BEYOND PUTS AND CALLS: 9 STEPS TO PROFITABLE OPTIONS TRADING

BY STEVE SMITH

Options are among the most versatile and profitable investment instruments out there, but only for those that understand the nuts and bolts of how they work in the real world.

In order to help you get the most out of your options trading adventures, veteran trader Steve Smith penned this informative guide to taking your trading beyond plain old puts and calls.

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By reading this paper, you will get a solid understanding of options pricing, risk management, special situations, and five rock-solid strategies you can put to work today.

1) Swinging for the Fences Ahead of Earnings

When people talk about trading options, the conversation usually turns to ultra-risky strategies. By far, the most common of these is buying call or put options ahead of an earnings report in the hopes of hitting a home run.

The upside in being right about such an unpredictable event is a big fat profit.

The downside when you're wrong? That'd be 100%. As in, the underlying stock gaps against you and the options are left worthless.

There is nothing wrong with making the occasional speculative bet, but you have to understand the risk involved and keep the position right-sized.

2) Failing to Understand Implied Volatility

Being wrong on a stock's direction is clearly an easy way to lose money with options. But there's a second, and even more frustrating way to lose money: failing to understand the intricacies of option pricing.

One of the biggest mistakes new options traders make is not taking into account implied volatility, which is a measure of the expectation or probability of a given size move within a given time frame. Put simply, implied volatility provides a gauge as to whether an option is relatively cheap or expensive based on past price action in the underlying stock, and it is among the most important components in option pricing.

For example, in early March 2012, options on banks JPMorgan (JPM) or Goldman Sachs (GS) were relatively expensive, as the implied volatility for March options was running around 30% -- or about double the 16% historic, or real 20-day volatility. This can be explained by nervousness surrounding the big banks' exposure to the economic crisis in Europe.

By comparison, Microsoft's (MSFT) March options carried an implied volatility of just 19.5%, while the 20-day historic volatility is running at 21%, making the options relatively cheap.

I can't tell you how many times I've heard traders say "options don't work" because they bought puts or calls ahead of earnings, were right on the direction of the stock post-earnings, but the option barely changed in price because implied volatility declined post-earnings, as is common after expected news events.

Therefore, in order to consistently make money trading options, one must attain a basic understanding of implied volatility. But have no fear – we'll go over ways to both harness and profit from changes in implied volatility.

3) Failing to Understand Time Decay

Traders also commonly fail to realize that options are a wasting asset. One very important component in the price of an option is the time until expiration. So as time goes on, the value of that time decays, with a negative impact on the overall value of the option itself.

If you buy calls or puts outright, and the underlying stock moves in your direction at a slow pace, the option may not gain in value.

However, a basic understanding of option pricing and a grasp of a variety of trading strategies will allow you to offset the impact of time decay -- or even turn it to your advantage.

Later in this guide, we'll be exploring strategies that will allow you to do so.

4) Ignoring the Power of Compounding Small Gains

Above, we referenced the risk in swinging for the fences with options. The less-sexy --- but far more lucrative -- reality is that the best options traders grind out steady profits using a wide variety of strategies, looking to consistently earn 2% to 4% a month, with an occasional kicker from speculative bets.

Two percent per month doesn't sound like a lot, but compounded over a year, it adds up to 27%. That's more than three times the average historical return for the S&P 500. Stretch that monthly gain from 2% to 4%, and the annualized profit is on the order of 60%

The important takeaway here is not the idea of making 60% in a year, but rather the power of consistently hitting high-probability singles rather than swinging for low-probability home runs every time we step up to the plate.

Extreme risk-taking could mean that you're up 100% one month -- and down 50% the next. You do that and you're right back where you started, but with an ulcer and heart medication.

There is plenty of room for speculation with options, but to stay ahead of the game, you

have to pick your spots wisely.

5) Failing to Diversify

Ideally, no single position should represent more than 5% of a portfolio. My OptionSmith portfolio typically carries six to 10 positions at a time. These can run from complex, multi-strike hedged positions that have four to six months until expiration, to speculative plays based on unusual activity or an upcoming event that will be held for just a few days.

Why? Because I never want to get knocked out of the game on one trade, or allow a position to get so large that it could threaten gains elsewhere in the portfolio if things go south.

When people go broke trading options, it's usually because they not only swung for the fences on an earnings play, but put far too much money into that single trade.

Now that we've got some of the basics out of the way, it's time to jump into options pricing.

What do former NBA star Allen Iverson and implied volatility have in common? They have both been labeled "The Answer." While Iverson has been more of a question lately (how exactly did he spend that $100 million+?), implied volatility remains the key to answering the number-one question on an option trader's mind: Is this option "cheap" or "expensive"?

The most commonly used apparatus for valuing options is the Black-Scholes model, which considers five factors in calculating a particular option's theoretical fair value:
1. The price of the underlying security

2. The strike price

3. The time, or expiration date of the option

4. Interest rates

5. Implied volatility

The first four inputs are known variables. To get number five, we plug those four inputs into the Black-Scholes model. This would give us "theoretical" implied volatility, which helps us answer our big question above. But given that options trade regularly, there is already an "actual" implied volatility assigned to each option based on its price, which is constantly updating in real-time. Therefore, our mission, should we choose to accept it, is to determine whether an option's current price looks cheap or expensive based on its volatility level.

Let's go over exactly what implied volatility is. Implied volatility is a measure of the probability of a certain percentage price move occurring within a given time frame. It is typically anchored to the underlying stock's historical volatility, which measures recent price action.

