00 as two new crises displaced the debt ceiling issue.

Spanning the globe from Northern Africa, Japan, Europe and the United States, 2011 has seen no shortage of crises in the first eight months of the year. Given this pervasive crisis atmosphere, it is reasonable for investors to consider how much volatility they should anticipate during a crisis. In this article I will attempt to put crises and volatility in some historical perspective and address a variety of factors that affect the magnitude and duration of volatility during a crisis, drawing upon fundamental, technical and psychological causes.

Year	Crisis	Peak 20-day HV
1987	Stock Market Crash: Black Monday	112.23
1929	Great Depression: Black Tuesday	111.10
1937	Great Depression: Recession of 1937	49.42
1940	Germany Defeats France	45.45
1939	Germany Invades Poland	42.15
1973	Oil Crisis	33.80
1974	Nixon Resignation	27.39
1941	Pearl Harbor	23.91
1957	Sputnik Launch	23.05
1963	JFK Assassination	21.95
1962	Cuban Missile Crisis	21.05
1979	Iran Takes US Hostages	15.95
1945	Hiroshima and Nagasaki Nuclear Bombings	12.60
1949	First USSR Nuclear Test	10.82

FIGURE 1 *Peak Volatility During Historical Crises*

Volatility in the Twentieth Century

Every generation likes to think that the issues of their time are more daunting and more complex than those faced by prior generations. No doubt investors fall prey to this kind of thinking as well. With a highly interconnected global economy, a news cycle that races around the globe at the speed of light and high-frequency and algorithmic trading systems that have transferred the task of trading from humans to machines, there is a lot to be said for the current batch of concerns. Looking at just the first half of the twentieth century, however, investors had to cope with the Great Depression, two world wars and the dawn of the nuclear age.

Given that the CBOE Volatility Index (VIX) was not launched until 1993, any evaluation of the volatility component of various crises prior to the VIX must rely on measures of historical volatility (HV) rather than implied volatility. As the S&P 500 index on which the VIX is based only dates back to 1957, I have elected to use historical data for the Dow Jones Industrial Average dating back to before the Great Depression. In Figure 1, I have collected peak 20-day historical volatility readings for selected crises from 1929 to the present.

Before studying the table, readers may wish to perform a quick exercise by making a mental list of some of the events of the 20th century that constituted immediate or deferred threats to the United States, then compare the magnitude of that threat with the peak historical volatility observed in the Dow Jones Industrial Average. If you are like most historians and investors, after looking at the data you will probably conclude that the magnitude of the crisis and the magnitude of the stock market volatility have at best a very weak correlation.

Any ranking of crises in which the Cuban Missile Crisis and the attack on Pearl Harbor rank in the lower half of the list is certain to raise some eyebrows. Frankly I would have been surprised if even one of these events

failed to trigger a historical volatility reading of 25, but seeing that was the case for half the crises on this list certainly provides a fair amount of food for thought.

Volatility in the VIX Era

With the launch of the VIX it became possible not only to evaluate historical volatility, but implied volatility as well. With only 18 years of data to draw upon, there is a limited universe of crises to examine, so in the tables in Figures 2a and 2b, I have highlighted the seven crises in the VIX era in which intraday volatility has reached at least 48. Additionally, I have included five other crises with smaller VIX spikes for comparison purposes.

VIX Rank	Crisis	Year	Max VIX	Max 20d HV	VIX to HV (days)	VIX vs. HV	VIX>10%10d to Max VIX (days)
1	2008 Financial Crisis	2008	89.53	85.19	8	5.1%	29
2	Long Term Capital Management	1998	49.53	45.27	-10	9.4%	47
3	9/11 World Trade Center Attacks	2001	49.35	32.39	14	52.4%	5
4	Asian Currency Crisis	1997	48.64	37.67	15	29.1%	3
5	Dotcom Crash	2002	48.46	48.17	16	0.6%	12
6	European Debt Crisis I (Greece)	2010	48.20	33.10	10	45.6%	18
7	European Debt Crisis II (Italy)	2011	48.00	46.00	8	4.3%	2
8	Flash Crash	2010	42.15	27.05	1	55.8%	1
9	Bear Stearns Collapse	2008	35.60	30.09	3	18.3%	11
10	Fukushima Nuclear Meltdown	2011	31.28	17.84	1	75.3%	1
11	Y2K	1999	26.15	14.55	-13	79.7%	9
12	Hurricane Katrina	2005	14.41	9.48	8	52.0%	n/a
	Median		**48.10**	**32.75**	**8**	**37.4%**	**9**

