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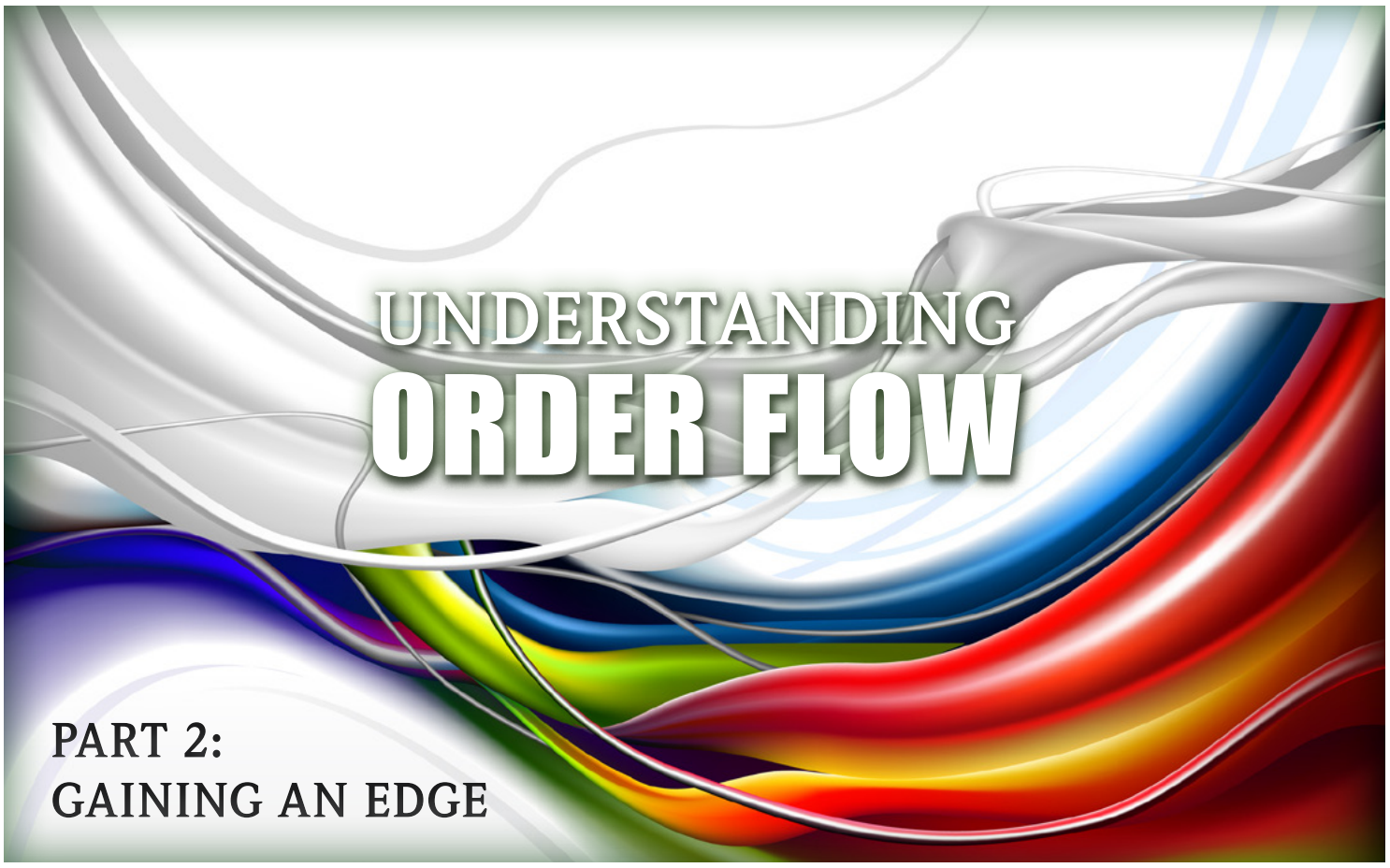
EXPIRING MONTHLY

THE OPTION TRADERS JOURNAL



Which Is the Most
Important Greek?

Delta Hedging and Regime Switching

AN INTERVIEW WITH
Women of the Trading World

EXPIRING MONTHLY
THE OPTION TRADERS JOURNAL

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About the Expiring Monthly Team

Bill Luby

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.

Bill has a BA from Stanford University and an MBA from Carnegie-Mellon University.

Jared Woodard

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.

Jared has been quoted in various media outlets including The Wall Street Journal, Bloomberg, Financial Times Alphaville, and The Chicago Sun-Times.

In 2008, he was profiled as a top options mentor in Stocks, Futures, and Options Magazine. He is also an associate member of the National Futures Association and registered principal of Clinamen Financial Group LLC, a commodity trading advisor.

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.

Mark Wolfinger

Mark grew up in Brooklyn and holds a BS degree from Brooklyn College and a PhD (chemistry) from Northwestern University. After working as a research chemist for Monsanto Company, in December 1976 he packed his belongings, left a career as a research chemist behind, and headed to Chicago to become a market maker on the trading floor of the Chicago Board Options Exchange (CBOE).

Over the next 23 years, he worked primarily as a market maker, and also held a variety of positions in the industry.

After leaving the CBOE (2000), he became an options educator and stresses conservative methods, as detailed in his newest book, *The Rookie's Guide to Options*.

He currently resides in Evanston IL with his life-partner, Penny.

Editor's Notes

Bill Luby

This month's options expiration cycle was dominated by a growing European sovereign debt crisis, concerns about global economic growth and increasing stridency in some of the doom and gloom prognosticators. In fact, circumstances look much like they did about a year ago, but this time, it appears as if no QE3 will arrive to save the day.

In our feature article, Mark Sebastian concludes his two-part series on understanding order flow, looking at call-to-put ratios, big trades just prior to earnings and trades that distort the skew.

Jared Woodard has an intriguing look at the effectiveness of delta hedging strategies that dynamically adjust according to their evaluation of market regime characteristics.

Dan Passarelli guest authors this month's Follow That Trade segment, with a bull put spread on 3M and some interesting thoughts on adjustments.

I am particularly excited to present Mark Wolfinger's feature interviews, which cover a cross section of women traders, including Linda Raschke, Denise Shull, Maureen Christensen, Carley Garner and one trader who prefers to remain anonymous. Each of these interviews would make an excellent feature in its own right, but as a collection they have an even greater impact.

In his monthly column for new traders, Wolfinger offers some thoughts to help traders evaluate various options strategies. He and the rest of us editors also discuss which Greek we think is the most important. Although it is difficult to select just one, the commentary should be enlightening.

Guest author Don Fishback focuses his energies on volatility, with an article that makes the important distinction between volatility and price movement—something students of realized volatility struggle with at times.

Elsewhere, I am back to talking about the Volatility Index (surprise), specifically about VIX complexity and what it means.

Once again, the EM team returns to answer reader questions in the Ask the Xperts segment. And back by popular demand, Jared Woodard pens the Back Page piece in which he looks at the role of qualitative information in trading.

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

Have a good expiration cycle,

Bill Luby
Contributing Editor

Ask the Xperts

The Expiring Monthly Editors

Bill,

Are there any index puts that do not involve as much of a potential cash outlay?

—Chris

Dear Chris,

Unfortunately, discounted index puts are hard to come by. For the most part, the cost of put protection is proportional to the implied volatility of the underlying asset. Some indexes, such as the Russell 2000, are traditionally more volatile than others, so the options associated with them tend to be more expensive.

A potential exception to the broad-based index rule would be the leveraged exchange-traded funds that are based on the indexes. These include the +3x UPRO and -3x SPXU for the S&P 500 Index, as well as the +2x SSO and -2x SDS. Here you run into a different set of issues due to compounding decay. These leveraged ETFs are generally priced at about 2 times and 3 times the unleveraged underlying.

Volatility Index calls are as close as one can get to what you are looking for, because when they are in the money, they tend to accelerate upward in a nonlinear fashion, so it is possible to obtain more bang for your buck with VIX calls. I chose the word "possible" carefully, as VIX calls are a notoriously inexact way to hedge.

Your question inspired me to research this subject further. My comments appear in this issue as "VIX Convexity."

Finally, I think you may receive a great deal of related benefit from reading "Cheating with Partial Hedges," which I wrote for last month's Expiring Monthly and delves into how to maximize the utility of hedges and minimize the costs associated with them.

Good trading,
Bill

Dear Mark,

What is your opinion on selling naked puts, both pro and con?

Thanks,
CKS

Dear CKS,

Selling naked puts does have its good points and bad points. Here is my take.

Pro

- It is better than buying stock. You get a reduced entry price.
- You may have less frequent losses and lose less money.
- If the put expires worthless, you keep the premium with no further risk.
- When bidding for stock (limit price), you often do not buy the shares; the put premium is consolation payment for not being able to buy stock.
- It is more efficient than writing covered calls, which is an equivalent strategy.
- You can easily exit the position early because the put may be available at a low price.

Con

- It is similar to owning stocks, so it has a big downside risk.
- You may miss the opportunity to buy the stock, only to see it surge in price.
- The biggest negative is not recognizing risk and, thus, selling far too many puts. This is a common rookie mistake.

Try This Instead

Selling put spreads cuts both profits and losses, and limits risk. I suggest considering this as an alternative.

—Mark W.

.....

Jared,

What is the rationale for exiting iron condor trades four to 10 days before expiry?

—Jack B.

Jack,

We do not always exit each trade in that timeframe—some positions get held to expiration. But when a trade is at or near the money, it is often better to exit a little early instead of having to flip in and out of larger delta-hedging positions during expiration week.

The negative gamma in a typical iron condor trade gets larger as expiration approaches, which means that a $1 move in the underlying asset will generate ever larger (unfavorable) deltas.

Hedging that risk as the underlying bounces around will not only incur greater costs, it also ties up more capital because the size of the hedge positions will be larger. That capital could probably be used more effectively elsewhere, so we will often exit troublesome trades a little early.

—Jared

Mark,

I have been analyzing buying calls or puts versus using a call or put spread. When should I do one versus the other?

—Joe

Dear Joe,

Although every trade is different, I have found that over time spreading is usually the better way to trade.

However, make one exception and go outright long under these circumstances: I feel strongly about direction and strongly about implied volatility, and I care much more about the latter than the former. In other words, if I think the IV is really low, I typically am a big fan of owning outright.

If I think IV is at an extreme high, I may also make that choice, although I am more hesitant in that case.

—Mark S.

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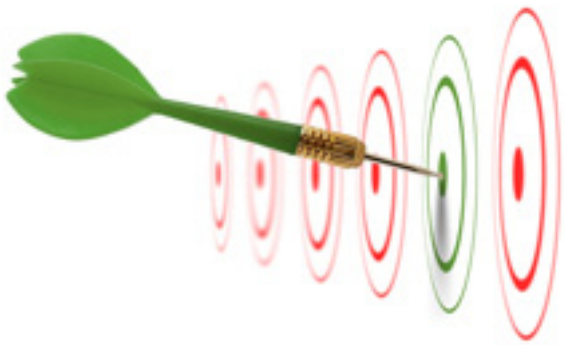


Find Your Focus

Mark D Wolfinger

Options are suitable for a variety of investment, hedging and speculative strategies. It may seem to be obvious, but it is important to understand why you use options and to think carefully before adopting new strategies.

Change is tempting. When someone tells you that he or she has been doing well with a different strategy from yours, it is easy to abandon what you have been doing to seek greater profits. If that new approach arrives at a time when you have not be making money for a couple of months, it may seem an opportune time to abandon a trading philosophy, even one that has served you well for years.

Please recognize that this is a huge move, and the decision must be made judiciously, not on your buddy's suggestion and certainly never all at once.

Experiment on a small scale and learn how well a different strategy suits you and your trading style.

Falling into the trap of believing that choosing the correct strategy is the end all and be all of trading is easy, but it is merely the starting point. It is simply your ticket into the arena.

Long-term results depend on your ability to manage the trade. That includes proper position sizing, making good decisions when the danger of losing too much money looms and knowing when to exit both winners and losers.

Reality Check

Say you were a buy-and-hold investor who now prefers to hedge your portfolio by writing covered calls or selling cash-secured puts. (They are very similar strategies. By selling puts, you may be required to buy stock later. When writing covered calls, you already bought stock.) Therefore, your options trading style has retained an investor's perspective.