A notable exception would be in biotechs such as **Dendreon** (DNDN) or **Biogen** (BIIB). Shares of these names can trade rather benignly for months on end, while the prospect of volatility-inducing events, like FDA rulings, keeps implied volatility in the options at elevated levels. And more related to our current events, options on banks like **JPMorgan** (JPM) and **Bank of America** (BAC) have implied volatilities that are premiums to historic levels because of ongoing worries over exposure to Europe and other issues.

In March of 2012, we examined at-the-money April calls in two very different types of stocks. **Salesforce.com** (CRM), a high-octane momentum stock which regularly makes massive price swings, had a current 30-day historical implied volatility (HV) of 38%. On the other hand, the relatively staid and less-exciting utility **Consolidated Edison** (ED) had a 30-day HV of 11%. But which one's options were cheaper?

Salesforce.com is the obvious answer, but to be sure, let's look under the hood at implied volatility readings. Back in March, Salesforce.com's April $135 call had an implied volatility of 35%, carrying a three-percentage-point, or 5.7% discount to HV. On the other hand, Con Ed's April $57.50 calls carried a 12.5% implied volatility, which is a 1.5-percentage-point, or 14% premium to HV. So at this point, I would say Salesforce.com's options, which traded at a discount, were cheaper than Con Ed's, which traded at a premium.

Reverting to the Mean

Now let's look at how historical volatility can be used to avoid the "options don't work" argument put forth by naysayers who get frustrated when they make an options bet, are correct on the direction of the underlying stock, yet don't make money.

Keeping with Salesforce.com, ahead of its February 24 earnings report, implied volatility climbed up to 50%, which was well above the then 32% rate at which the 30-day historical was running. This was because the options market was pricing in the 7% price move that the shares had averaged over the past four earnings reports.

The down-and-dirty way to gauge what the options market is pricing is to look at the at-the-money straddle and revert the IV back to the mean.

An increase in implied volatility ahead of an event is simply the expression of a higher probability of a larger-than-usual price move within a given time frame. In this sense, an increase in implied volatility is an artificial expansion of time. In other words, what could happen over a long period of time is now being priced into a shorter period of time.

Understanding where IV stands relative to HV, and why it is at the current level is crucial to valuing current option prices and anticipating future moves. If a volatility-inducing event is anticipated -- like with an earnings report -- implied volatility will revert back to the mean after the event. But if there is unanticipated news -- like a surprise FDA ruling on a drug -- IV will spike. So regardless of what happened, one should have expected that IV on Salesforce.com options would revert toward the mean of around 35% following the report.

This means one would need at least a 6% price move to break even. (Note: This is not 7% because the options would still retain some time value. This is part of an extended discussion beyond the scope of this paper.)

As it turned out, Salesforce.com blew away expectations and jumped some 10% following earnings, so an owner of calls enjoyed a nice profit. However, if Salesforce.com shares rose just 3% after earnings, an owner of calls would have actually *lost* money since the increase in the stock price wasn't sufficient enough to offset the expected decline in implied volatility.

Time Is Square, Man

There's a basic math formula used in the Black-Scholes model which is a good starting point for understanding the rate of decline in an option's value due to the passage of time, also knows as time decay or theta. Basically, we use the square root of time to calculate and plot time decay. The math involved in the nitty-gritty of evaluating theta can be extremely complex, so focus on this: Time decay accelerates as expiration approaches.

For example, if a 30-day option is valued at $1.00, then the 60-day option would be calculated as $1 times the square root of 2 (2 because there is twice as much time remaining). So all else being equal, the value of the 60-day option is $1.41, or $1 times 1.41 (1.41 is the square root of 2). A 90-day option would be $1 times the square root of 3 (3 because there is three times as much time remaining) for an option value of $1.73. (1.71 is the square root of 3).

If you notice, the premium of the 60 day over the 90 day ($0.32) is less than that of the 60 day over the 30 day ($0.41). So again, the important takeaway is to realize that the closer an option gets to expiration, the rate at which time value decays gets faster.

Here are some other basic concepts you need to know about theta:

- An options theta can be calculated as follows: If a particular option's theta is -10, and 0.01 of a year passes, the predicted decay in the option's price is about $0.10 (-10 times 0.01 is 0.10).

- At-the-money options have the highest theta. Theta decreases as the strike moves further into the money or further out of the money. In-the-money options are mostly composed of intrinsic value (the difference between the strike price of the option and the market price of the underlying), while out-of-the-money options have a larger implied volatility component.

- Theta is higher when implied volatility is lower. This is because a high implied volatility suggests that the underlying stock is likely to have a significant change in price within a given time period. A high IV artificially expands the time remaining in the life of the option, helping it retain value.

Now it's time to move on to trading methodologies, the first of which is calendar spreads.

Calendar spreads, which are also known as time spreads, are one of the most useful options strategies out there because they allow us to make directionally-biased trades at a lower cost basis than with outright purchases of puts or calls.

Calendar spreads offer the hope-springs-eternal element that keeps us all coming back to trading options.

Supposedly, time is on our side, and the never-ending cycle of options expirations means we can keep rolling our positions forward, always chasing that perfect confluence of time and price. But that ain't the way I play it. I don't want to be beholden to time, or be led down some primrose path. If time doesn't make me money, I walk away and don't look back.

But enough with the fanciful and back to the prosaic.

What exactly is a calendar spread? A calendar spread is constructed through two simultaneous trades:

1) the purchase of an option
2) the sale of another option with the same strike price, but an earlier expiration.