FIGURE 2A *Selected VIX Era Crisis Volatility Data*

VIX Rank	Crisis	Year	SPX Drawdown	VIX:SPX Drawdown Ratio	SPX Low vs. 200d MA	Consec Days VIX>30	SPX days +/-4%
1	2008 Financial Crisis	2008	46.7%	4.2	63.89%	170	36
2	Long Term Capital Management	1998	17.7%	10.0	89.94%	49	3
3	9/11 World Trade Center Attacks	2001	13.5%	9.9	78.01%	30	1
4	Asian Currency Crisis	1997	7.4%	24.9	104.07%	17	2
5	Dotcom Crash	2002	22.6%	7.0	73.11%	47	6
6	European Debt Crisis I (Greece)	2010	17.1%	10.8	91.98%	9	1
7	European Debt Crisis II (Italy)	2011	17.7%	9.8	87.04%	12	6
8	Flash Crash	2010	7.0%	17.9	101.38%	2	1
9	Bear Stearns Collapse	2008	8.1%	16.9	87.50%	2	1
10	Fukushima Nuclear Meltdown	2011	6.2%	25.7	106.33%	0	0
11	Y2K	1999	2.7%	0.0	104.99%	0	0
12	Hurricane Katrina	2005	n/a	n/a	101.09%	0	0
	Median		**13.5%**	**10.0**	**91.0%**	**11**	**1**

FIGURE 2B *Selected VIX Era Crisis Volatility Data*

[Some brief explanatory notes will probably make the data easier to interpret. First, the crises are ranked by maximum VIX value, with the maximum historical volatility in an adjacent column for an easy comparison in Figure 2a. The column immediately to the right of the MAX HV data captures the number of days from the peak VIX reading to the maximum 20-day HV reading, with negative numbers (LTCM and Y2K) indicating that HV peaked before the VIX did. The VIX vs. HV column calculates the amount in percentage terms that the peak VIX exceeded the peak HV. The VIX>10%10d . . . column reflects how many days transpired from the first VIX close above its 10-day moving average to the peak VIX reading. Turing to Figure 2b, the SPX Drawdown column calculates the maximum peak

to trough drawdown in the S&P 500 index during the crisis period, not from any pre-crisis peak. The VIX:SPX drawdown ratio calculates the percentage change in the VIX from the SPX crisis high to the SPX crisis low relative the percentage change in the SPX during the same period (of course these are not necessarily the VIX highs and lows during the period.) The SPX low relative to the 200-day moving average is the maximum amount the SPX fell below its 200-day moving average during the crisis. Finally, the last two columns capture the number of consecutive days the VIX closed at or above 30 during the crisis and the number of days the SPX closed at least 4% above or below the previous day's close during the crisis.]

Looking at the VIX era numbers, it is not surprising that the financial crisis of 2008 dominates in many of the categories. Reading across the rows, one can get an interesting cross-section of each crisis in terms of various volatility metrics, but I think some of the more interesting analysis comes from examining the columns, where we can learn something not just about the nature of the crises, but also about volatility as well. One important caveat is that the limited number of data points does not allow for this to be a statistically valid sample, but that does not preclude the possibility of drawing some potentially valuable and actionable conclusions.

Looking at the peak VIX reading relative to the peak HV reading I note that in all instances the VIX was ultimately higher than the maximum 20-day historical volatility reading. In the five lesser crises, the VIX was generally 50–80% higher than peak HV. In the seven major crises, not surprisingly HV did approach the VIX in several instances, but in the case of the 9/11 attack and the 2010 European sovereign debt crisis the VIX readings grossly overestimated future realized volatility.

The magnitude of the stock market volatility have at best a very weak correlation.

One of my hypotheses about the time between the first VIX close above its 10-day moving average and the ultimate maximum VIX reading was that the longer the period between the initial VIX breakout and the maximum VIX, the higher the VIX spike would be. In this case the Long-Term Capital Management (LTCM) and 2008 crises support the hypothesis, but the data is spotty elsewhere. The current European debt crisis, Asian Currency Crisis of 1997 and 9/11 attack all reflect a very rapid escalation of the VIX to its crisis high. In the case of the May 2010 'Flash Crash' and the Fukushima Nuclear Meltdown, the maximum VIX reading happened just one day after the initial VIX breakout. As many traders use the level of the VIX relative to its 10-day moving averages as a trading trigger, the data in this column could be of assistance to those looking to fine-tune entries or better understand the time component of the risk management equation.

Turing to the SPX drawdown data, the Asian Currency Crisis stands out as one instance where the VIX spike seems in retrospect to be out of proportion to the SPX peak to trough drawdown during the crisis. On the other side of the ledger, the drawdown during the Dotcom Crash appears to be consistent with a much higher VIX reading. Here the fact that it took some 2½ years for stocks to find a bottom meant that when the market finally bottomed, investors were somewhat desensitized and some of the fear and panic had already left the market, which is similar to what happened at the time of the March 2009 bottom. Note that the median VIX:SPX drawdown

ratio for all twelve crises is 10.0, which is about 2½ times the movement in the VIX that one would expect during more normal market conditions.

One could argue that a 4% move in the SPX is a **necessary condition** for a financial crisis and/or a significant volatility event.

The data for the SPX Low vs. 200-day Moving Average is similar to that of the SPX drawdown. For the most part, any drawdown of 10% or more is likely to take the index below its 200-day moving average. In the seven major crises profiled above, all but the Asian Currency Crisis dragged the index below its 200-day moving average; on the other hand, in all but one of the lesser crises the SPX never dropped below its 200-day moving average. Based on this data at least, one might be inclined to include the 200-day moving average breach as one aspect which helps to differentiate between major and minor crises.