You have adopted a somewhat bullish options strategy that has a limited profit potential as covered call positions have positive delta, earn money on the upside and may lose money on a decline. If your buddy tells you that he has discovered how to make good money by trading iron condors, calendar spreads or the outright purchase of calls or puts, that is no excuse to abandon your plans and jump into his boat.

You must understand that some strategies come with more risk than others, and your tolerance for risk may be far different from that of your friend. Your investment plan

Falling into the trap of believing that choosing the correct strategy is the end all and be all of trading is easy, but it is merely the starting point.

may be much more conservative or involve more risk taking, and those are crucial to consider before trying to chase a winning strategy.

Most of all, it may not be the strategy that has done so well. Your friend may have made some skilled (or lucky) decisions, and you have no reason to believe that you can duplicate his results.

By writing covered calls or owning stocks, you have always prospered in a rising market, but iron condors or at-the-money calendar spreads do not do well in a strongly rising market. That is a complete change in your long-time investment philosophy and may not be suitable for you.

Psychology plays a significant role in the life of a trader or investor. And if

you do not believe that, just imagine how you would feel if a strong bull market began at the same time that you abandoned your bullish strategy for one that depends on a sideways market.

Take Your Time

Do not be tempted by someone who is making money. An intelligent idea is to learn about the strategy and how it makes/loses money. Be able to calculate maximum loss and the likelihood of incurring that loss. Know how to size trades so that you never are exposed to a big loss.

Then, and only then, can you have a good feel for whether that specific strategy is right for you. A change in investment philosophy may be appropriate, but do not make the switch just because you heard one person is making money with a new idea.

Also, if you are considering becoming an option buyer, please understand that that move takes you from being an investor with a bullish bias to an being outright speculator. That change is likely to result in your becoming an unhappy investor. You would be switching from a hedged but still risky (think bear market) strategy to one that is essentially gambling.

It is true that some people can buy and sell options profitably, but you live in a different world. In fact, you have been a premium seller, not a premium buyer. Switching is difficult to accomplish. The mindset is different and you must know that you can approach trading from an entirely new point of view.

The Grass Isn't Necessarily Greener

Always be alert to new ideas and give them careful consideration. But do not assume that profitability is easier to find elsewhere. EM

Delta Hedging and Regime Switching

Jared Woodard

Show any trader a price chart of some asset, and he or she will probably have an opinion about whether the asset is in a rangebound or trending environment. The idea of different market regimes is intuitive and ubiquitous among practitioners, and is an object of increasing interest among researchers.

In a 2010 ICMA Centre Discussion Paper in Finance, Carol Alexander, et. al, consider whether delta hedging techniques can be made more effective by making them responsive to market regimes.

In Why Black-Scholes Is Better Than We Think, (May 2011), I reviewed some research showing that a Black-Scholes-Merton (BSM) pricing model adjusted for the negative correlation between implied volatility and equity price returns performs better in a delta-hedging scenario than nearly every other major pricing model.[1]

Alexander, et. al take this work a step further by making the volatility smile adjustment to BSM dependent on the current market regime.

This is not the first research into making volatility models responsive to market regimes. As the authors note, Emanuel Derman in an April 1999 RISK article developed several models—sticky strike, sticky moneyness and sticky tree (local volatility)—for evaluating options during trending, rangebound and excessively volatile markets, respectively. But subsequent research on Derman's models found that sticky moneyness deltas were less effective than BSM and that the primary advance was using local volatility to hedge during highly volatile markets.

The Study

To test the effectiveness of three regime-switching models along with four others, the authors sell a call and hedge with a futures contract in the same contract month for options with 30, 60, 90, 120 and 180 days to expiration at 1% moneyness intervals from 95% to 105%, giving them 66 options to price each day. They ran tests with each hedge rebalanced at one- or 10-day intervals.

One nice feature of the study is that the authors use more than 16 years of data on FTSE 100 Index options. They note that the empirical delta hedging studies they surveyed used no more than four years of data.

I will mention some of the other pricing models tested for comparison. The "sticky strike" and "sticky tree" models due to Derman make the following assumptions about how volatility skew changes when the price of the underlying asset changes: The sticky strike skew does not change at all, and the sticky tree skew changes by an amount equal to the slope of the existing skew.

Although these might sound strange or ad hoc to traders, each model has its advantages. For example, in a stable, trending environment in which the skew curve does not change dramatically, using a sticky strike or implied BSM model to hedge is cheaper.

To provide an intuitive sense of the difference between market regimes, the authors examine the relationship between changes in ATM implied volatility and changes in the futures price: "[I]n the volatile regime a 5% fall in 30-day FTSE futures is associated with about a 6% rise in ATM [at-the-money] volatility; but in the tranquil regime a similar fall in the FTSE futures precipitates little more than a 3% rise in ATM volatility."

These sorts of relationships make it clearer why we would want to make our delta hedge ratios sensitive to the general market regime.

In a tranquil market, calculating deltas with the most aggressive model is likely to increase needlessly the costs of hedging, while using

a less-responsive model during a volatile regime will increase the risk of having unwanted price exposure.

Results

Good performance for a hedging model was measured as the standard deviation of out-of-sample hedging error as a percentage of the hedging error obtained by using the implied BSM delta. For daily rebalancing of hedges on 30-day options, regime-switching models removed about a third of the hedging error obtained by Black-Scholes. For 180-day options, this error was cut in half.

Regime-switching models were especially effective for OTM calls rather than ITM calls, and performed better than other standard hedging regimes across the board.

Of additional interest is the extent to which the regime-based models remained effective over time. Figure 1 shows the same performance metric—standard deviation of hedging error—on a rolling one-year basis for daily rebalanced hedges of 30-day calls. The three charts show the hedging error by moneyness. A lower reading is better.

As you can see, the regime-switching models (RS, MS1, MS2) performed

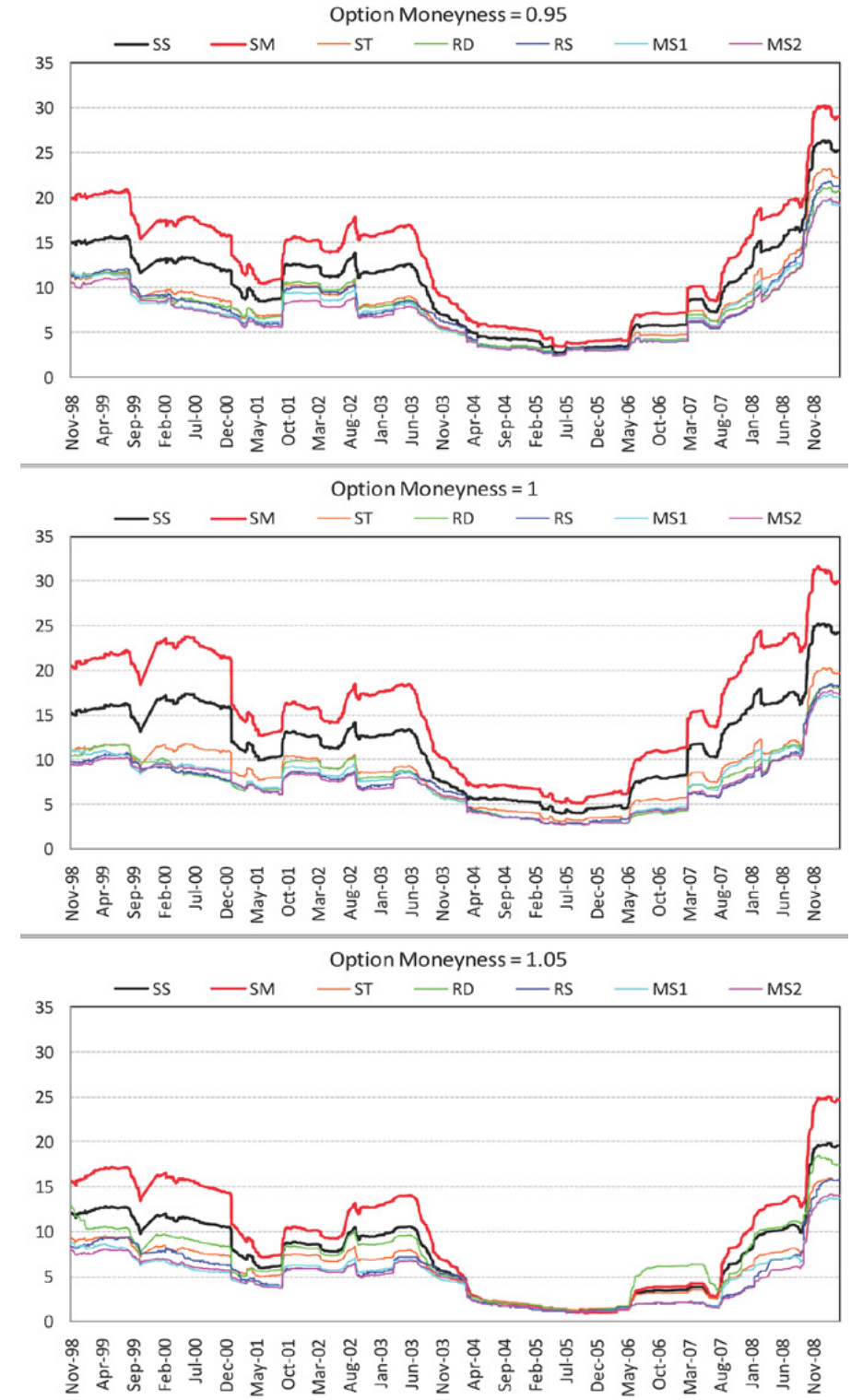


FIGURE 1 *Standard Deviation of Hedging Error Over Previous Year*

better than the others in two ways, at each level of moneyness. First, they registered consistently lower hedging error in absolute terms. Second, the volatility of their error was much lower—the regime-based models had much more consistent results. Compare any of the blue lines during fall 2008 with the red or black lines (SS or SM).

The key to the success of the regime-based models, again, is that deltas are calculated so that changes in the volatility skew are made responsive to how volatile and stable prices have been in the recent past. The authors state: "The essential property to capture is that there is a shift of the smile accompanying a change in the underlying price. Furthermore, the size of this shift should depend on the current market regime."

The authors conclude that tailoring the delta hedge to the market environment makes "a huge difference" to performance.

Of the three switching models they evaluate, one requires for inputs only the current volatility smile and a short history of ATM volatility, and so should be a fruitful area for application among practitioners and traders. **EM**

[1] This is not the first research into making volatility models responsive to markets regimes. As the authors note, Derman (1999) developed several models — sticky strike, sticky moneyness, and sticky tree (local volatility) — for evaluating options during trending, range-bound, and excessively volatile markets, respectively. But subsequent research on Derman's models found that sticky moneyness deltas were less effective than BSM and that the primary advance was using local volatility to hedge during very volatile markets.

References

Alexander, Carol, Rubinov, Alexander, Kalepky, Markus and Leontsinis, Stamatis, Regime-Dependent Smile-Adjusted Delta Hedging (September 23, 2010). ICMA Centre Discussion Paper in Finance No. DP2010-10. Available at SSRN: http://ssrn.com/abstract=1678460

Derman, E. "Regimes of Volatility." RISK, April 1999.

Expiring Monthly Interview:

Women in the Trading World

Mark D Wolfinger

On Dec. 28, 1967, Muriel Siebert became the first female member of the New York Stock Exchange. It was not easy for her to achieve that position. Trading at the exchange had been an old boy's network since its inception.

The experience turned out well: Siebert is one the Wall Street's success stories. To this day, she remains in the business as head of Muriel Siebert and Company.

Another year and a half passed before Carol J. Ovitz became the first woman member of the Chicago Board of Trade.

Today, women are playing an ever-increasing role in the trading world. With so much trading occurring in front of computer screens rather than on exchange floors, noses cannot be counted. From the retail end of the business, some women use family accounts set up in their husbands' names, once again making it impossible to make a realistic estimate.

If we do not have accurate statistics, we can speak with women from different ends of the business to gain some perspective. Each was very generous with her time and eager to help with the interview.