This combination creates a fairly neutral position that benefits from the accelerated time decay of the front-month option sold short. As we discussed in the last section on pricing, as an option gets closer to expiration, the rate at which time value decays accelerates.

In other words, the near-term option loses time value much more quickly than the longer-dated ones. The maximum profit would be achieved if the price of the underlying is at the strike price of the front month sold short at expiration, rendering it worthless.

In late March, we looked at Wal-Mart (WMT), which has traded sideways since the Paleolithic age, meaning one could reasonably expect it to remain between $55 and $65 for the foreseeable future. With the stock trading at $61.10 we could: 1) sell the April $62.50 calls at $0.30 a contract, and 2) buy the June $62.50 calls at $0.80 a contract. This gives us a $0.50 net debit for the calendar spread. That $0.50 cost is the maximum risk. A perfect scenario would be Wal-Mart creeping higher over the next month, but finishing below $62.50 at the April expiration, rendering the short April call worthless. All else being equal, with a $62.50 share price and two months remaining until the July expiration, the July calls would have a value of around $1.70.

The position would have a $1.20, or 140%, profit on the initial $0.50 outlay.

But don't think calendar spreads are necessarily easy money. There is a significant challenge in getting the timing right. If the underlying stock price moves too quickly and deeply into the money, the value of the spread will decline as both options move toward intrinsic value. And few stocks trade in a straight line like Wal-Mart. In fact, most will try your patience of holding fast to an "unchanged" price over many months.

In addition, there are outlier risks in the form of unforeseen news events like a merger/takeover, or a legal or FDA ruling, that spikes shares higher. In such cases, a "terminal value" (call it takeout price or the lifting of unknown outcomes) will cause the value of the shares to spike. But with the unknown event now clarified, the long-term option's implied volatility will plummet, and it will lose its time premium, even though there could be many weeks or months for the deal or decision to be handed down. This is because much of the uncertainty regarding future price action would be removed. And since calendar spreads benefit from the longer-term option retaining time value more effectively than the near-term dated one, they would suffer if the time premium was eliminated all at once.

So, there are two important takeways here:

1. A long calendar spread is a long volatility position. This means it benefits from an increase in implied volatility.
2. A news event, such as the confirmation or failure of a merger, will diminish the range of possible outcomes, causing a decline in implied volatility, especially at the later-dated options.

The Diagonal Calendar Spread

The diagonal calendar spread is one of the most useful calendar-spread variations.

To construct a diagonal calendar spread -- and we'll just focus on a long spread here – we combine the following: 1) the purchase of a later-dated option and 2) the sale of a shorter-dated option with a strike that's further out-of-the-money. This gives the position a stronger directional bias, or a higher delta than a straight calendar spread.

In March, we examined a diagonal calendar spread in **Google** (GOOG), when shares were trading around $628:

- Buy the June $625 calls at $31
- Sell the May $640 calls at $20

This gives us an $11 net debit. The maximum loss would be $11 if shares of Google plummet below $625, and stay down until the June expiration, rendering both options worthless.

The best scenario would have been Google at $640 at the May expiration, meaning those May calls expire worthless, leaving us outright long the June $625, now worth $15 intrinsic ($640 - $625 = $15), at an $11 cost basis. That is a 36% profit.

If you had just bought the June $625 calls outright at $31, and shares of Google stood at, say, $630 on the May expiration, the June calls would have a value of about $23 a contract – a loss of about $8, or 25%, mostly due to time decay. (Note: The $23 value was calculated using a standard options calculator.) Meanwhile, with the calendar spread, the May $640 calls would have expired worthless, netting you $11 of premium, for a $12 profit during the two month holding period.

If you're confused by the math: The May $640 call expired worthless, while the June $625 call is worth $23. The initial net cost was $11. With the June call now worth $23, we can subtract the initial $11 cost for a $12 profit.

Nearly all that profit was the result of the shorter duration, further out-of-the-money call experiencing a greater rate of time decay. In this example, with only a moderate increase in the stock price, and all else being equal, one can see how harnessing time decay can provide a powerful tailwind to profitability. On the other hand, by just buying the calls outright, one could have actually lost money -- even though the stock went up!

Conclusion

The possibilities for profits and adjustments on calendar spreads can be practically endless. My approach to calendar spreads in the OptionSmith portfolio is to keep them dynamic. I don't have static price targets. Rather, I respond to the market to best exploit the acceleration of time decay of the front-month option to provides an edge in the form of a lower effective cost basis.

One of my typical adjustments to calendar spreads is to roll the option sold short up to a higher strike to extend the position in terms of time and amount of premium taken in.

I do this frequently with names that offer weekly options such as the Spyder Trust (SPY), **Amazon** (AMZN), Google, or even **iShares Barclay's Bond** (TLT). These never-ending mini-expiration cycles allow me to capture the steep part of the decay curve on a more frequent basis. However, they also require more attention and willingness to take quick profits and losses when things don't play out as planned.

One thing I should I add at this point is that options education is not linear, but rather circular. While you need to start at a certain point, such as understanding option pricing models, they really don't mean much until you start examining and applying certain strategies. So be patient. It may be a dizzying journey, but it's also a rewarding one.

One of the biggest challenges in using options as an investment tool is that not only must you be right on direction and price target, but you must also be accurate in your timing.

You can buy a call with too short an expiration period, watch the stock go up, and actually lose money because time decay will offset most or all of the directional gains if the move does not come quickly enough.

Butterfly spreads are a good, low-cost way to establish positions that are not impacted by time decay or short-term price movement. Due to their balanced construction, their value only becomes price sensitive -- albeit exponentially so -- as expiration approaches.