As I see it, the last two columns—consecutive days of VIX closes over 30 and number of days in which the SPX has a 4% move—are central to the essence of the crisis volatility equation. Since the dawn of the VIX, the SPX has experienced a 2% move in about 80% of its calendar years, the VIX has spiked over 30 about 60% of the years, and the SPX has seen at least one 4% move in about 40% of those years. Those 4% moves are rare enough so that they almost always occur in the context of some sort of major crisis. In fact, one could argue that a 4% move in the SPX is a necessary condition for a financial crisis and/or a significant volatility event.

Fundamental, Technical and Psychological Factors in Crisis Volatility

Crises have many different causes. In the pre-VIX era, we saw a mix of geopolitical crises and stock market crashes, where the driving forces were largely fundamental ones. During the VIX era, I would argue that technical and psychological factors become increasingly important. The rise of quantitative trading has given birth to algorithmic trading, high-frequency trading and related approaches which place more emphasis on technical data than fundamental data. At the same time, retail investing has been revolutionized by a new class of online traders and the concomitant explosion in self-directed traders. This increased activity at the retail level has added a new layer of psychology to the market.

In terms of fundamental factors, one could easily argue that the top nine VIX spikes from the list of VIX era crises all arise from just two meta-crises, whose causes and imperfect resolution has created an interconnectedness in which subsequent crises are to a large extent just downstream manifestations of the ripple effect of the original crisis.

The first example of the meta-crisis effect was the 1997 Asian Currency Crisis, which migrated to Russia in the form of the 1998 Russian Ruble Crisis, which played a major role in the collapse of Long-Term Capital Management.

The second example of meta-crisis ripples begins with the Dotcom Crash and the efforts of Alan Greenspan to stimulate the economy with ultra-low interest rates. From here it is easy to draw a direct line of causation to the housing bubble, the collapse of Bear Stearns, the 2008 Financial Crisis and the recurring European Sovereign Debt Crisis. In each case, the remedial action for one crisis helped to sow the seeds for the next crisis.

In addition to the fundamental interconnectedness of these recent crises, it is also worth noting that the lower volatility crises were largely point or one-time-only events. There was, for instance, only one Hurricane Katrina, one turn of the clock for Y2K and one earthquake plus tsunami in Japan. As a result, the volatility associated with these events was compressed in time and accordingly the contagion potential was limited. By contrast, the major volatility events are more accurately thought of as systemic threats that ebbed and flowed over the course of an extended period, typically with multiple volatility spikes. In the same vein, the attempted resolution of these events generally included a complex government policy cocktail, whose effects were gradual and of largely indeterminate effectiveness.

Apart from the fundamental thread running through these crises, I also believe there is a psychological thread that sometimes spans multiple crises. Specifically, I am referring to the shadow that one crisis casts on future crises that follow it closely in time. I call this phenomenon 'disaster imprinting' and psychologists characterize something similar as availability bias. Simply stated, disaster imprinting refers to a phenomenon in which the threats of financial and psychological disaster are so severe that they leave a permanent or semi-permanent scar in one's psyche. Another way to describe disaster imprinting might be to liken it to a low-level financial post-traumatic stress disorder. Following the 2008 Financial Crisis, most investors were prone to overestimating future risk, which is why the VIX was consistently much higher than realized volatility in 2009 and 2010.

While it is impossible to prove, my sense is that if the events of 2008 were not imprinted in the minds of investors, the current crisis atmosphere might be characterized by a much lower degree of volatility and anxiety.

Conclusion

As this goes to press, the current volatility storm is drawing energy from concerns about the European Sovereign Debt Crisis as well as fears of a slowdown in global economic activity. The rise in volatility has coincided with a swift and violent selloff in stocks that has seen six days in which the S&P 500 index has moved at least 4% either up or down—a rate that is unprecedented outside of the 2008 Financial Crisis.

Ultimately, the severity of a volatility storm is a function of both the magnitude and the duration of the crisis, as well as the risk of contagion to other geographies, sectors and institutions. Act I of the European Sovereign Debt Crisis, in which Greece played the starring role, can trace its origins back to December 2009. In the intervening period, it has spread across Europe and has sent shockwaves across the globe.

By historical standards the volatility aspect of the current crisis is more severe than at any time during World War II, the Cuban Missile Crisis and just about any crisis other than the Great Depression, Black Monday of 1987 and the 2008 Financial Crisis.

In the data and commentary above, I have attempted to establish some historical context for volatility during various crises extending back to 1929 and in the process give investors some metrics for evaluating current and future volatility spikes. In addition, it is my hope that concepts such as meta-crises and disaster imprinting can help to bolster the interpretive framework for investors who are seeking a deeper understanding of volatility storms and the crises from which they arise. EM

Volatility Cones Come In New Flavors

Donald Schlesinger, Guest Contributor

[Editor's note: A version of this article first appeared in a publication by Morgan Stanley in 1995. It was republished a year later in Futures Magazine. It has been revised and updated for Expiring Monthly.]

When it comes to forecasting volatility, it seems that the old axiom about weather is applicable: "Everyone talks about it, but no one can do much about it!" Volatility cones are a tool that may be useful in one's attempt to do something about predicting the future volatility of an asset. But first, let's briefly review the two major types of volatility so we may better understand how these measurements relate to volatility cones.