The Professional Options Trader: Linda Raschke

Linda Raschke, a well-known futures trader, was recognized in Jack Schwager's *The New Market Wizards* and is known for her own top-selling book *Street Smarts*. Also she was president of the American Association of Professional Technical Analysts.

However, it is her early trading experience as an options trader that interests us at Expiring Monthly.

Expiring Monthly: *When you began trading options on the Pacific Exchange in 1981, did gender play a role? Were you treated differently?*

Linda Raschke: If anything, being female was helpful. I had a boyfriend who was a respected trader down there, so I know that no one was trying to hit on me.

The options floor was a lot tamer than the futures pits—such as the S&Ps or eurodollars—and nobody ever tried to push me around. When times were slow, everyone joked with everyone. When times were busy, anyone could turn into a jerk, regardless of gender. Once, I got into a big yelling match, typical "F you" back and forth.

Then I grabbed him by his necktie. I think I won a lot of brownie points for that exchange.

The weasels were detested equally by male and female traders. Gender never came into the picture.

When I moved to Philadelphia, it was the same. You develop your own clique of trader friends, and that is who you hang with.

EM: *Were there many female traders?*

LR: I remember three other females on the Pacific Coast floor, and about the same on the Philly floor. There were lots of female clerks and keypunch operators, but they never talked to the traders.

EM: *Did you feel pressure to be better than everyone else, or did you just do your own thing?*

LR: I did my own thing. It is like playing golf. I know I am never going to be one of the best. I just try to improve my own pathetic score. There were better traders around and, everyone has to develop their own style.

EM: *Where did you get your basic options education? Were you self-taught?*

LR: I first watched a series on video tape (about option pricing) that First Options of Chicago had in their office. I took diligent notes. I think about 5% of it sunk in. It was a lot of learn by doing in those days. It was only after a year that the light bulb went off: I discovered conversions/reversals after a friend showed me how a box works. Pretty basic, huh?

From the **experienced** trader: "It was another 10 years before I started to feel really **proficient** in technical analysis."

From the **new** trader: "I love charts!"

EM: *How long did you remain in equity options? Was there a specific factor that encouraged you to move to trading short-term futures? Obviously, that was a winning decision for you.*

LR: I actively traded equity options for about eight years. Volume dried up after the crash of '87. I continued to trade them for another few years from upstairs [off floor] but started trading more and more futures. I gave up on options when the volatility completely died in the early '90s.

I traded the SP futures the first day it was listed. My boyfriend at the time was a pioneer in trading new products, so I sort of followed along what he did. There was another trader who was very good at trading them, and I could hear his fills over the loudspeaker while upstairs in the First Options office. I tried to figure out what he was doing (buying low, selling high!).

I figured out how to get fast quotes from the Quotrons on the floor—updating the ticks every few seconds instead of waiting for them to update every minute. I would punch the button (for quotes) repeatedly. When they stopped going down, I bought. It was called hamster trading. That trick does not work anymore.

EM: *How did you get interested in trading?*

LR: When I was a kid, my dad had a few trading books in his library. One was on the Wall Street masters—Dow, Rhea, Gann, etc.—with a six-page blurb on each. That remains one of my favorite books. My dad had me look through stock charts to see if I could find something just breaking out. I did not know what I was doing, but it

was the one way my dad spent time with me. He did not like to listen to my piano practice.

When I went to college, I was on the board of directors of a student fund. We met once each week and made decisions to buy or sell mostly based on fundamentals. I still did not know what I was doing, but it was cool to be around. When I graduated college, I went to San Francisco to become a stock broker. Nobody hired me. It was only by chance that I stumbled across the Pacific Coast Exchange. I did not know one existed in San Francisco.

EM: *Did you find success right away, or was it a struggle? Did you adopt specific strategies or, as a market maker, did you do the best you could with the trades that came your way? Were you aggressive?*

LR: I made money steadily for a few months. Then I blew out by selling straddles on City Service before it was bought out. Lesson learned: Overpriced options are overpriced for a reason. It took me five years to pay back my debt to First Options.

I was too aggressive when I first started. But I was not smart enough to know that. When I went to Philadelphia, I found a group to back me. They were very conservative and lectured me daily. No negative gamma for me! I have always erred on being more aggressive than conservative. It worked in my favor, but as I get older, I continue to get more and more conservative probably because you learn more about risk with each year.

EM: *Did you find futures trading to be very different, or do you believe that trading is trading?*

LR: Futures trading is very different. Options involve more strategy and setting up certain plays. It is more like a chess game. I see a lot of options traders playing games like bridge. I see a lot of futures traders playing blackjack. For me, futures trading is 100% directional and very technical.

Once upon a time, options trading was a pure arbitrage game to take advantage of slight mispricing. That edge is not there anymore. Nor is there the edge of one-eighth-point wide spreads. On the other hand, there is better liquidity than years ago.

I like trading options on some of the big cap, blue chips and some of the highest volume stocks. It's easier to build the size I want to trade using options, rather than stock. I no longer like trading stock. Everything is algorithm driven. With futures, I can trade decent size with one mouse click, with no slippage. That is my ideal market to trade.

By the way, it was only after six years of full-time options trading that I started to get into technical analysis. I think it was another 10 years before I started to feel really proficient in technical analysis. I still learn new things every day in this field.

People have to appreciate the years of study and practice it takes to get good at something. You can take courses and read all the books you want, but it is hard to speed up that learning curve other than by making your own best guess as to how things are going to unfold the next day.

EM: *Any special advice for options traders?*

One of the best lessons I ever learned from that Philly group is never get too big that you can't get out. That could be a problem in the options pit when everyone has the same position. The volatility would start to drop and everyone would slowly start to bleed to death. There was nobody to dump your options on. So to this day, I say that it is always easy to get into a position, but you have to be able to get out when you want to get out.

"We must use our **emotions to our advantage.**"

Make sure you are trading a market where liquidity is there if things start turning sour.

I learned my lessons the hard way, and usually I had to repeat the same mistake three dozen times before it sunk into my thick skull. It is a wonder I am still around. It shows just how much opportunity there truly is in the markets that a trader can make so many stupid mistakes but still be in the game.

Just don't make stupid mistakes in size. Leverage is really the name of the game. Tee it up only when something starts going your way. Don't add to losers. I could say that till I am blue in the face. Traders will get away with cost averaging nine out of 10 times. But it really develops the worst habits.

The Professional Futures Trader: Denise Shull

One of Denise Shull's claims to fame is her opposition to a long-standing belief that emotions get in the way of trading. In her forthcoming book *Market Mind Games,* Shull shares her belief that when it comes to investing, we are taught the opposite of the truth. Specifically, we're taught to conquer our emotions, and Shull thinks that we must use our emotions to our advantage.

EM: *How did you get started trading?*

DS: A Chicago friend was a former CBOE and Chicago Mercantile Exchange floor trader. He thought I would be good at trading, but I didn't want to go on the floor with the pushing and shoving. In 1994, I accepted an opportunity to trade at one of the early upstairs prop firms where I traded index futures full time until 2006. I came to New York City after being hired to set up a prop desk within a market-making firm.

My father paid close attention to stocks, but he only bought and never sold. I was always interested in the markets. Being able to trade in and out within moments grabbed my attention and wouldn't let go.

EM: *Did being a woman make a difference?*

Denise Shull: It made no difference to me, but the owner of the prop firm told me that I had the best instincts he had ever seen. However, he did not think a woman could trade because she would be too emotional.

He wanted me to take more risk and one day directed me to buy 5,000 shares of a stock that I strongly felt had broken down. I did it because he was giving me capital. You can guess what happened. I changed firms because I was more of a momentum trader as opposed to a reversion to the mean (case in point above) trader.

At the new firm, I felt much more on the outside. At my previous firm, all the guys were great, and I felt absolutely no issue with being a woman. The trading world is a total meritocracy.

EM: *How long after you began trading did you recognize that your major interest was in the behavioral/mental/risk aspect of the business? Or did that come first?*

DS: I studied the neuroscience of the unconscious mind prior to becoming a trader, so it was always there. I read all the trading books based on the theories of cognitive psychology—intellect over feeling/emotion. I knew the brain didn't work that way.

In 2003, I was asked to rewrite my master's thesis for publication, and I was able to add lots of human research that showed that we need emotion for a decision, we can't make a decision without it.

So I decided to write an article and give a talk for traders saying that. Afterward, the phone just kept ringing because my article resonated with so many people.

> "The owner of the prop firm **did not think** a woman could trade because she would be **too emotional.**"

EM: *Do you have any insight as to why so few women become traders?*

DS: When it comes right down to it, women are not exposed to it. There is also the misunderstanding that trading is a numbers/probability game, where in reality it is a perception game and the numbers are simply "hints." That would naturally weed out lots of women because, as we know, girls are discouraged from studying math.

EM: *I note that you have an outstanding track record when coaching traders. Do you have any difficulty applying your principles to your own trading?*

DS: Teaching my ideas to others improved my own trading—by a lot! And you have to take into account that my theory is to use emotions as both a risk-management tool and a strategy tool. But also as an information tool—feelings and emotions as data.

Women are better at learning to read that data because they don't have to unlearn the assumption that allowing emotions to influence decisions is bad.

EM: *Do women adapt more easily than men when it comes to improving their performance as a trader?*

DS: Honestly, I am not sure I have a valid sample. Of the maybe 1,000 traders I have talked to or who have bought my courses, maybe 25 of them are women.

EM: *An amazingly small number.*

DS: Theoretically, women should do better because women are slightly less subject to the fear of missing out than men.

But I find certain personalities just get it once they hear it. It has more to do with how a person's parents handled emotions than male/female in my opinion.

EM: *That says a lot.*

The Young Professional Eurodollar Trader: Anonymous

This trader prefers to remain anonymous. She is not an options trader, but has insight into topics of interest.

EM: *How long have you been in the business?*

Anonymous: Five years as a trader and three years earlier with a now defunct broker.

EM: *Do you have any experiences that are gender dependent?*

A: People often ask what it's like to be a woman who trades for a living.

EM: *Do those questioners make you feel out of place, why you are in a man's game? Or do they ask your opinion as to why there aren't more women traders?*

A: Both. Many people I meet never knew that trading could be a profession. And those who do, think of it as a man's game as when it was conducted only in the trading pits.

When people get it that I'm a trader, they typically ask, do you mean like trading on the Chicago Board of Trade? When I tell them yes but that I am not *on* the trading floor, the follow up is, then what do you *do*? The concept that I do the same thing, but from behind a trading screen, is foreign to them. They've seen images of pit trading in movies, but screen trading is new to them.

I know a woman who worked on the floor. She was a clerk in the late '70s/early '80s. She was harassed all the time, and guys would grab her ass. That makes it easy to understand why women would not want to be there. I wouldn't.

EM: *I'm sure some of these people must trade for their own accounts but still cannot conceive of it as something a person could do as a profession.*

A: Exactly. Most of the guys who are still on the floor are the old timers. There are newer, younger traders,

but there is an obvious age gap. I believe the younger men would be more tolerant of women.

EM: *What are you trading?*

A: Interest rates, eurodollar. I see trading as game theory, rather than playing with complicated equations.

EM: *Are you working for a prop firm?*

A: It's more sophisticated than that. There's more going on these days, and the firms must keep up with advances. It's nothing like the original prop firms.

I'm the only female trader at my firm. And I'm the only one my firm has ever hired. In fact, there had been only one previous female applicant, and she was totally unqualified. She wanted the job because she could make a lot of money, and that's not the right set of qualifications.

EM: *Do the men make the trading room uncomfortable for you?*

A: Nothing bad is directed toward me. But these guys have big egos and can be pretty arrogant at times. And when they are making good money, those personality traits are enhanced. It's not a place where most women would feel comfortable or be welcome.

Language is a problem. The men are not trying to be insensitive. It's just a locker room attitude. One time I had to have a little talk (I yelled at him) with one guy who made me uncomfortable. I told him that if he didn't stop, then I'd act like a girl and go speak with the managers. That did the trick; he toned it down.

Sexual harassment doesn't exist in the actual harassment form, but there's a lot of stuff that's in the air. Early in the game, when the men swore, they would apologize, something they would not do for other men. So there are different standards for guys and gals.