In this way, one can eliminate the need to be right about the velocity of the price move -- you need only be correct about the price level at expiration. This makes butterfly spreads useful as both protective positions and potentially highly profitable directional bets.

A Stack of Spreads

A butterfly is a three-strike position that involves a combination of the following:

- The sale (or purchase) of 2 identical options
- The purchase (or sale) of 1 option with an immediately higher strike than the 2 identical
- The purchase (or sale) of 1 option with an immediately lower strike than the 2 identical

All options must have the same underlying stock and have the same expiration date. One way to think of butterflies is as a combination of two vertical spreads -- one bullish and one bearish -- with a common middle strike. We call this a 1 x 2 x 1 construction.

Today, we'll focus on the long butterfly, in which the two outside strikes are purchased and the "body," or center strike, is sold for a net debit.

This "stack of spreads" (one long, one short) creates a position that is initially near both delta and theta neutral. This means that changes in price and time, and even implied volatility, have little impact on the value of the position. This strategy's name undoubtedly is derived from its structure of a midsection and two equidistant outside pieces.

This creates a profit-loss diagram with two "wings" in which the middle common strike is typically sold short and represents the price of maximum profit on expiration day.

For example; back in late March, when **Google** (GOOG) currently trading around $645 one could have set up the following trade:

- Buy 1 April $650 call for $21 a contract
- Sell 2 April $670 calls for $13 a contract
- Buy 1 April $690 call for $8 a contract

This is a $3 net debit (2 x $13 = $26, while $21 + $8 = $29). That $3 would be the maximum loss, and would be incurred if shares of Google made a big move -- in this case, if they are below $650 or above $690 on the April 21 expiration. As it turned out, Google was well under $650 at the April expiration, resulting in a $3 loss.

The maximum profit of $17 (calculated by the width between strikes minus the cost, or $20 - $3, which gives us $17) would have been realized if Google was exactly at $670 on expiration.

Low Maintenance

Butterfly positions are often referred to as “vacation positions” in that they’re low-cost and have minimum risk, and you can basically put them on and forget about them for a while. For most retail investors, there’s no need for monitoring or adjustments on a daily or even weekly basis, until expiration approaches. The trade-off is that significant profits can only be realized near expiration.

As expiration approaches, the position’s gamma, or rate of change in delta, increases dramatically, so incremental profits that might have accrued over a few weeks can evaporate in a few days.

However, the low-cost nature of these positions can make them very useful as a portfolio protection tool for less active traders.

Let’s assume that one would like to hedge downside risk in a reasonably diversified portfolio. It might make sense to buy some wide width butterfly spreads -- let’s say $10 between strikes -- on the **Spyder Trust** (SPY) that would land in the profit zone on a 5% to 10% market decline.

More active traders often use butterflies in multiple layers to maintain an inventory of spreads that can deliver both profits across several price levels and expirations to trade against shorter-term price swings.

For example, one technique I like to employ in the OptionSmith portfolio is establishing sizable put butterflies in the SPY. If there is a subsequent decline, which will usually have an accompanying increase in implied volatility, and shares move toward the profit zone, I can sell shorter-term (i.e., weekly) puts against the butterfly spreads to capture premium and scalp short-term profits.

This worked quite well in the summer and fall of 2011 as intra- and interday volatility provided frequent opportunities to sell short-term puts against the much larger, longer-term butterfly spreads. In terms of number of contracts, to keep risk limited I might sell short 10 puts for every 50 butterflies I was long and look to scalp that for $1 profit.

Breaking a Wing

Another strategy I frequently use for shorter-term, aggressive directional bets is what is called a broken wing, or skip strike butterfly. This will usually involve a 1 x 3 x 2 construction, in which a strike is skipped. So in the Google example above one might:

- Buy 1 April $650 call at $21
- Sell 3 April $680 calls at $10
- Buy 2 April $690 calls at $7.50

This would currently cost $6 net debit. This is calculated as follows: 3 x $10 = $30, from which we subtract $21 and $15 (2 x $7.50), which gives $6.

While the $6 outlay here is greater than the $4 above, it expands the maximum profit to $24 for a 6:1 risk/reward.

This $24 is the width between the long $650 call and the short $680 strike, minus the total cost of the spread, or $30 - $6, which equals $24. It also expand the range in which a profit will be realized. Unlike a 1 x 2 x 1 position in which losses are incurred above the higher strike, in this case, if shares are above $690, the spread will still be worth $10, meaning the position still produces a profit of $4 no matter how much above $690 shares are at expiration.

Given the price stability of these spreads, this can be an especially powerful tool for playing earnings during an expiration week. Given that many of the most actively traded and biggest earnings movers like **Amazon** (AMZN), **Salesforce** (CRM), and Google offer weekly options, there should be plenty of opportunities as we head into earnings season to try to catch one of these powerful butterflies in coming weeks.

Options traders often want to make bets on volatility. However, doing so can entail taking on inordinate downside risk. To limit this downside risk, we can use combinations of spreads, the most common of which is the iron condor.

While iron condors can be bought or sold, they are typically sold for a credit to take advantage of a stock or index that is in a trading range. They benefits from both time decay and a decline in implied volatility. Selling an iron condor is a bet that the underlying shares will remain in a limited range and have an accompanying low or decrease in volatility. If you were buy an iron condor, you are banking on a break outside the range that is defined by the condor's outer strikes, or "wings."

Before jumping fully into iron condors, let's do a quick overview of put/call combinations. A straddle is the simultaneous purchase or sale of a put and a call that have the same strike and same expiration.