"Asset" or "statistical" volatility can refer to the past or the future, while "historical," or "realized," volatility is strictly a backward-looking statistical parameter. One simply defines a previous period of time and studies the fluctuations in price of the asset under consideration. Mathematically speaking, historical volatility (usually expressed as an annualized number) is the standard deviation of the (continuously compounded) log-returns of the asset. The figure, expressed as a percent, tells us what has happened in the past. When referring to the statistical volatility that an asset might display in the future, we'll use the term "forecast volatility."

As with the weather, knowing what a market or underlying asset has done for, say, the past month is not always helpful in predicting the future path of returns. For a variety of reasons, some of which have little do with actual forecasting, the number that market participants ascribe to the asset, in an apparent effort to predict future volatility, often is different from historical measurements. This second kind of volatility, which can be ascertained from the prices of options trading on the underlying, is known as "implied" volatility. In essence, it represents the aggregate, and somewhat biased, estimate, by all those who trade the options, of the future volatility of the asset.

When we enter the options arena, in an effort to "trade volatility," we want to be able to compare current levels of implied volatility with recent historical volatility in an effort to assess the relative value of the option(s) under consideration. Volatility cones can be an effective tool to help us with this assessment.

A volatility cone is an analytical application designed to help determine if the current levels of historical or implied volatilities for a given underlying, its options, or any of the new volatility instruments, such as VolContract™ futures, VIX futures, or VXX and VXZ ETNs, are likely to persist in the future. As such, volatility cones are intended to help the user assess the likely volatility that an underlying will go on to display over a certain period. Those who employ volatility cones as a diagnostic tool are relying upon the principle of "reversion to the mean." This means that unusually high levels of volatility are expected to drift or move lower (revert) to their average (mean) levels, while relatively low volatility readings are expected to rise, eventually, to more "normal" values.

Cone Design

Not all volatility cones are constructed in an identical manner. At The Volatility Exchange, we have incorporated into our version several enhancements to the traditional cones (see www.volx.us, Data, VolX Cones). The ones created by VolX have these features: 1) a variable historical period of data, specified by the user; 2) 12 different periods of historical volatility data, from as long as one year to as short as one month; 3) for each of the volatility time periods, the maximum and

minimum historical volatility displayed by the underlying during the life of the study, and the 90-, 70-, 50-, 30- and 10-percentiles for the historical volatilities (see the cones for the Euro and S&P 500, below), and 4) a tabular array of all of the foregoing data (available on the web site only).

In our featured examples, the underlying assets are the S&P 500 E-mini futures contracts and the Euro FX futures, both of which trade on the CME. The historical period studied is August 2006 to August 2011. [Note that VolContract futures are currently offered on the Euro FX, and there are plans to roll out other VolContract futures on many more assets.]

Suppose we're about to purchase a six-month at-the-money straddle on the S&P 500 E-mini futures contract and we want to know how the level of implied volatility that we'll pay (approximately 27%, as we write these lines) compares to the likely future volatility that the S&P 500 will display over the life of our options (the next six months). We consult the cone and focus on the "–6" entry on the horizontal axis. Directly above it, we find, along the various curves provided, the following information: maximum six-month historical volatility for the past five