Other women traders I know hardly ever speak to the guys who trade with them. That's not for me; I'm friends with some.

EM: *Does your firm offer coaching or make an effort to improve the performance of their traders?*

A: In my previous job, I was a senior trader and part of what I did was trying to make other traders better. They do train new traders, but no coaching. We do have weekly strategy meetings, and we get a lot of technology support.

People must (and do) have excellent risk-management skills these days. However, sometimes traders are forced to remove a risky trade immediately.

I've taken some big losses (and big wins), and have come to respect risk. Trading is a hard job. I have the personality for it, but not everyone does. Personality does make a difference, and some people know they don't have what it takes—too stressful.

EM: *Do you have anything to say to women to encourage/discourage them from becoming a trader?*

A: I think it's a great lifestyle choice for women. Nowadays, it's expected that women be supermoms—job and family. In my opinion, trading is the one job where a woman can do just that.

EM: *It seems to me that you are a very satisfied trader.*

A: Yes. It's challenging. It's fulfilling. The number of hours worked is not related to income. Women have natural temperaments and must avoid being upset by the rowdy guys at any firm.

I think hiring people out of college is a good way to find traders. In fact, most grads don't know about trading and would not have any

preconceived negative notions about the business.

Women are organized and can multi-task well. Those are good traits for a trader.

I see one advantage to being a woman. Guys are willing to talk to me about their strategies. They don't feel as competitive with me.

The Work-from-home Trader: Maureen Christensen

In response to an e-mail inquiry, she just told her story.

Maureen Christensen: I learned options from the Najarians (Pete and Jon). I attended one of their conferences in March 2009, and about 5% of attendees were women.

I have come to love trading, and I'm always happy to talk about it, especially with someone who understands what I'm talking about.

I am frequently asked to teach friends how to trade. I decline, but the most interesting question was asked at a party. In all seriousness, a man asked: "Could you please explain the last 20 minutes of 'Trading Places' to me?" And I did.

I had to snicker when I read your comments about leveraged ETFs [exchange-traded funds]. I had a genuine, certified financial advisor recommend DIG (or was it DUG?) [These are leveraged oil and gas ETFs] as an investment. When I eventually took my money back from him, I gave him a quick education on leveraged ETFs. And as I was walking out the door, my parting comment was, If you ever want me to run your money, give me a call.

EM: *How did you get started?*

MC: 2007: I retired, with a lump sum pension after a lifetime in information technology—programmer, systems analyst, project manager, all that stuff. The only experience I had with financial markets was to allocate funds in my 401(k). Gave my pension money to a financial advisor and rolled my 401(k) into an IRA.

The advisor took my cash and put it into a pile of mutual funds on the day the Dow hit 14,000.

EM: *And for this he charges a fee?*

My husband and I were getting concerned as we watched our funds evaporate. One day, we started following Jim Cramer, watched his show together every day; then started watching "Fast Money."

2008: Kept hearing Pete Najarian talk about options on "Fast Money." My husband encouraged me to learn about options. I downloaded the free material from Pete's OptionMonster website. I read it all, and I just didn't get it.

I vividly remember this August day. I woke up thinking that if I didn't do something soon, I was not going to be able to stay retired. I got out the options materials, and this time I understood it. Started paper trading, waiting to be approved to trade options in my IRA.

Made my first real trades; bought BAC calls. Made money. Shit, this is fun! First five or six trades very profitable, then I got cocky, and had some losers. That destroyed my confidence, and I wasn't sure what to do next.

I was getting frustrated. One evening in February, I just wished I could sit and talk with Pete for an hour. I knew I had so much to learn, and I just didn't know where to go next.

Then I got an e-mail from OptionMonster, announcing a one-day seminar in New York. I handed it to my husband, and said, "I need to go to New York." He read it, and said, "Go." (We live in Portland, Oreg.)

I was in the plane, watching CNBC, when the S&P made the 666 intraday low. The conference was incredible. I came home so energized and with so much new information. And it was the beginning of what have become special friendships.

Today, my understanding of options-trading strategies continues to increase and evolve. During the market recovery in 2009, I made a lot of money with diagonal call spreads. (I thought it was my brilliant strategy, but looking back, I see that any idiot could have made money in that market). I've been to three more of their conferences and always come away with new ideas and inspiration.

I'm now working on income strategies: butterflies, condors.

I've populated my stock portfolio with high-dividend payers, and I probably don't have to be trading options. But I've become addicted, and I've taken it as my personal challenge to excel. And I am not under pressure to make money trading options, it gives me opportunity to study, analyze and hopefully do it right.

EM: *How did you make your picks?*

MC: Technical analysis and charts. I love charts!

Note from Wolfinger: *A big tip of my hat to Christensen. She opened my eyes. My original perspective: I could not imagine a worse way to get started and yet she succeeded. Watching Cramer and "Fast Money" would not be on my list of the best 10,000 ways to learn what you need to know about trading. Coming home "energized," learning to love charts so quickly and buying options are not good ideas either.*

However, her chart setup is very professional. Maureen has 4 computers and 5 monitors. She follows the price action of significant assets and 'has her act together.' I still have a problem with a beginner being proficient with technical analysis, but she has me convinced that she is doing the right thing, and earning extra cash because of it. But 'Cramer and Fast Money' still give me the shakes.

The Commodities Broker: Carley Garner

She and her business partner run the brokerage firm DeCarley Trading.

EM: *What's your background? Were you ever a floor trader?*

Carley Garner: I've never been a floor-trader. I've been a commodity trader for seven years—all from Las Vegas—and I began right out of college. The pits still exist and are not nearly as wild as they were at one time. It's shifting to electronic trading. The futures are already primarily electronic, but options are still open outcry.

EM: *What's your overview of commodities trading?*

CG: My job as broker is to provide advice when asked, but I cannot tell my clients what to do. Some tend to be aggressive but not all. Others are conservative, have patience and put the odds of success on their side.

It's an interesting game. Those who play successfully do very well. Unfortunately, the odds are skewed—more losers than winners.

EM: *Was gender ever an issue for you?*

CG: This is not an environment for women who cannot be around a very testosterone-driven environment. Men in this business are egotistical (necessary for traders). The alpha-male thing is more abundant in commodities than in other trading areas. The leverage, the excitement attracts that type of person.

From my perspective, gender is a double-edged sword. As far as bringing in business from clients, being female has worked in my favor. Some male clients want to work with women, saying that they don't trust men.

EM: *Anything else to say about DeCarley Trading?*

CG: We publish newsletters. Two women, one firm, and we make some bold predictions in our newsletters. When wrong, they let us know about it, and I get a lot of hate e-mail. That's OK. It's part of the business. It is what it is.

EM: *Your clients? Do they trade options?*

CG: We encourage clients to sell premium. You can be wrong and still come out ahead. We recommend naked option selling. We do not sell and hold to expiration. We actively trade countertrend options. We look for over-priced options with an implied volatility that jumped. In an ideal world, we like to be out in a day or two. We are into a single side—no strangles.

EM: *Do you have many female customers?*

CG: No. An extremely low percentage of our customers are women. I don't know whether that is because we are a woman-owned firm. My estimate for the industry is that 5% to 10% of the traders are women.

I've discovered that the wives of our customers tend to be super bitter.

We try to teach our customers that they do not have to use leverage. We try to educate and then it's up to them.

Summary

The idea was to find some women in the trading business and listen to their stories about how difficult it was to get started in the business due to the 'old boy network that would surely make it difficult for most women. On the contrary, I discovered a handful of women who were pleased to take the time to offer comments and describe their history in becoming involved in the markets. And no one—from the veteran to the newcomers—faced any gender difficulties or prejudices. To this writer, that means we should expect more women to become part of this exciting business. EM

PART TWO: GAINING AN EDGE

UNDERSTANDING ORDER FLOW

Mark Sebastian

Last issue, I discussed the process of reading order flow. Although many may find the process interesting, they may not see all of the uses of reading and following large customer order flow. For those who learn to master the process, it is quite possibly the most powerful tool an individual trader can use to gain an advantage.

As individual options traders, we often lack research information. As Jeff Augen discussed in the March 2011 interview, individual traders do not have the ability to fly to China to see Apple Corp's production facilities. We do not have the resources to obtain the information that falls inbetween insider trading and public research.

The big houses and hedge funds have this research at their fingertips; this is why they win more than the rest of the general public. That information is certainly far superior to that which is released to the general public.

OI	Volume	Delta	IV	Bid	Ask	Strike
5895	11850	27.65	42.35	0.70	0.85	BMC May21 52.5
5190	11544	15.04	45.71	0.35	0.40	BMC May21 55

FIGURE 1

FIGURE 2

Because public data is so bad, I often tell my students to do their own research. At this point, traders have two options. The first is to conduct their research the really hard way. This means reading everything, talking to everyone a trader can to learn the company backward and forward.

The second option is to steal from the other guys. This is where reading order flow comes in handy. By using one's ability to analyze order flow, one can use it to find trades to initiate, confirm one's suspicions and structure the trade itself.

Finding a Trade

As a writer for TheStreet.com, one of my jobs is to find an actionable idea on a near daily basis. I do not care who one is, without a massive staff of researchers, finding a trade with good odds of success five days a week is almost impossible. Despite my staffing deficiencies, I tend to find some winners on a semi-decent basis. This is because the majority of my trades are piggybacked on someone else's research.

One good example in which I used order flow to develop an idea was in BMC Software. May 3 I was looking for an interesting trade idea. I went to my favorite scan, which is call-to-put ratio. On this particular day, I noticed that BMC had traded a massive amount of calls relative to puts.

Upon further investigation, I found that BMC does not have a large amount of paper flow in its options. This made the call volume even stranger. It turned out that almost all of the volume was on two strikes and had been originated by one customer.

A customer bought more than 10,000 of the $52.50/$55 call spreads. Making the trade more intriguing, this was a day ahead of the earnings report release. I decided this would be a good trade to write up for TheStreet.com.

In the article, I admitted that I knew little to nothing about BMC, but I felt perfectly comfortable putting together a bullish trade (although I lambasted the

customer for paying at least 10 cents too much on the trade and poorly structuring the trade).

What made the trade intriguing was that one trader was willing to bet about 10% to 20% of the total option open interest in one direction. That the trade was structured (albeit ill conceived) completely on out-of-the-money calls made the trade even more appetizing.

I decided to put this trader's good research and bad strike selection to my advantage and piggyback the trade. Although I did not go with the same strikes the trader selected, I did bet in the same direction. (I became long delta and short vega.)

When BMC announced its earnings, the stock rallied significantly and the trade I suggested collected a nice profit.

In this example, I knew little about the company but was able to profit because I recognized a trader who had a major axe to grind and did not mind paying up to get it done. I did not just copy his trade, but I did develop a trade completely based on someone else's belief.

This can be profitable but dangerous. Before trying to do this, traders need to make sure they know exactly what the customer was trying to accomplish with a particular trade. Lucky for me, I do not know that I have ever seen an OTM 2.5 vertical call spread used as a hedge for a short.

Trying to piggyback a hedge or a trade that is really a bet in the opposite direction can be a dangerous proposition. This approach should only be used by the most experienced options traders.

Confirming

The next way option traders can use customer order flow to their advantage is to confirm one of their own trade ideas or, in some cases, learn that the whole world disagrees with the analysis.

Several months ago I was mentoring a client who was giving me a bit of a sob story. In 2009, the trader had been successfully selling premium into Amazon's earnings. Quarter after quarter the premium was bid up and then earnings fizzled. Thinking he had found a consistent winner, the trader sold a large amoutn of premium in Amazon ahead of its October earnings announcement. If only this trader were versed in reading paper, he might have had a different idea.

As the trader told me this story, I quickly looked at the November option montage from the day before earnings. Not only had call trading far outpaced put trading, but almost all of the trading was buyers of calls.