For example: On Friday, March 30, 2012, with the **Spyder Trust** (SPY) trading at $140.50, one could have constructed a long at-the-money straddle by buying:

- the April $140 call for $1.40
- the April $140 put for $0.70

In buying this straddle for $2.10 ($1.40 + 0.70), you are betting that the SPY will finish below $137.90, or above $142.10 at expiration. Note that both of these numbers are $2.10 -- or the cost of the straddle -- away from the $140 strike price. In other words, the stock has to make a move greater than $2.10 in order to offset the purchase of the options.
A straddle is an uncovered position, meaning if you are long both puts and calls, your potential profit is theoretically unlimited should the underlying stock make a dramatic move. Conversely, if you sell a straddle, the profit is limited to the premium collected, while the potential loss is unlimited.

Let's reverse the example above, and assume we sold the April $140 call for $1.40 and sold the April $140 put for $0.70. In this case, the maximum profit would be the $2.10 credit received for selling the options, assuming the stock is trading above $137.90 or below $142.10 below expiration. So, on the short side of a straddle, we want the stock to make a move less than $2.10.

As it turned out, the SPY closed at $137.95 at expiration, making the position roughly break even on both the long and short sides.

These uncovered positions make sense if you're willing to roll the dice ahead of an event like earnings, FDA decisions, or even an election. But otherwise, the probability of profitability is unattractive -- particularly on the short side where your losses are theoretically unlimited.

Another common call/put combination is the strangle. A strangle is a position that employs two different, typically out-of-the-money strike prices. So in the example above, instead of buying the $140 strikes, you might buy the $138 put and the $142 call. This allows you to pay just $0.50, but the breakeven points are further out at $137.50 and $142.50. So in exchange for a lower probability of making a profit, we pay out less in premium.

On the flip side, if we were to sell the strangle by selling $138 put and the $142 call, we would take in just $0.50 worth of premium, but the probability of making money would be higher since our breakeven point would be further out. However, keep in mind that like a straddle, selling a strangle carries unlimited downside risk.

Button It Up to Limit Losses

That possibility of an unlimited loss is why I button up the strangles and straddles and turn them into condors.

A condor is a butterfly in which the "body," or midsection, is comprised of two strike prices instead of one. By constructing positions that are built on spreads, we not only limit risk, but keep the margin clerks off our back in the event a position makes a big move in the wrong direction.

A condor, or more specifically, a short iron condor, consists of selling two out-of-the-money spreads. Sticking with the SPY, an example of an out-of the-money iron condor might be:

- sell 1 April $142 at $1.50 a contract
- buy 1 April $144 at $0.50 a contract

and

- sell 1 April $139 put at $0.80 a contract
- buy 1 April 137 put at $0.42 a contract

This gives a net credit of $1.38 (calculated as $1.50 + $0.80 - $0.50 - $0.42).

Given that the width between strikes is $2, the maximum loss has been contained to $0.62 ($2.00 - $1.38), no matter how far below or above the SPY might fly outside the $137 and $144 strikes.

The maximum profit of $1.38 would be realized if SPY is between $142 and $139 on the April expiration. We call them “iron” because turning these strangles into spreads limits their risk, making them like iron.

Playing the Probability

An iron condor is a time and volatility play. In selling premium, we benefit from time decay or theta and a decline in implied volatility that would accompany a range-bound stock price. On the other side, I see no reason to use condors as a long volatility play. To bet on a rise in volatility, straddles or strangles makes more sense. In particular, when it comes to the broader markets, buying a straddle or strangle on the SPY is far more effective than playing with something like (TVIX), which as we’ve seen, isn’t particularly good at fulfilling its mandate. But if I think a certain stock or sector is range-bound, then selling a pair of out of-the-money spreads, a.k.a. our friend the iron condor, makes sense.

It helps to find names that have a relativilty high implied volatility while exhibiting a relatively defined trading range. While **Wal-Mart** (WMT) fits the bill of trading in a narrow range, the option premiums offered are low as it has just an 11% implied volatility. On the other hand, many of the commodity names, like **Mosaic** (MOS) or **Potash** (POT), which have been in range for the past four months, carry an implied volatility above 35%, which is a premium to their 30- day historic volatility which is running below 25% in both cases. Futhermore, since they have a defined risk and reward, iron condors should be held until expiration. Meaning, even if the underlying shares move above or below the outer strikes and threaten a maximum loss, you should not close out the position prematurely. This is because iron condors have a natural stop-loss level. The maximum loss assumed on establishing the position is the credit minus the width.

For example, if you think Mosaic will stay between $54 and $60, then selling the April $50/$52.20-$60/$62.50 iron condor for a $0.33 net debit might make sense. Based on historic volatility levels, there is a only a 9.5% probability that shares of Mosiac will move the 6% up or down that will create a loss. On the other hand, implied volatility is pricing in a 7.5% move in the next month. This puts the odds in your favor that time decay and the reversion to the mean of IV (implied volatility) toward HV (historic volatility) will result a profitable position

When establishing iron condors, assess the risk and reward and be prepared to hold it until expiration. The odds are known. Don't mess them up by trying to trade around them.

In previous articles in this series, we've looked at popular options trading strategies like calendar spreads, butterfly spreads, and condors, all of which use the simultaneous purchase and sale of puts or calls to create limited risk or partially hedged positions.

These traditional spreads allow you to reduce costs in exchange for capping gains. This week, we're getting more aggressive and drilling down into a strategy known as the risk reversal, which uses combinations of puts and calls to create a low-cost position that carries both unlimited risk and reward.