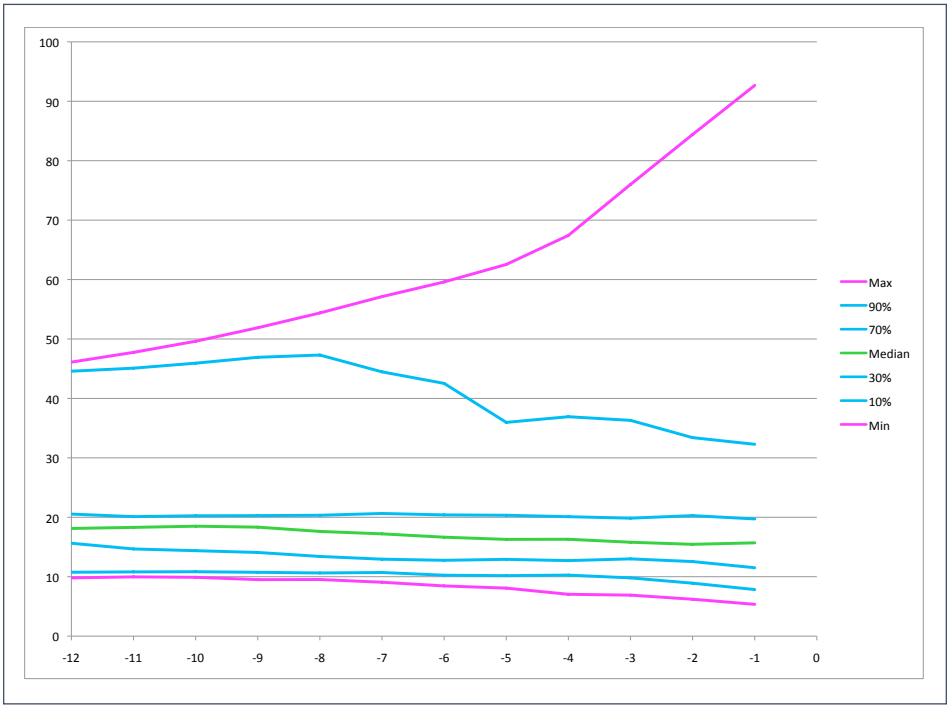


FIGURE 1 *ES: S&P 500 Index Futures E-Mini – CME*

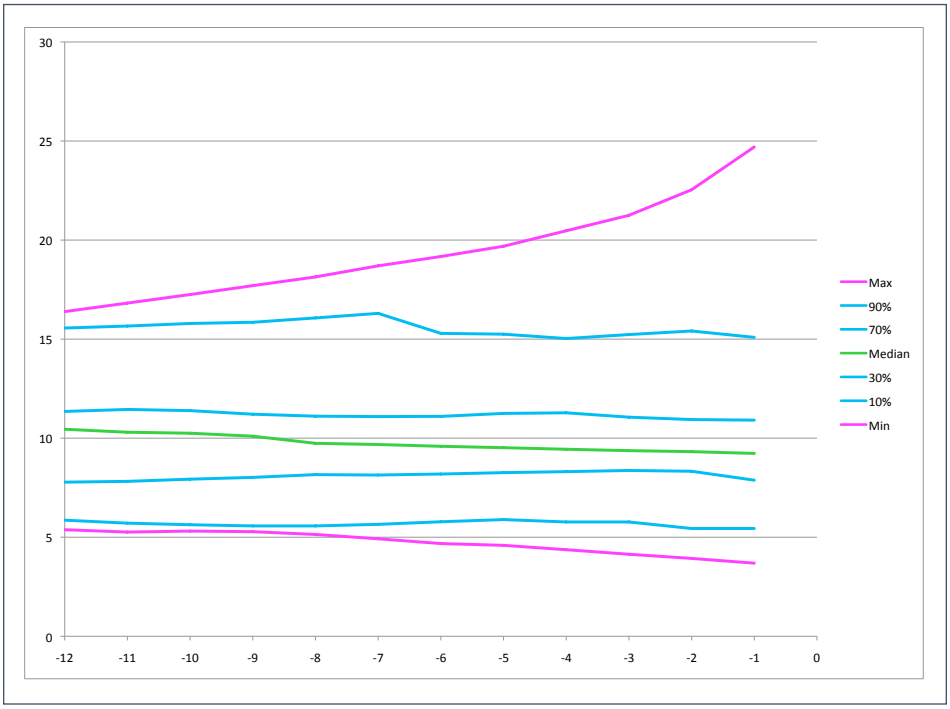


FIGURE 2 *CU: Euro FX Futures – CME*

years is 59.60; 90% of the time, six-month volatility has been below 42.53; 70% of the time, volatility has been below 20.40; 50% of the time (the median value), volatility has been below 16.65; 30% of the time, volatility has been below 12.76; 10% of the time, volatility has been below 10.25, and the lowest (minimum) six-month volatility for the period was 8.45. Clearly, it would be safe to say that paying 27% implied volatility is at the upper end of the spectrum and that it might be very difficult to sustain those levels over the coming six-month period. Again, the cones provide a level of guidance as to just how "difficult" this may be.

Of course, by now, we hope that you have become familiar with our flagship product, VolContract futures. Currently offered on the CME on the Euro FX, VolContract futures are the first exchange-listed product to settle to the realized volatility of an underlying asset. Clearly, the above use of volatility cones for options trading is also applicable to the trading of VolContract futures. One would simply compare the current price of the VolContract futures to the percentile values and matching time duration of the appropriate cone to receive guidance as to the likelihood that future volatility would, or would not, exceed the price of the VolContract futures under consideration, during the designated time period.

Interpreting the Data

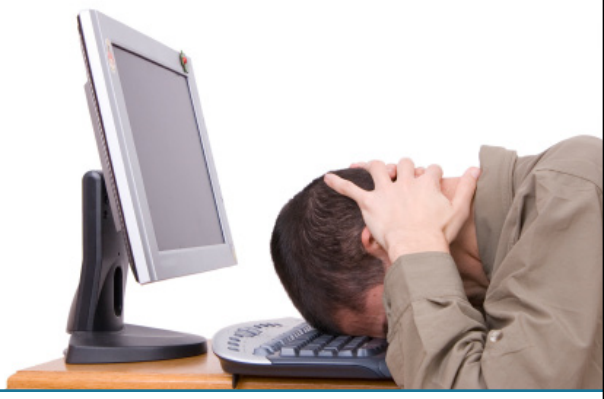
Suppose we consider a Euro FX VolContract futures with a three-month Realized Volatility Period ("3Vol™"), and that it is offered at a price of 15.23. The cone tells us that 90% of the time, over the past five years, three-month historical volatility for the Euro has remained below this level. Perhaps we're paying too much for this contract, using history as a guide. Similarly, suppose our VolContract futures is offered at a price of 8.37. Only 30% of the time has three-month historical volatility been that low over our five-year window. In other words, 70% of the time, the Euro has demonstrated a three-month volatility greater than the level of our purchase, so maybe this is a relatively "cheap" contract. By ascertaining the various historical levels of volatility corresponding to a given time horizon for the VolContract futures under consideration, we're better prepared to judge the relative "cheapness" or "expensiveness" of the instrument.