Traders were buying quite far away from where Amazon was trading at the time (around $94) as well. One trader in particular purchased close to 8,000 of the $125 calls for about 8 cents. That day in particular, order flow was

OI	Volume	Delta	IV	Bid	Ask	Strike	Bid	Ask	IV	Delta	Volume	OI
527	59	93.83	54.70	18.80	18.95	ZQN Nov21'09 75	0.38	0.42	54.19	6.01	5895	2429
720	242	87.85	52.24	14.30	14.45	QZN Nov21'09 80	0.88	0.92	52.05	12.08	7132	6619
1258	775	78.20	50.32	10.25	10.40	QZN Nov21'09 85	1.82	1.83	50.39	21.83	14561	8184
5825	4182	64.90	48.86	6.85	7.00	QZN Nov21'09 90	3.40	3.50	49.03	35.13	11566	7517
10717	11502	49.47	47.83	4.25	4.35	QZN Nov21'09 95	5.75	5.85	48.00	50.51	3092	4457
14904	19070	34.40	47.14	2.46	2.50	QZN Nov21'09 100	8.95	9.05	47.15	65.60	368	1801
7215	13343	21.91	46.81	1.33	1.37	QZN Nov21'09 105	12.80	12.95	47.08	77.94	116	505
5456	7867	13.12	47.09	0.69	0.71	QZN Nov21'09 110	17.15	17.30	47.65	86.56	178	360
1294	3179	7.61	47.81	0.36	0.37	QZN Nov21'09 115	21.80	22.00	49.77	91.46	78	519
469	2180	4.45	49.03	0.18	0.21	QZN Nov21'09 120	26.60	26.80	54.77	93.41	36	102
285	8624	2.52	49.96	0.09	0.12	QZN Nov21'09 125	31.55	31.70	61.50	94.06	45	422

FIGURE 3

FIGURE 4

almost completely pointing toward the stock reacting to earnings in one way. Major paper was betting that the stock was going to go up and go up hard. Needless to say, they were right.

My client got completely worked over, losing a good portion of his trading account in one fell swoop. I felt really bad for him. In the end though, he had chosen to enter a major short premium position without readily available information. Moral of the story: If there are many big orders in one direction, do not trade against them.

When I am constructing a trade either into earnings or simply because I have an axe to grind, one thing I always take the time to review is what the major orders have been over the past few days. If I think a stock is going to go down but all I see is put selling and call buying, I typically rethink my strategy.

If on the other hand, I can see puts being bought in droves, I feel much more confident about my approach. In fact, I can usually use order spikes to create a trade with true edge.

Choosing the Right Strikes

One of the best ways to use paper flow is to construct a trade. Typically, the skew curve is smooth, meaning the volatility spread from strike to strike is somewhat even. Likewise, the spreads between months are usually somewhat even. That is not always the case, though.

We all know that implied volatilities move based on supply and demand. Greater demand or over supply on one strike or another can cause a curve to have a weird shape at given times. This is exactly when to pounce on a trade. Here is a great example.

A trader is somewhat bullish about the KBW Bank Index (KBE) and is looking for the right chance to get into the trade. On a given day, the trader notices a huge buy on the July 25 calls, with the stock trading $23.55.

Looking at the order, the customer bought these calls on splits, paying 17.5 cents a contract; this is information the trader can now use to his or her advantage. Looking at the skew curve the trader notices something that is not right.

The customer has bought so much of the $25s that it has forced the IV of the $25 calls higher than the IV of the $24 calls. This is where savvy traders make their money, because they can construct a position that is bullish and allow them to sell a higher IV than they are buying.

In the example, the trader could in theory buy the $24 calls for 45 cents and then work to sell the $25 calls at 20 cents, knowing that he can sell them at 15 cents if the trader must. This creates a one-point call spread that has a 40% chance of ending up in the money for which the trader pays only 25 cents or 30 cents.

This is definitely a trading edge, as normally a call spread with a 40% chance of working should eat nearly 40% of the premium in the vertical. Basically, the spread should cost closer to 40 cents. This is something market makers try to do all the time.

OI	Volume	Delta	IV	Bid	Ask	Strike
83		64.05	28.06	0.90	1.15	KBE Jul16 23
7530		41.23	25.11	0.40	0.50	KBE Jul16 24
1156	28600	19.64	25.78	0.15	0.20	KBE Jul16 25

FIGURE 5

Is that 5 cents or 10 cents of edge a big deal? In the short run, no. But if done consistently, an extra 5 cents per trade adds up fast.

Improve Your Skills

This is actually just the tip of the iceberg when it comes to following paper. There are so many nuances to learning what the customer is trying to do and why. For those who become good at reading what is going on in the pits there are some serious chances to improve one's trading significantly.

The key is to dissect and read. Great resources are available that can help you learn, including Expiring Monthly. Take the time, learn the skill and become a better trader. EM

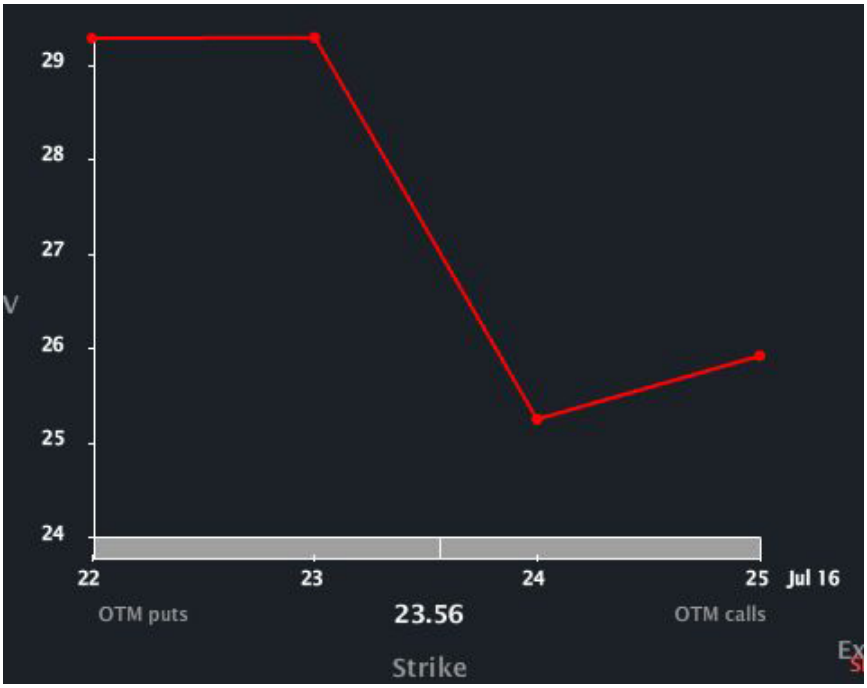


FIGURE 6

Understanding the Difference Between
Volatility and Price Movement

Don Fishback, guest contributor

The combination of the Arab revolt in North Africa and the tragedy of the Japanese Earthquake caused volatility to return to center stage. There have been countless articles about volatility. The stories that have caught my attention are those discussing the accuracy of derivatives that have volatility forecasts embedded in them. For instance, stock and stock index options have what's called implied volatility. There are also derivatives devoted to guessing the implied volatility of S&P 500 index options. Then of course, you have actual volatility, which is also known as realized volatility, statistical volatility and historical volatility.

I've written about this before, but after seeing what's in the news and in recent research, it bears repeating: volatility and movement are two different things. When an individual trades options, more often than not, the *movement* of the asset is more important than the volatility. It almost sounds heretical to say that, but if you read on, I think you'll see what I mean. For instance, when trading options, the strategy will have a breakeven price. The breakeven is the price where, if the underlying asset price exceeds that threshold breakeven point, the strategy is either profitable or unprofitable. If you're holding the position till expiration, it does not matter what the volatility of the asset is. The only thing that matters is whether the breakeven price was exceeded or not. [We'll look at what happens if you're planning on exiting a position prior to expiration at the end of this article.]

We can illustrate the difference between volatility and movement in a variety of ways. Let's start with the simplest. Let's say you have a stock ABC that goes from 10, up to 11, back to 10, back to 11 and so forth for a couple of weeks in a row. There is another stock XYZ that goes up 10 % a day, each and every day for two straight weeks.

Here's how those two would compare.

Day	Stock Price	% Change	Log Change	Std Dev	Volatility
0	10				
1	11	10.00%	0.0953		
2	10	-9.09%	-0.0953		
3	11	10.00%	0.0953		
4	10	-9.09%	-0.0953		
5	11	10.00%	0.0953		
6	10	-9.09%	-0.0953		
7	11	10.00%	0.0953		
8	10	-9.09%	-0.0953		
9	11	10.00%	0.0953		
10	10	-9.09%	-0.0953	0.1005	161%

TABLE 1 *Stock ABC*

Day	Stock Price	% Change	Log Change	Std Dev	Volatility
0	10				
1	11	10.00%	0.0953		
2	12.10	10.00%	0.0953		
3	13.31	10.00%	0.0953		
4	14.64	10.00%	0.0953		
5	16.11	10.00%	0.0953		
6	17.72	10.00%	0.0953		
7	19.49	10.00%	0.0953		
8	21.44	10.00%	0.0953		
9	23.58	10.00%	0.0953		
10	25.94	10.00%	0.0953	0.0000	0%

TABLE 2 *Stock XYZ*

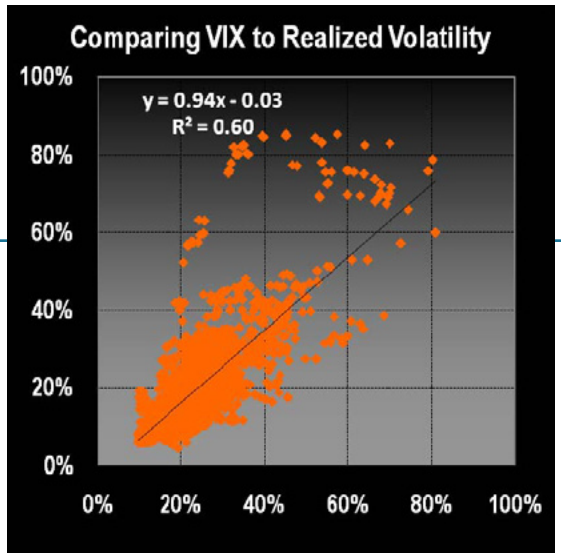


FIGURE 1

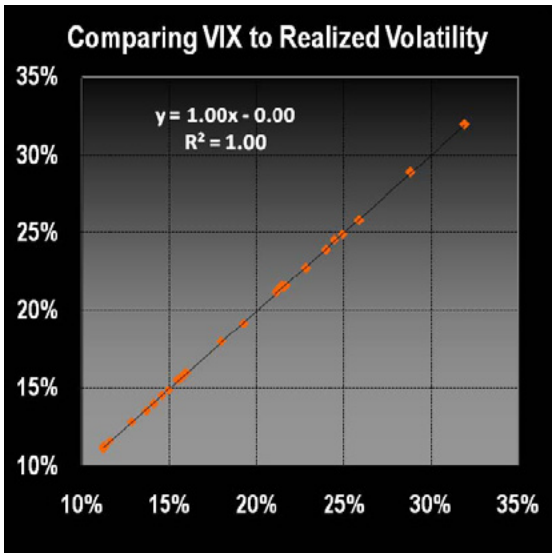


FIGURE 2

Recall that volatility is equal to the annualized standard deviation of log returns. XYZ climbs from $10 to $25.94. That's a net price change of 159%. Yet the volatility is zero because the returns don't deviate. ABC, on the other hand, is locked in a range between $10 and $11. The net price change of the stock over the two-week period is 0%. But because the fluctuations are back and forth, the standard deviation is high, which means the volatility is high.

In the case of ABC, if your forecast was for volatility to be high, you'd be correct. If, however, you implemented an option strategy designed to profit from a rise in volatility, such as buying a straddle, you'd probably be out of luck. That's because the *movement* of the stock wasn't very big.

Clearly, volatility and movement are two different things.

The differences between the different types of volatilities and movement can also be illustrated by comparing implied volatility, realized volatility and movement. We're going to use three measuring methods. The VIX is the CBOE Volatility Index, which is a weighted measure of the implied volatility of constant 30-day S&P 500 Index options across the entire spectrum of strikes. We're also going to look at the daily statistical volatility of the S&P 500 Index over the course of a month. Finally, we're going to look at the magnitude of the moves that the S&P 500 Index makes in a month. This first chart compares the VIX to the realized volatility of the S&P 500 during the 30 calendar day period after a VIX reading. For instance, if the VIX is at 25% on February 1st, we compare that to the actual volatility over the next 30 days. The x-axis is VIX, the y-axis is the realized volatility over the next 30 calendar days. I've also drawn a trendline based on a linear regression.