A risk reversal consists of being long (buying) an out-of-the-money call and being short (selling) an out-of-the money put, both with the same expiration date.

What makes the risk reversal different from most leveraged speculation or hedging strategies is that it aims to achieve a position with a very strong directional bias, but with a minimal capital outlay or possibly even a credit.

When constructing a risk-reversal position, the sale (purchase) of the put should offset the cost (credit) of the call.

A risk-reversal position simulates the behavior of a long (or short) position in the underlying shares. Therefore, it is sometimes called a synthetic position.

For example, back in April 2012, if we wanted to make a bullish bet on IBM (IBM), with shares trading around $205, we could:

- Sell the May $200 put for $3.20 a contract
- Buy the May $210 call for $2.50 a contract

This gives us a $0.70 net credit ($3.20 - $2.50).

So, if IBM shares simply remain above $200, or do no worse than a 2.4% decline before the May expiration, the position will reap a $0.70 profit.

This risk reversal requires much less capital, even on a margin account, than buying underlying shares outright. The flip side is that if IBM only goes go up $210 at expiration, the profit will still only be $0.70, as both the put and call will expire worthless.

Of course, the ideal scenario would be the stock skyrocketing, as the call option will increase in value, while the put will be worth less -- creating unlimited profit potential.

Note, however, that there is also significant downside risk if IBM's stock were to collapse. In that case, the value of the short put option would dramatically increase while the long call would be crushed.

Reducing the Risk Portion

As shown in the above example, because a pure risk reversal involves a naked short or uncovered sale of an option, it carries enormous downside risk. Again, this is no different than being long or short a stock, but my goal as an options trader is to gain the benefit of leverage but keep risk limited.

I do this by transforming the "naked" portion of the risk-reversal position into a standard vertical spread.

Sticking with the IBM example above, we could expand the position by going long the May $195 put, giving us the following combination:

- Buy the May $195 put for $1.90 a contract
- Sell the May $200 puts for $3.20 a contract
- Buy the May $210 call for $2.50 a contract

This gives us a $1.30 net credit ($3.20 - $1.90) for the put spread, meaning the total position has now shifted to a $1.20 net debit. Note, we get $1.20 by subtracting the $1.30 net credit from the cost of the call, which is $2.50.

This puts the breakeven at expiration in the $199.30 to $211.20 range.

The breakeven points are calculated by adding (or subtracting) the net debit (or credit) to the risk-reversal strike prices. So when we received a $0.70 credit the, $200 put would be $0.70 in the money, making $199.30 the lower breakeven point. When we shift to a $1.20 net debit, it will take a rise above $1.20 above the $210 strike, or $211.20. Just remember these numbers are based on the expiration date, and profit and losses could change if the position is exited before expiration.

Using a spread on the put side caps the loss to $4.90 should disaster strike and IBM take a big dive below the $195 level. The upside, however, is still potentially unlimited as we remain outright long a call.

I only employ this aggressive strategy when I feel there is a very, very attractive entry point that presents the potential for a strong counter move.

At the same time, the put spread offers us a tight stop-loss level. The position is rarely held to expiration, so in case of an adverse price move, the short spread will not go to full value, so the maximum loss will rarely be incurred.

As an example, let's say IBM shares were at $195 at the end of April. The put spread would be in-the-money, and with three weeks until the May expiration, it would be worth approximately $2.50. Given it was sold for a $1.30 credit, the loss, if closed, would be $1.30, not the full $5, which is the width of the spread ($200 - $195).

So by turning that put into a spread, we can define downside risk and avoid a serious reversal of fortune.

With market volatility picking up significantly over the past two weeks, the timing on our topics for this series has been pretty darn good.

Following last week's risk/reversal discussion, we are ready to explore another directionally aggressive strategy, but one that also benefits from an increase in implied volatility: back spreads.

A back spread is a position consisting of all calls, or all puts, with the same expiration, in which one sells a near in-the-money strike and buys a multiple number of contracts in an out-of-the-money strike. The goal is to have as minimal an outlay or debit as possible, while achieving a high ratio of long option contracts to short.

A good rule of thumb is to buy three contracts for every one sold for even money. I tend to use back spreads on the put side as portfolio protection, or straight-out bearish bets.

Let's look at the basic construction of a back spread using our old friend Google (GOOG), which has been sliding following its April 12 first-quarter earnings report.

Immediately after the numbers hit, implied volatility in the May options dropped from 39% to 22%. As I wrote in an OptionSmith Alert that morning, "looking at the report, I think the stock should be down $50." You would have had to be awfully quick though, and I wasn't nearly so on getting out of the long side of a broken butterfly, but with the stock near $650 on the open, one could have:

- Sold 1 May $630 put at $12 a contract
- Bought 4 May $600 puts at $3.50 a contract

This is a $2 net debit (4 x $3.50 = $14, and $14 - $12 = $2). The notion is that if shares of Google kept going higher, the loss is limited to $2.

On Monday morning, with shares of Google dipping below $605, the $630 put was around $33, and the $600 put was around $15, making the position worth around $27, for a 1,250% increase. (Note: 4 x $15 = $60, and $60 - $33 = $27)

This is a bit of a rigged example, as these gains occurred on a huge move in the stock, and as implied volatility in the May options bounced back above 25% following the initial post-earnings decline. But the point is, it illustrates how the gain in implied volatility worked in conjunction with the directional move in the stock to generate a big gain.

This happened for two reasons.