Conclusion

Remember, as with all interpretation of financial data, "past performance is not necessarily indicative of future results." But, in the absence of a better crystal ball, volatility cones can be an effective and simple forecasting mechanism to "get a handle" on future volatility. Of course, the cones shouldn't be used in a void. One should attempt to assess future volatility on one's own, before consulting the cones. Do you think volatility will be higher than normal? If so, by how much? The cone can help you to define "normal" and just how high "high" really is. A similar logic applies to forecasts of lower volatility. Finally, in the absence of any strong opinion about future volatility on your part, or if your forecast is simply for a period of normal fluctuations, the cone, once again, will help to define just what normal really is.

At VolX, we are dedicated to providing cutting-edge technology and research for volatility traders. We hope that you will find our interactive volatility cones both useful and informative, and we would be delighted to hear from you regarding your experiences in using the cones. **EM**

Donald Schlesinger is Chief Strategy Officer of The Volatility Exchange, www.VolX.us



Shorting VXX Calls Too Early

Jared Woodard

On August 4th, the CBOE Volatility Index (VIX) jumped 35%, and the iPath S&P 500 VIX Short-Term Futures ETN (VXX) notched its single largest daily gain since it began trading, rising 20% by the close. With equity prices down so dramatically and market behavior entering "abnormal" status, there was limited value, in my opinion, in the standard measures of market breadth, technical support, relative volume, etc. that traders often rely on. Certainly, just about any measure of price behavior we might consider was giving more or less the same message: that stocks were oversold and that a rally was due in the near term.

Instead of taking on new bullish price exposure in such situations, traders should think instead about likely future levels of volatility. Fig. 1 shows the daily log returns since inception for VXX. Even if the markets had continued to decline, unless they had done so at a very rapid clip, present option premiums would have proven to be excessive. Given the sizable move in VXX, I took a closer look at the historical IV and HV of the ETN.

The light green line is the 1-month average implied volatility of options on VXX; the medium green line tracks 2-month IV. If you compare those estimates to the dark line

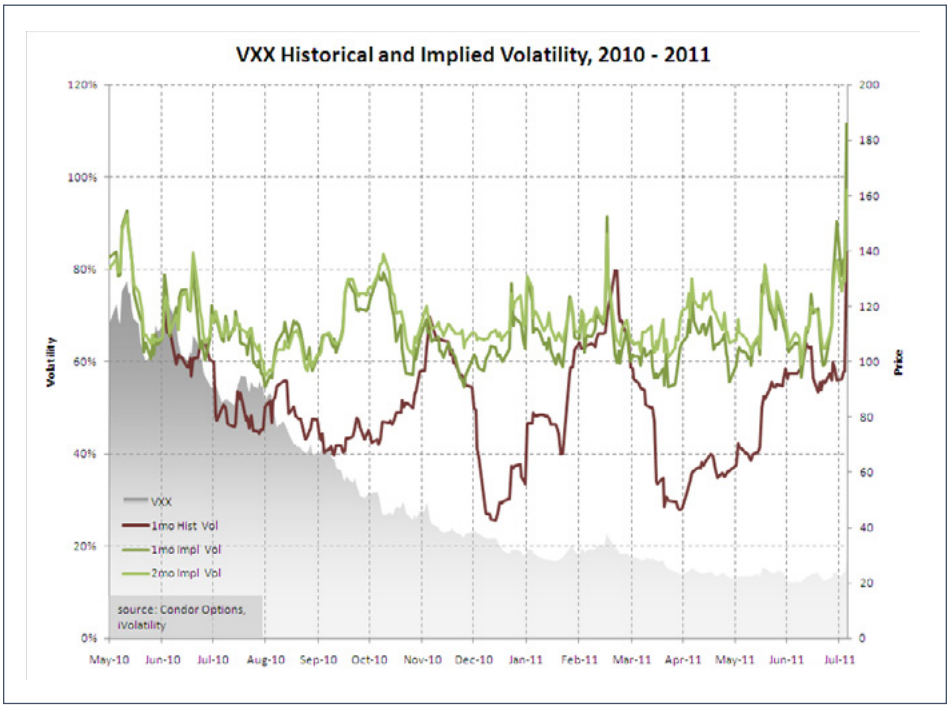


FIGURE 2 *VXX Historical and Implied Volatility, 2010–2011*

FIGURE 1 *VXX Price*

tracking the 1-month price volatility of the underlying VXX ETN, you'll see that the options trade at a significant premium even under normal market conditions. At the far right edge, notice that the IV of VXX options reached all-time nominal highs above 100% in the case of the one-month average.

Odds strongly favored a short bet on VXX IV at those elevated levels. The first reason I liked a short call spread on VXX was that this position allowed me to be agnostic about future stock price movement: even if stocks had continued to fall, as long as they did so less quickly than the pace shown on August 5th, VXX was expected to decline as SPX volatility moderated. A second reason was that, once VIX futures returned to a flat or contango term structure, the persistent negative roll yield in VXX puts natural downward pressure on the underlying. Finally, as noted above, options on VXX are priced abnormally high across the board.