You can see that there is a relatively strong relationship between the level of VIX, and what happens over the next 30 days. But it's clearly not perfect. If it was, then the equation would simply be $y = x$, and the R^2 would be 1.00.

What we're going to do now is filter out all those instances where the implied volatility differed from the realized volatility. What we'll be left with is only those instances where the one-month implied volatility matched the realized volatility over the subsequent 30-day period.

This graph shows all instances where implied volatility was right about what the level of realized volatility would be. In each case, the expected level of volatility implied by the index options was the volatility that was realized. The volatility prediction was perfect.

But what about the movement? What if you bought a straddle, or sold a credit spread, where your profit and loss is based by whether the asset moves beyond a

breakeven price? The magnitude of the underlying asset's price move is what determines your success or failure!

This next chart provides an illustrative answer to those questions. It takes the datapoints from the chart above (when VIX perfectly forecasted the realized volatility) and performs a movement analysis. As before, the x-axis is the VIX. The y-axis is the absolute value of net change of the S&P 500 over the next month. If the S&P 500 gained 5% over the next month, the value would be 5%. If it lost -8% over the next month, the value would be 8%.

Far from perfect, this illustration shows that sometimes, even though the volatility forecast was always dead-on perfect, the actual magnitude of the S&P 500's price change was sometimes completely different! Three of the most vivid examples are found near the bottom of the graph between 20% and 25% on the x-axis. In those three examples, the VIX was around 22%. But the net movement was very small. What this tells us is that those three instances were more like Stock ABC, where the stock just vacillated back and forth.

The next two charts take things a bit further. As before, we first selected only those instances where VIX correctly forecasted the realized volatility over the following month. We then compared the VIX to the *maximum* move of the S&P 500 Index over the subsequent month. We looked at the maximum up move, followed by the maximum down move.

What these charts show is that, even though the implied volatility of the index options was perfect, the eventual magnitude of the underlying asset's movement was often very different.

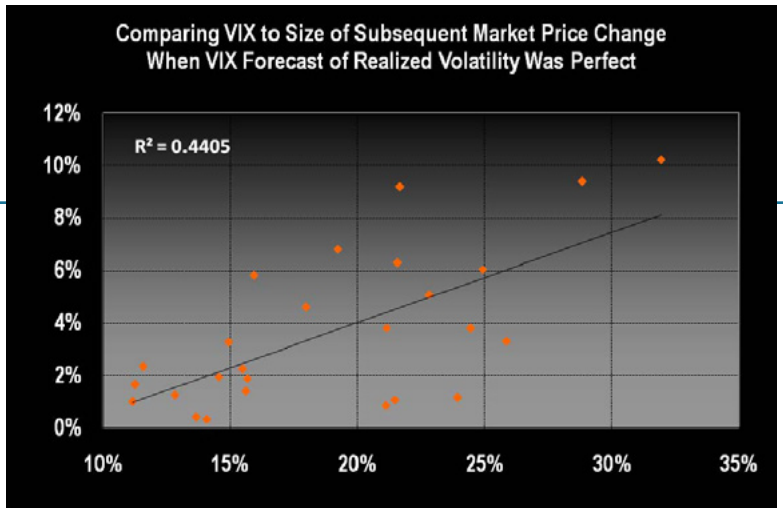
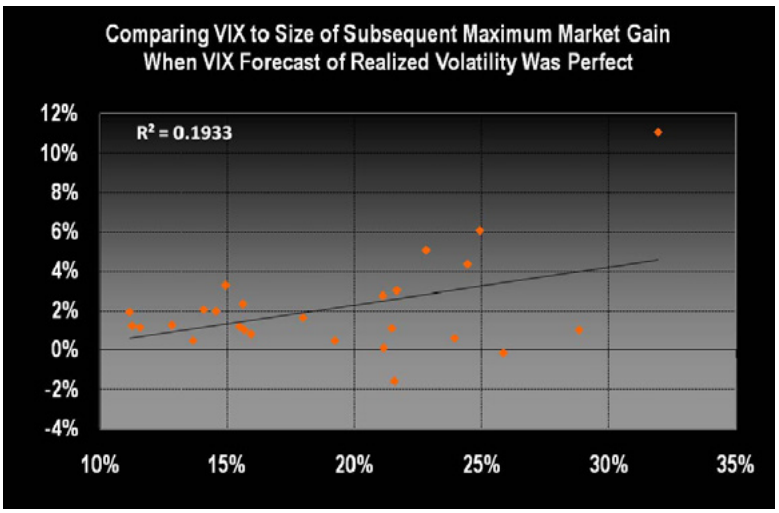


FIGURE 3



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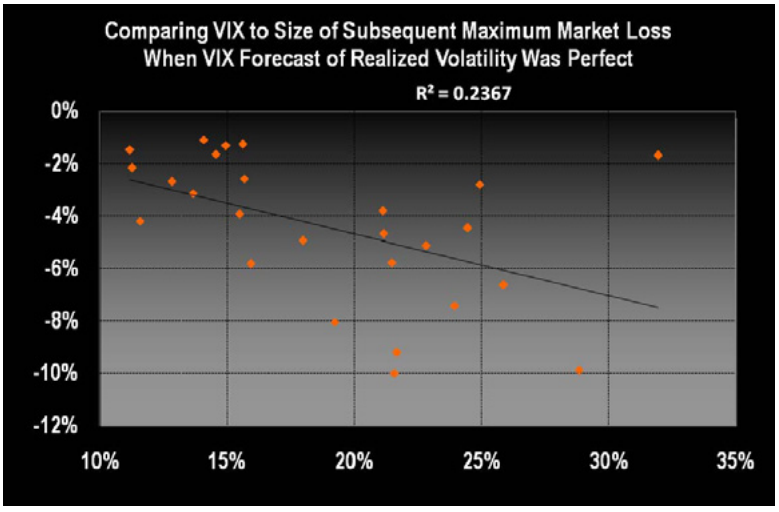


FIGURE 5

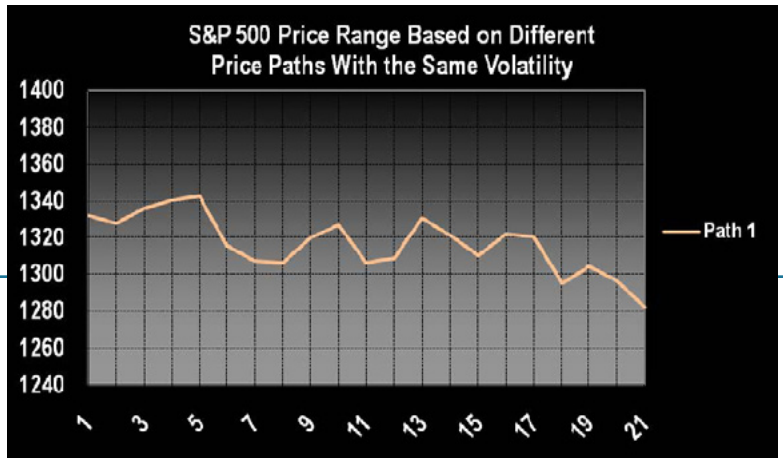


FIGURE 6

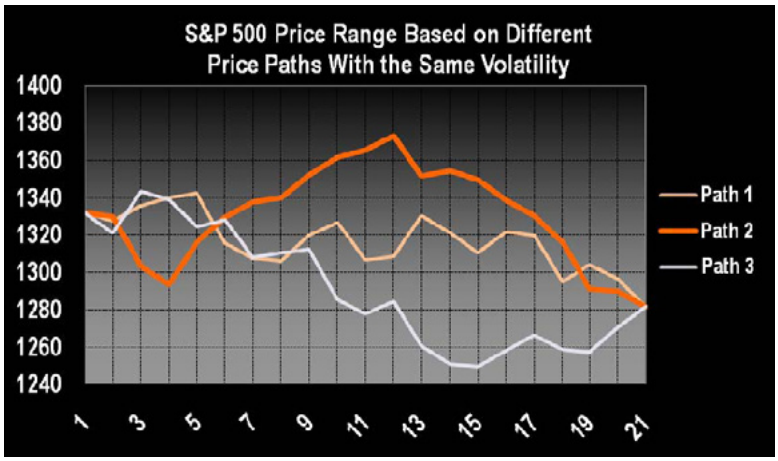


FIGURE 7

The last thing that will show why *movement* is so much more important to option traders than *volatility* is the action in the S&P 500 from February 14 to March 15. The dates don't matter. You could do this for any time period. I just chose it for convenience. This first chart is the actual path of the S&P 500 during that time period. The x-axis is the number of days.

The next chart mixes things up a bit. I created two hypothetical paths that the index could take, using the same log price changes, only I randomly rearranged the order in which those log changes occurred. Because standard deviation doesn't care about the order in which the price changes occur, the volatility of each path is identical.

Path 1 is the actual price chart of the S&P 500. Path 2 is a randomly generated path that happens to go down a little, then up, then down hard. Path 3 goes down relentlessly, then flat lines at a lower level before ticking up slightly.

The question I have for you is, do you think those paths make a difference to you as an options trader? If you're holding them to expiration, the answer is no.

But if you plan on taking action in between implementation of your trade and option expiration, then the path matters! One reason is because, even though volatility is the same, the price range for each path is different!

Of course, this is just scratching the surface. If you're taking action and buying or selling part or all of your position prior to expiration, then the expected volatility of the options at the time you're taking that action is also important. But that discussion will have to wait.

In the meantime, I want to emphasize that, when it comes to options trading, volatility analysis does not provide you with a complete picture. Measuring the magnitude of the underlying asset's price movement is often far more important. **EM**

Don Fishback has been a pioneer in the field of derivatives for 24 years. In the late-1980s, Don's original research helped create a revolutionary way of analyzing market sentiment. In the mid-1990s, Don developed an innovative way of valuing options that is based on measuring instead of modeling. Don is the President of Fishback Management & Research. After years of providing ground-breaking research for his customers, Don made available his analysis and commentary via his blog https://www.donfishback.com/blog/.

Which Is the Most Important Greek?

Mark D Wolfinger, Bill Luby, Mark Sebastian and Jared Woodard

Author's Note: *The contributing editors are doing something different this month. Instead of finding only one person with whom to disagree, Mark Wolfinger is taking on the entire staff.*

Among the five most commonly used Greeks (delta, gamma, theta, vega and rho), which is most important when trading?

DELTA

By Jared Woodard

Delta is the most important Greek because it is the one risk measurement that no trader can afford to ignore.

If you use options to express some view about volatility, it is essential to identify and then hedge away your delta exposure. In this way, the performance of your position is dependent on your volatility thesis, rather than on the underlying asset's price.

It's Fundamental

If you use options simply for the leverage, delta is important as well. Trading options as mere leveraged directional bets without knowing your delta exposure is like trading stocks or futures without knowing how many shares or contracts you own.

Just as you would not decide to buy or sell a stock and enter a random number of shares into your order ticket, no trader buying or selling options can ignore the delta exposure of the resulting position.

Delta is so important, it is the only Greek that has acquired a life outside the options markets. Banks and other institutions often refer to the "delta one" category of products: vehicles such as exchange-traded funds, futures, forwards and equity swaps that have no optionality and simply track the price movements of their underlying assets.

Chances Are . . .

Another fun thing about delta is that it'is a rough proxy for probability. That 10 delta call you bought so cheaply is cheap for a reason. It is highly unlikely that the option will be in the money by expiration, whereas a 50 delta option has an even chance of expiring in the money (ITM).

This is a useful heuristic in domestic life, too. For example, if your partner or spouse asks whether you are ever going to do that thing he or she has been asking about forever, you can cryptically answer that you would give it a five delta.

GAMMA

by Mark D Wolfinger

For traders who attempt to be as neutral as possible—all the time—no specific risk factor (as measured by the Greeks) plays a special role. Greek-neutral portfolios are intended to be as risk free as possible.