First, an increase in implied volatility will pump up out-of-the money options more than in-the-money ones. So since we're long the out-of-the-moneys, an increase in implied volatility is clearly beneficial. Second, all things being equal, an increase in implied volatility increases the value of an option. Since we're long more contracts than short, we profit here as well.

Now let's look at what would have happened had you established a similar position in **Apple** (AAPL) in early April when it crossed the $600 billion market cap around the $640 level. With earnings coming the next week, the implied volatility jumped from 33% last week, to 43% on Monday.

On April 9 one could have:

- Sold 1 May $620 puts at $23 a contract
- Bought 3 May $590 puts at $13 a contract

This would be a $16 net debit (3 x $13 = $39, $39 - $23 = $16).

On the following Monday, with shares around $590, the position would have been worth around $99 for a 618% profit. The lower return relative to the Google trade is due to Apple starting with a higher implied volatility, making it harder to establish a higher ratio of long to short; we had 4:1 in Google and only 3:1 in Apple for a higher cost. This highlights how important it is to use a back spread when implied volatility is low and set to rise.

So ultimately, the the best thime to use a back spread is when a stock or ETF has enjoyed a remarkable rally, and is set for a fall in price, while implied volatility is low. This is because the low IV will allow for an attractive long to short ratio since with low IV, we can buy more of the out-of-the-money options. And when that IV rises, the out-of-the-money options we are long rise in value.

Sounds perfect, right? Not so fast!

The drawback with a back spread comes when there is a moderate decline that could lead to a very steep loss, especially if shares drift between the short and long strike prices -- the area I call the dead zone. The short strike could be in-the-money while the long options remain out, potentially becoming worthless, making back spreads a high-risk strategy.

Let's look at the worst-case scenario in the Google example above. If shares stabilized around the $625 level, and implied volatility continued the typical post-earnings decline, the position would be worth around a $7 net debit, for a $9 or 56% loss. If it were to be stubbornly held until the May expiration and shares were right at $600, the loss would be a whopping $32 -- far more than the initial $16 outflow.

This type of risk creates a dilemma: Back spreads can usually be established on a more attractive ratio closer to expiration as the further out-of-the-money option becomes less expensive. But holding a back spread until expiration increases the chances it will land in the dead zone and incur a loss.

There are two ways to minimize this possibility.

1. If you establish a back spread with more than two weeks until expiration, only plan on holding until there is at least one week remaining until expiration. If the big move you were expecting doesn't occur, it makes sense to just get out.

2. If the stock moves opposite your prediction, as in higher on a put/bear back spread, think about buying back the short portion of the position as a decrease in value also creates a less attractive risk/reward for remaining short it. Remain long the out-of-the-money strikes at a lower effective cost basis. Many times, these seemingly worthless options can come back to life and produce big profits.

Back spreads can be powerfully profitable, but they must be used judicially and traded around nimbly.

Risk management may seem like a complex topic, in reality it comes down to a few key points -- make a plan, make sure your trades are the right size for your risk threshold, and make sure you fully understand the plusses and minuses of the strategy chosen. And always, always have an exit strategy.

Ask anyone in any field -- business, sports, medicine, or the arts -- what it takes to achieve measurable success and without a doubt, they will mention consistency. A good definition of consistency is the ability to produce above-average results over a long period of time. For the most part, those that occupy the various "Halls of Fame" did it through a lifetime of above-average achievement.

Taking big risks may be exciting for near-term glory, but long-term success, particularly in investing, is an outgrowth of properly managing risk. And by avoiding situations that can lead to complete failure, we put ourselves in a position to succeed.

Allocation Flows Downstream

The concept of asset allocation is the big tree under which all investment strategies should operate. Allocation can be boiled down to "don't put all your eggs in one basket." This is a very simple way of looking at the issue, but it is crucial to appreciate it. And it is a concept that flows downhill. By this I mean, one shouldn't have his or her entire investment portfolio in just equities, but diversified across various asset classes such as bonds, real estate and commodities. Ideally, there should be an element of diversification within each asset class.

Most people will have a preponderance of equities, but within that base, make sure a variety of sectors are represented. Holdings like Apple (AAPL) and Google (GOOG) can represent technology, while ExxonMobil (XOM) can give exposure to energy, and Coca-Cola (KO) to consumer staples. And obviously, no one sector should represent too big a piece of a portfolio.

It's also important to watch for overlapping holdings, particularly if you own both stocks and ETFs and/or mutual funds. For example, Apple represents about 20% of the Powershares QQQ ETF (QQQ), meaning that if you own both, it's important to be aware that your exposure to the unblemished fruit is magnified.

Theoretically, a well-balanced and diversified portfolio will help minimize large swings or losses during times of volatility. But as we have seen in recent years, the market, especially during downturns, has become incredibly correlated.

The bursting of the housing bubble didn't just take down housing and financial stocks -- all asset classes, including commodities and many fixed-income instruments pretty much fell uniformly.

Options Into the Breach

So what does all this basic common sense about diversification have to do with options? First of all, options, especially through the prism of volatility, can certainly be viewed as a distinct asset class. As such, they can be used to hedge or protect your overall investment portfolio. This can be done through basic put or put spread purchases using popular ETFs such as the **Spyder Trust** (SPY), which mimics the performance of the **S&P 500** (^GSPC).

What we want to look at is how options can fit into your overall investment portfolio as a means to boost returns and/or reduce risk. Given their leverage, an options-based portfolio can easily be the tail that wags the dog.