On August 5th, I sold the VXX September 35 calls at $2.39 and bought the VXX September 38 calls for $1.98. This position is still open. If the call vertical expires worthless, it will return nearly 16% in 43 days. Instead of defining a stop loss point for exiting the trade, I preferred to let position sizing shoulder some of the burden of risk management here by keeping position sizes modest.

Is It Better to Be Early?

Stocks continued to decline for another day or two, and VXX hit an intraday high of 36. I was definitely a little on the early side—the ETN is still at 32.16 at pixel time, and the position is slightly underwater at $0.65. Because this is a risk-defined spread and because it was entered in small size, I am not hedging the delta exposure or other risk factors.

Traders who wait for confirmation of a top in volatility (or a bottom in underlying prices) can miss the opportunity altogether.

From the perspective of a speculator, the tricky thing about spikes in volatility is that they often quickly reverse. Traders who wait for confirmation of a top in volatility (or a bottom in underlying prices) can miss the opportunity altogether. On the other hand, committing capital when volatility is still rising entails a risk of being committed too early, such that you are forced to endure adverse market action if the volatility trend continues.

There is no secret solution—risk-taking, after all, will always be risky—but some attention to position sizing can help a lot. If you spread out your capital, you can afford to do both: get in early and late, too. Opening a small "starter" position when you think you might be early on a trade gives you the flexibility to keep the trade open even if it comes under pressure, and it gives you the resources to commit new capital once the initial thesis appears to be confirmed.

In the context of the current trade, if we see markets struggle at some prior high and then turn lower once again, and implied volatility pops back up, I will look to add a new short call vertical. The news that has been offered as justification for the August selloff just isn't grim enough; the U.S. economy is in bad shape and European banks and sovereigns are even worse, but the speed of the recent decline seems unwarranted. To keep VXX at 35 or above for the next month will require more bad news in heaven and earth than is dreamt of in the philosophies of our current fear mongers. EM

Expiring Monthly Interview with
Danny Riley

Mark Sebastian

Danny Riley is the President of MrTopStep LLC. For over 30 years, Danny has lived and breathed the CME trading pits everyday. He started in 1978 as a grain room runner and moved into the bonds in 1981. In 1985, he traded in his running shoes to work for some of the largest accounts in the business. His insights on the market can be found on MrTopStep's The Opening Print *(FREE sign up at www.mrtopstep.com) every trading day. He reports on the big trades and order flow out of the CME pits every Friday.*

Expiring Monthly: *How did you get into financial the financial world?*

Danny Riley: I started as grain room runner at the Chicago Board of Trade at 1978, where I moved orders to and from the pits. A few years later, I worked in the bond pit, where I first started executing bond give-ups. This was my first real break because I was introduced and worked directly with several Market Wizards people like Richard Dennis from C&D and Gary Biefeldt of BLH both in the original Market Wizards book. I have been on customer side executing ever since.

EM: *What is MrTopStep, and why did you start it and where is it going?*

DR: Before there was ever such a thing as electronic trading, we would execute orders by telephone or direct line and hand signal. When electronic took over it became hard to communicate with the banks and hedge funds. While electronic trading changed communication from the phone to screens, I started to load names into an AOL instant message to distribute information to our customers. It became so popular that I was asked to add people from other hedge funds, banks, and prop trading firms. For a period of time, IM was how all brokers and prop shops really communicated. In 2008, I teamed up with John Najarian to start up a new IM Company, called Futures Monster. Then, in December 2010 I took the company back and went off on my own.

We named the company MrTopStep because it is in reference to the most senior pit person that was only reserved for the one who stood at the pit's top or at the top step. We have several product offerings like our daily educational videos that are reported from the CME floor and futures-related articles that we publish on our website. But our core product is an instant messenger service where we relay information, order floor, and floor news to primarily institutional clients. We have about 400–500 institutions on IM.

EM: *What is the value for institutional customers?*

DR: The basic concept is people could clear their business with a large broker like a Morgan Stanley or Goldman Sachs, but these institutions never give them coverage. The brokers instead provide morning research on the overall market, but there is no detail or record of the order flow from

the trading floor. When was the last time a clearing firm or broker called to tell you why the S&P moved 10 handles? We fill in that void, we help connect the dots. We follow big order flow and news up to the second and our customers see it.

EM: *I get where an institution that wants to trade 500 cars "contracts" get its benefits, what about retail?*

DR: Great question, there is a perception that you can't mix retail with the institutions, but we have learned, through IM, you can. They each want to know what the other is doing. Retail can move the market in short spurts. We can provide a view from inside. In addition, the IM is hooked up to 4–5 pro offline traders, sort of like an aggregator, and it is also hooked into European feeds. Just like the markets, we have a global customer base from all walks of trading, who talking to each other in one environment. It is not just an order flow pipe, it is a chat where retail and institutional traders willingly talk to each other.

EM: *5 years from now, where is Mr. Topstep?*

DR: Our chat is really focused in the US market hours, and we want to look beyond to the global 24/7 market. People want to talk before they trade. This can create a semi-close/ open forum to have their voices heard and bounce ideas in a professional environment. Its only going to get bigger.