For the rest of us, one risk (or reward) possibility is typically key.

As a frequent iron condor trader, it seems that theta would be my natural choice. Collecting the daily time decay is the goal when using that strategy and consequently should be the natural choice as the most important of the Greeks.

However, skilled risk management is the secret to success with any option strategy. Thus, I am more concerned with what can go wrong than with collecting that time decay. Time will pass; theta will be collected. There is no need to dwell on it.

Quick Change

On the other hand, the danger of loss occurs when the price of the underlying asset undergoes a significant change. The problem for the trader is deciding when risk of loss has reached or is approaching the point where taking defensive action is necessary.

The nature of that action is beyond the scope of this discussion, but it essentially boils down to three choices: exit the trade, buy back a portion of the position to reduce size or make a change to the position by adjusting it.

From my perspective the most important Greek is gamma, which measures the sensitivity of the option delta to a change in the underlying asset price.

This is the enemy. Gamma tends to give plenty of warning that danger is approaching. However, if the trader is careless, gamma can sneak in during the night and wreak havoc the next morning. As traders, we must learn to recognize and heed the warning signs.

Get to Know Gamma

Gamma is a double-edged sword. It can attack from above and below. Short call or put positions are subject to attack, and that attack is without prejudice. Both option types are treated equally by gamma. (Calls and puts of the same strike and expiry have identical gamma.)

Gamma is essentially zero when the option is far out of the money (OTM) or deep in the money (ITM). As the underlying asset moves toward the strike price, gamma increases and reaches its maximum value when the option is at the money (ATM). As time passes or implied volatility changes, that maximum value for gamma does not remain constant. But it is still true that for the given conditions, gamma for a specific option is highest when it is ATM.

The Real Enemy

The real danger for traders occurs when they are willing to remain long delta in a falling market (or short delta in a rising market) and be unaware that gamma is about to become explosive and result in a much more sudden change in the position delta. In simple language, that means that losses suddenly exceed those estimated from the position delta.

One reasonable protection against such an occurrence is to pay careful attention to a risk graph. These illustrate expected profits and losses when the underlying asset changes price. A trader can easily see the effects of gamma when the profit/loss slope steepens.

That is the dangerous area for the short gamma trader. Holding unadjusted positions when gamma is explosive is one quick path to ruin.

Positive Gamma

Traders who have positions with positive gamma have the same considerations but from the opposite perspective. They benefit from owning options with explosive gamma because that translates into rapidly increasing profits. Managing those profits and deciding if and when to make a delta adjustment

to a positive gamma trade can be challenging.

By paying theta to own a positive gamma position, the trader neither wants to miss opportunities to sell delta on rallies and buy delta during declines, nor make those adjustments too frequently.

Owning positive gamma is more comfortable, depending on the theta cost, but these positions require active risk management, just as do their negative gamma counterparts.

THETA

By Bill Luby

When it comes to complex subjects, I find that a healthy dose of oversimplification can often come in handy. Sure, there are risks, but even a long academic paper needs a title and a pithy executive summary.

Such is the case with options Greeks—a subject Expiring Monthly will cover in much more detail in September.

As I see it, there are four key Greeks. With apologies to all those from Aristotle to Zorba, the most important Greeks are delta, gamma, vega and theta. In terms of my own personal oversimplification, these translate as moneyness, acceleration, implied volatility risk and rent.

When all is said and done, the majority of my trading consists of selling premium and then hoping I have sufficient theta to offset changes in the underlying asset. In this sense, my strategic approach is nothing more than what has aptly been described as "picking up nickels in front of a steamroller."

Sticking with that metaphor for a moment, while I would generally not advocate the idea of picking up nickels in front of a steamroller, what if I had an excellent approach to forecasting the speed of the steamroller? Even better, what if I could somehow make the steamroller smaller, slower or less prone to sudden acceleration? At some point, a superior risk-management approach would begin to make dodging the steamroller an appealing activity.

Managing Risk

Of course the flip side of the risk equation is how much I am being compensated for my efforts. What if, for instance, those were not nickels in front of the steamroller but quarters, dollars or even $100 bills? A good deal of literature on options trading delves into the details of risk management—essentially those risks associated with having a steamroller bearing down on you.

I like to look at the issue the other way around. Assuming certain risk management skills are available to apply to a certain position in a specified trading environment, what is the appropriate compensation to assume that risk? In other words, how much rent will I be getting paid while I wait to see if something goes wrong?

Theta is essentially the rent an options seller is paid for each unit of time. Because time is difficult for most mortals to manage, most traders tend to focus on delta and gamma. By focusing on theta, I have a tendency to think of the amount of risk I am assuming in terms of theta rent.

Avoiding Bad Trades

There is one other application of theta that I find helps my trading. As a habitual seller of premium, I like to structure my portfolio so that if the markets do nothing on any given trading day, the profits I make from time decay meet or exceed my daily profit target.

In such a portfolio, I have no reason to succumb to the desire to make something happen by initiating trades for which I do not have a sufficient edge.

In sum, by focusing on theta, I create a profit-and-loss context in which to evaluate risk and am able to craft a portfolio that discourages me from making bad trades.

VEGA

by Mark Sebastian

Vega is the key Greek because it measures sensitivity to the most important aspect of an option's price, volatility. If we think about the five main factors of an option's price—stock price, strike price, cost of carry, time to expiration and volatility—the only factor that we cannot quantify to within a penny or two is volatility.

Anticipate Ups and Downs

Because the implied volatility of options are constantly changing, often at an even faster rate than the price of the underlying asset, traders need to be able to manage the risk associated with swings in volatility. Any trader can tell you there is nothing worse than selling a call option at $1 and then buying it back for double the price with the stock unchanged or down.

If traders did not have vega, they would have no way to prepare for managing spikes and dips. It is the single best way to manage volatility risk.

For those trading a large position, several strikes, volatility, for edge or into special situations, there is not a more important Greek to consider.

Traders have dug into vega like no other Greek because of how complex it is. Traders "weight" their vega by putting them into buckets. And traders have developed derivative Greeks of vega such as vomma, sometimes called the gamma of vega.

The Final Frontier

Why the depth of interest? Because as bid-ask spreads have tightened and high-frequency trading has arbitraged away the value of technical analysis, the last horizon of trading edge is in trading volatility.

Trading volatility means managing vega risk. EM

LEARNING GREEK

DELTA The ratio comparing the change in the price of the underlying asset to the corresponding change in the price of a derivative. It is sometimes referred to as the "hedge ratio."

GAMMA The rate of change for delta with respect to the underlying asset's price. It is used when trying to gauge the price of an option relative to the amount it is in or out of the money.

THETA A measure of the rate of decline in the value of an option due to the passage of time. Theta can also be referred to as the time decay on the value of an option. If everything is held constant, then the option will lose value as time moves closer to the maturity of the option.

VEGA The amount that the price of an option changes compared to a 1% change in volatility.

RHO The rate at which the price of a derivative changes relative to a change in the risk-free rate of interest. Rho measures the sensitivity of an option or options portfolio to a change in interest rate.

—All definitions courtesy of Investopedia.com.

A Study in Minimalist Management

Dan Passarelli, guest contributor

The overall market was in somewhat of a slump May 18. The S&P 500 Index had been winding lower for a couple of weeks, but the market rose a bit that day. Volatility was slightly high across the board. And I had an itch to trade.

I was reviewing my usual suspects of stocks. One potential opportunity was 3M (MMM). It is a stock that in the distant past, I frequently used for direction-neutral income trades (iron condors, time spreads and the like). But 3M is not quite as good for direction-neutral trades as it had been in the past.

May 18, it was trending lower, like the broad market, and its implied volatility was slightly overpriced (per a volatility-chart analysis).

At this point, I was not necessarily bullish on the stock; but I sure was not bearish. The trade that came to mind? A bull put spread.

A bull put spread is when a trader sells a put (in this case, an out-of-the-money put) and buys a lower-strike put for protection.

The premise of such a trade is that if the underlying stock remains above the strike price and is still trading there at expiration, the spread expires and the premium received is all profit. If, however, the underlying stock falls below the strike price at expiration, the spread will have some value, but would lead to a loss if the stock price is below the breakeven.

The Trade Breakdown

With 3M trading around $93, I sold the June $87.50–$90 put spread at 38 cents. For this specific trade, the maximum profit is 38 cents, presuming 3M remains above $90 a share by expiration. The maximum loss is $2.12, which is the difference between the strike prices ($90–$87.50) and the 38 cents premium received. The breakeven is $89.62.

As long as 3M remains above that breakeven price, I would have nothing to worry about—theoretically.

All was good until June 1, when the stock dropped nearly $3 a share from $94.33 to close at $91.44. *Warning, warning. Danger Will Robinson.* 3M was still solidly above the $90 strike, but a trade that for a week or so felt like a layup was now starting to feel like one I was going to have to sweat out.

Feeling the Heat

And indeed I have had to sweat it out. Since June 1, 3M has bounced around in a $2 range. It has been even lower than it was on the precipitous drop June 1. It fell all the way to a low of $90.19 at one point. Oh, the options gods keep one humble.

The questions that may arise are, why has he not done anything, and when will he?

When I entered the trade, my plan was that the $90.10 level would be my trigger to possibly exit the trade. At that point I would have to make a decision.

The rationale for my decision as to whether to keep the trade as-is or exit it is rooted in what I call the would-I-do-it-now? rule.

Fish or Cut Bait?

Whenever traders decide to keep a trade or exit it, they necessarily go through the same thought process as one would if deciding to initiate a trade.

Traders consider the risk-reward from that point forward compared to the perceived chances of success. "Would-I-do-it-now?" implies that the trader imagines that he or she does not have the trade in inventory (and mentally/emotionally ignores any profits or losses thus far) and decides whether to do it now at current market prices.

If the trader thinks initiating the trade at current market prices makes sense

in terms of risk-reward and likelihood of success, then he or she should keep the trade. If not, the trader should surely close the position.

In the 3M example, the trade flirted with the $90.10 level, but it did not break through it. Thus, I stayed the course.

Tweak It?

Now you may wonder, where are the fancy adjustments I like reading about so much? Has this Passarelli guy never heard of adjusting? Well, I have. And I do, in fact, adjust. But I do so sparingly.

The fact is that credit spreads such as this are negative gamma trades. That means that when the market moves directionally against the trade (in this case, lower), gamma creates adverse deltas. So, here, when MMM moved lower, my spread acquired an increasing number of positive deltas.

The problem with certain types of adjustments (those that are designed to curtail losses) is that they neutralize deltas. If I were to implement a delta-lessening adjustment (such as rolling down a strike), it would for all intents and purposes lead to a negative delta scalp.

Rolling down a strike, for example, is closing the current trade (thus selling out my long deltas from the spread) and opening a new (long delta) lower-strike put credit spread. Selling out long deltas after the market falls is like buying stock and then selling after the stock falls—not necessarily a good trading maneuver.

So to that point, does that mean traders should never adjust? No, it certainly does not. Sometimes adjustments are necessary. Good adjustments (even those that negative scalp for delta losses) change the struggling position to better reflect the trader's new thesis.

Again, the trader effectively uses the would-I-do-it-now? Rule: I wouldn't want to make this (current) trade at current market prices. So what trade would I want to make?

When 3M fell, I racked up somewhat of a loss as a result of delta. Had I chosen to close the trade or adjust selling off long deltas, I would have locked in the delta loss. To be fair, the damage had already been done at that point. The loss was there, just not locked in.

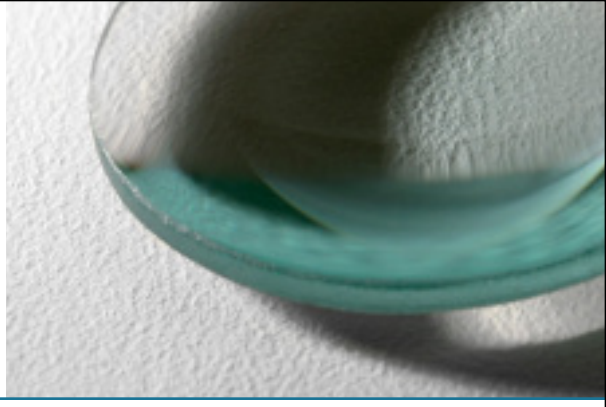
Perhaps under the right set of circumstances, adjusting the trade (and selling out long deltas) may make sense *if* it improves theta

(continued on page 40)

Dan Passarelli is the author of the book Trading Option Greeks *and founder of Market Taker Mentoring LLC™. Market Taker Mentoring provides personalized, one-on-one options education for traders. The company website is www.markettaker.com.*

Dan started his trading career on the floor of the Chicago Board Options Exchange (CBOE) as an equity options market maker. He also traded agricultural options and futures on the floor of the Chicago Board of Trade (CBOT). In 2005, Dan joined CBOE's Options Institute and began teaching both basic and advanced trading concepts to retail traders, brokers, institutional traders, financial planners and advisors, money managers, employees of the SEC and Federal Reserve bank, and market makers. In addition to his work with the CBOE, he taught options strategies at the Options Industry Council (OIC). Dan has been featured on television and radio and has written numerous articles in the financial press. Dan can be reached at dan@markettaker.com. He can be followed on Twitter at twitter.com/Dan_Passarelli.

VIX Convexity



Bill Luby

A couple of months ago I attended the Chicago Board Options Exchange's Risk Management Conference, where there was a great deal of discussion about the CBOE Volatility Index, known more colloquially as VIX.

Although the conference covered a number of themes, the one idea that seemed to creep into every presentation and conversation is the concept of VIX convexity.

By the Numbers and in Graphical Form

Figure 1 summarizes the concept of VIX convexity in graphical terms, using a scatter plot of the ratio of the daily percentage changes of VIX relative to the S&P 500 Index (SPX). In the scatter plot, the daily percentage changes in VIX are plotted on the y-axis, while daily changes in the S&P 500 are plotted on the x-axis.

The gray diagonal line is a linear regression for the data set. This linear interpretation of the VIX-to-SPX ratio suggests that the daily price changes in VIX average about -3.9 times that of the S&P 500 Index.

The VIX/SPX data, however, do not conform to a linear interpretation. A much better interpretation is as a second order polynomial, which is graphed as a dotted blue line.

The polynomial approach allows for a more nuanced interpretation of the data. For instance, historical data going back to 1990 indicate that when SPX gains 1% in a single day, on average, VIX will fall 3.6%. If, however, SPX gains 2%, VIX falls about 6.2%. This means roughly that VIX falls 3.6% for the first 1% increase in SPX but only 2.6% for the second 1% change.

The data are even more dramatic when SPX falls. When the SPX declines 1% in a single day, VIX increases, on average, about 4.3%. On the other hand, when SPX suffers a 2% daily decline, historically VIX rises 9.2%.

So for the first 1% decline in SPX, VIX rises 4.3% but jumps to 4.9% for the second 1% change. This tendency of VIX to accelerate to the upside on a per-unit basis as SPX falls but to decline in increasingly smaller increments as the SPX rises is the essence of convexity.

This convexity can be seen as the curving of the VIX-to-SPX ratio at the extremes of the data set and is highlighted by the vertical gray line,

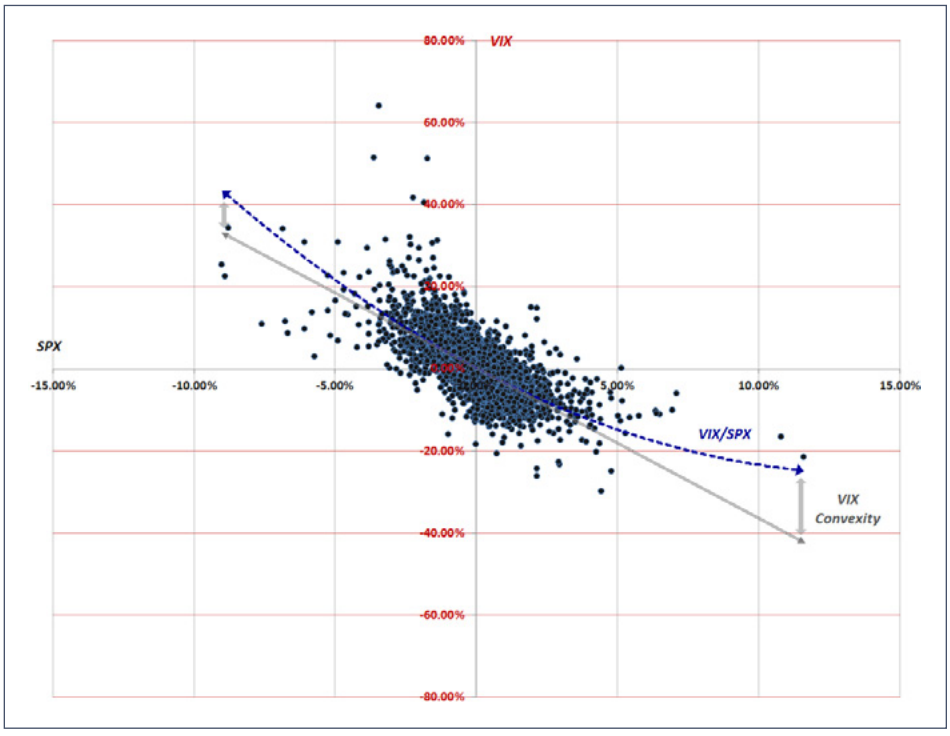


FIGURE 1 *VIX Convexity Evident in Scatter Plot of Daily Changes in VIX vs. SPX*

which shows how much the ratio polynomial deviates from a liner interpretation of the data.

Interestingly, the convexity of VIX is more dramatic on those days in which SPX rises. This is because the extreme readings on days that SPX increase seem to be capped around a VIX change of -20% to -25%, regardless of how much SPX rises.

On the other hand, the extremes associated with VIX spikes demonstrate a disproportionate number of VIX spikes of 25% or more, including 15 whose magnitude was larger than the biggest daily decline (29.6%) in VIX.

It should come as no surprise to anyone who studies VIX that it is more sensitive when it rises than when it declines. In human terms, the emotional content in the marketplace is much higher when investors are in a panic than when they are exhibiting extreme greediness.

Said another way, panic tends to be acute and in compressed timeframes, whereas greed typically spreads more gradually and is generally more free-floating in nature.

Implications of VIX Convexity

Note that the dotted blue line (second order polynomial regression line) has a strong resemblance to a profit-and-loss graph for a long put position. The key difference is that along the positive portion of the x-axis, the curve never really flattens out.

One could make the argument that it appears that VIX will never fall more than 30% in one trading day, but more likely the truth is that we have just not seen enough data points yet to bet our portfolio on that assumption.

It is the negative side of the x-axis that gets the attention of most who study this data. Here it becomes obvious that a long VIX position cannot only act as a hedge, but the value of that hedge can accelerate as movements in SPX become more adverse.

Convexity is what makes VIX attractive both as a hedging tool and a speculative play. In theory, VIX convexity should make it possible for VIX options that are far out of the money to have an unusually fat tail.

This raises the possibility that purchasing VIX options that are 20% or 30% out of the money can result in positions that are in the money in one trading day. Further, VIX options that are 50% or 100% or more out

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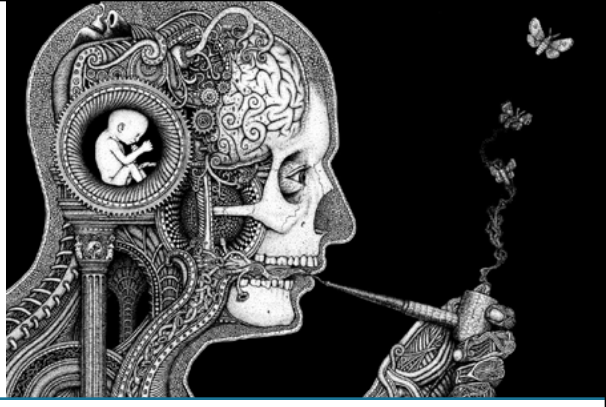
Stories or Data? Cognitive Biases and Investing



Jared Woodard

Sometimes I think that radical ignorance about the companies, commodities and other assets we trade is the safest way to work.

If I am trying to decide what type of trade to enter for in a given stock, the worst thing I could do is learn what industry the company works in, what its earnings were like last quarter, whether its products are actually any good, and how the CEO overcame all the odds to achieve his grandfather's dream of making better widgets.

A large amount of research and reporting crosses my desk each week—sell-side reports on various industries and markets, trade ideas from friends, newsletters, blogs, academic papers, media coverage, etc. One of the most common features of all that information is that it relies on narratives—stories—to make a point.

Journalists interview sympathetic subjects; sell-siders tell the stories of how companies are or are not besting their peers; even technical analysts—the ones more prone to magical thinking, anyway—sometimes talk about the way a stock price has changed with phrases such as "rejection at the support line" and "fought to work off its oversold status."

These are just ways of taking a set of data, whether it is same-store sales, new housing starts or changes in a moving average, and making it comprehensible to an audience.

Take a Data Journey

But what does the price of tea in China have to do with the price of a Chinese tea-making company? The one relationship that matters—the one piece of information that would make any report valuable to a trader—is almost always missing.

> What does the price of tea in China have to do with the price of a Chinese tea-making company?

If I present you with a set of data and dress it up in a nice story, the one question that will be on your mind is what that data suggests for the future, or more specifically, how similar changes in that data have been related, historically, to changes in the price of a tradable asset.

With that connection in place, we can track a chain of argument from the news item (company A reported a x% increase in same-store sales since last year) to the relevance and value of that item (historically, changes in company A's same-store sales have shown a positive correlation of z with subsequent price returns) to a warranted trade idea (I should buy shares in company A).

I am not asking journalists to become quantitative researchers, although that might be fun.The hard work of finding stable and valuable relationships among data and tradable assets is not something we should expect anyone to do for us.

Toxic Thoughts?

My point is that sometimes it feels like any qualitative knowledge at all is a contaminant. I might like to imagine myself as some kind of rigorously rational evaluator of data, but from experience I know that it is hard to operate that way.

Knowledge of the history of a company, experiences I have had with its products, news I hear about its principals are all likely to exert an influence on my view of a company whether I want them to or not.

In practice, that might not matter too much. If I see that implied volatility in the stock's options has fallen too far, I might still buy the straddle.

But then, I might not, I might have some inkling or vague sense that the trade should be modified or avoided, not because of some contrary piece of evidence on the screen, but because of some qualitative information I have.

The biggest risk is that knowledge of qualitative data will trigger cognitive biases that cloud judgment and yield bad decisions. For instance, even though the data says that implied volatility is too cheap, I might focus too much on comments made during a recent earnings announcement (anchoring bias) as a reason to think the stock will trade quietly, and so miss out on a profitable trade.

Know What's Good for You

The obvious answer to this worry is to keep stories out of it. Ignore the news, unfollow the people who share fascinating tidbits on Twitter and skip the parts of reports that are not essential. Become a data-mining robot.

But, like I said, I only think this way some of the time. There is an important objection to this line of thought: that a disciplined observer can synthesize and prioritize large volumes of qualitative data and develop over time the skills to make use of it without falling prey to some cognitive bias. We call that expertise. EM

or moves the breakeven point to provide more wiggle room to the downside. But because 3M did not hit my level of $90.10, so I had the luxury of status quo.

What Now?

Expiration is a week away. The jury is still out on this trade. It ended up being more of a nail-biter than I had hoped. But the tactic of minimal management, absent adjustment, has proved wise.

I can sell this 3M $87.50–$90 put spread that is out of the money by 73 cents with one week to go at 44 cents. If I had not already entered this trade, would I do it at these current prices? Yep. EM

of the money may have a surprising potential for appreciation even during the course of one options expiration cycle.

Implications for selling VIX options as well as creating a synthetic VIX with some interesting properties also exist.

A Starting Point

Of course market makers are aware of these and many other unusual characteristics of VIX. The big question is to what extent have market makers priced VIX options properly at the extreme high and low end of each options series.

This question is best left for another article, but I hope this brief discussion of VIX convexity will help readers think about the VIX, encourage additional research and perhaps bring some new strategic thinking to the surface. EM