EM: *You have been down in the CME for over 30 years , what do you see as the future of futures trading and options trading. Does the floor eventually disappear?*

DR: Things have changed some. The trading floor used to be packed, but now there are only three types of people, the guy desk with business, the guy in pit that gets it from the desk, then the traders that get to trade off the order flow. More changes may be on the horizon, but the basics of trading options won't change. I don't see the mercantile changing its policies towards the trading floor anytime soon. Maybe shrink down the size of the future pits and increase the option pits. There are only 15 people in the euro dollar, where they used to have the 400–500. Could the exchange shut down as electronic trading casts a shadow over its existence? I don't believe so, because the grain room has 14 year remaining on its lease and the exchange owns the financial room. Despite the future pits not being nearly as populated as they once were, the exchange will be here for a long time because. The best price discovery for options trading is still done by hand. If that was not the case the floor would have been closed a long time ago.

EM: *What about Topstep on the floor?*

DR: We are working a new IM system that will allow off the floor traders to see live option flow. Our main push is to continue to keep all our clients up to date and informed.

EM: *Thanks so much for your time.*

DR: It was my pleasure. EM

The Iceberg Illusion

Tyler Craig, Guest Contributor

We live in a comparative society. On a daily basis, we are inundated with examples of people who possess superior skills or abilities. Tiger Woods is a better golfer than me (barely). Kobe Bryant is a better basketball player. And, more close to home, Warren Buffett is a better investor. On the surface it seems they were simply the lucky beneficiaries of superior talent from the womb; born with a predisposition for world class performance that only the few are able to enjoy. Perhaps they were the fortunate recipients of a super gene that made them destined for achieving extraordinary feats. Or so we reason.

By attributing the success of others to some talent fairy who randomly dispenses talent to the few, we largely absolve ourselves of any responsibility over our success or lack thereof. After all, if the talent fairy passed me over, what control do I have over becoming a successful trader? In Geoff Colvin's entertaining read *Talent is Overrated*, we learn that world-class performers become such largely as a result of thousands of hours of deliberate practice. This revelation holds promise for those seeking to rise above the sea of mediocrity and join the ranks of the elite. It empowers the individual as they discover how much control they truly have over their own success. It also serves as a rude awakening to those who think stellar performance (in trading or otherwise) is achievable without considerable effort. Colvin quotes Professor John A. Sloboda as saying, "There is absolutely no evidence of a 'fast track' for high achievers."

Readers familiar with Malcolm Gladwell's book *Outliers* won't find this revelation all that surprising as Gladwell stated as much when introducing the "10,000-Hour Rule". If you want to golf like Tiger or play basketball like Kobe you have to *work* like they do. The same could be said of the trading arena. With the advent of blogs, Twitter, and more specifically StockTwits, individuals now have more access than ever to professional traders. They have been granted the ability to look over their shoulder and into their mindset. While such an opportunity can aid in speeding up the learning curve, it can also easily lead to unfair comparisons—the novice comparing their performance or intelligence to that of the elite. Some even allow such an exercise to lead to discouragement as they reason they lack sufficient talent to ever achieve trading success. To combat such an outcome, or even the initial unfair comparison, remember the iceberg illusion as explained by Matthew Syed in Bounce.

What is invisible to us—the submerged evidence, as it were—is the countless hours of practice that have gone into the making of the virtuoso performance.

"When we witness extraordinary feats of memory (or of sporting or artistic prowess), we are witnessing the *end product of a process measured in years*. What is invisible to us—the submerged evidence, as it were—is the countless hours of practice that have gone into the making of the virtuoso performance: the relentless drills, the mastery of technique and form, the solitary concentration that have, literally, altered the anatomical and neurological structures of the master performer."

When watching an elite trader one must keep in mind they are "witnessing the end product of a process measured in years." At one point, they too were a novice. Through hard work, deliberate practice, and an insatiable desire

to master the craft, they *became* great traders.

The artistic world also provides an insightful example into this process. In *The Talent Code*, Daniel Coyle shares a revealing statement from Michelangelo. To put the comment in proper context one must keep in mind the incredible creations that flowed from his hands—the *Pietà*, the Statue of David, and the Creation of Adam. It's easy for us mere mortals to marvel at such impressive works and conclude they were the result of pure genius, talent from the womb. Interestingly, Michelangelo, the artist himself, disagreed with such a conclusion. He stated, "If people knew how hard I had to work to gain my mastery it would not seem so wonderful at all."

Learning how to trade is similar to acquiring any other skill. Rather than spending time and energy on a search for short-cuts or holy grails, traders should focus on the path traveled by other elite traders and follow in kind. EM

A Comparison of Fixed-Strike and Dynamic Buy-Write Strategies *(continued from page 10)*

latter strategy was forced to sell further OTM options (bringing in less premium as the market fell). The dynamic approach performed better in sharply rising markets.

I would like to see a similar comparison conducted for put selling strategies. As we have discussed previously in this journal (see Jason Ungar, "The Many Virtues of a Put Selling Strategy"), cash-secured put selling has offered better performance than both buy-and-hold and buy-writing strategies in the past. EM

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