So here are some basic rules of thumb for managing the risk of an option portfolio:

- Do not let options positions exceed 15% or 20% of your overall risk capital.
- Only 50% of an option account should be at risk in the market at any one time.
- No single position should represent more than 5% of the options portfolio on the risk side. So if a position turns out to be a total loss, the overall drawdown on that particular trade would be 2.5% (5% of 50% is 2.5%).
- Set price targets and stop loss prices that have probabilities in your favor.
- Trade the strategies that you are comfortable with. To this day, I don't trade VIX products like the Credit Suisse 2X VIX (TVIX) or double leveraged products because I'm simple not comfortable with their construction and behavior. No one asked Pete Rose to hit homers. He wasn't good at swinging for the fences, but he sure could hit singles. If you're a grinder, work on covered calls and vertical spreads. If you're Dave Kingman, try to knock one over the pyramids. Maybe these aren't the best examples as neither are Hall of Famers for different reasons, but you get the idea.

So once again, the bottom line is that managing risk is about having a plan, understanding your risk threshold, and being fully aware of the plusses and minuses of the strategy chosen.

And always have an exit strategy -- for better or worse.

It may be the last chapter of this paper, but the game is far from over. Over the past eight weeks, I've addressed not only introductory-type concepts like option pricing and behavior and risk management, but also some key basic and not-so-basic options trading strategies.

Unlike many option primers, which tend to start their focus on the innards of options math, my approach is to provide instruction on how they work in the real world. The analogy would be that we don't need to know how to build an engine in order to drive. But to travel safely and efficiently, it certainly helps to have instruction in how the vehicle operates under different conditions. Hopefully, we now have a basic operating manual that will not only get us from point A to point B, but also teaches us what do when presented with adverse or unexpected conditions.

In today's piece, we're going to look at what are generally called "special situations," or events, both known and unknown, that can have a large impact on a stock's price, and how we can use options to predict and ultimately profit from the outcome. I want to look at three areas -- mergers and acquisitions, earnings reports, and extreme moves. The first two categories would fall under predictive plays -- that is, you take action before an expected event. The third would be considered reactive in that you respond after the fact.

Mergers and Acquisitions

Mergers, both real and rumored, may be coming back in vogue, providing not only a catalyst for stock-price movement, but for an increase in option activity. While overall M&A volume is near three-year lows, there are signs that with healthy balance sheets, low interest rates, and a slowly returning sense of confidence, we might expect a dramatic pickup in activity in the second half of the year

According to PricewaterhouseCoopers, as of the beginning of 2012, US corporate balance sheets had over $1.4 trillion in free cash, while private equity firms held in excess of $1 trillion in uncommitted capital. Last year, we saw a string of strategic corporate mergers, especially in technology, as firms like **Intel** (INTC), **Hewlett-Packard** (HPQ), and **Amazon** (AMZN) gobbled up young companies for huge premiums, handing out big profits for those that found themselves sitting on out-of-the-money calls. These land grabs are hard to predict and, Facebook-for-Instagram notwithstanding and unplayable anyway, they have somewhat subsided of late.

Instead, we are seeing more synergistic acquisitions, like **Roche's** (RHHBY) play for **Ilumina** (ILMN), **Energy Transfer Partners**' (ETP) recent bid for **Sunoco** (SUN), and

Coty's offer for **Avon** (AVP). In deals like these, companies look to mix and match parts to fill in product lines and/or boost top-line revenue as organic growth stalls.

While these types of transactions may continue, I think the best money-making opportunities overall will come in the reemergence of private equity and activist investor hedge funds making deals to take companies private. A great example of this was the recent purchase of **PF Chang** (PFCB) by Centerbridge Partners for $1.1 billion, or a 30% premium to the prior day's close.

I think mature retailers, with their relatively modest capital expenditure requirements and good cash flow will be prime sector targets for takeovers. Two names I think are ripe are **Abercrombie & Fitch** (ANF) and **Urban Outfitters** (URBN). Both have recognizable and respectable brands, but have stumbled and are ready to be turned around by skilled managers.

Identifying What's in Play

Trying to predict a takeover is extraordinarily difficult. However, options activity can give an inside read that something is actually in play. Things to look for include:

- An increase in both stock and option volume, accompanied by an increase in implied volatility.

- Option volume that exceeds prior open interest, which suggests strong new buying.

- A shift in skew with front-month options carrying a higher implied volatility than longer-dated options. Typically, longer-dated options carry a higher implied volatility than the near-term options. This is because the longer the time period, the greater the probability of a big price move. But if anticipation of a takeover builds, traders will bid up the price of a front-month option on expectations of a near-term move.

With this in mind, one strategy that might make sense is to short diagonal calendar spreads. This means that we buy a near-term closer-to-the-money call, and sell a longer-term option further out-of-the-money call. If a deal is announced, both options will move toward their intrinsic value based on the takeover price because most of the time premium will disappear. As well, the value of the longer-term option you've sold short will decline relative to the value of the one you're long.

For example; in early May Abercrombie & Fitch shares were trading around $52.50. One could have put on the following trade:

- buy the August $55 call for $4.20 a contract
- bell the January $60 call for $5 a contract

This is an $0.80 credit ($5 - $4.20). Assuming Abercrombie is bought prior to August expiration for any price above $60, the position will be worth $5. That is the spread between the long $55 call and the short Jan. $60 call. Plus, you keep the $0.80 credit you collected, giving a profit of $5.80.

However, this strategy comes with very important caveats to which you absolutely must pay close attention.

This strategy is time-sensitive. If a deal isn't announced or agreed to prior to the expiration of the front month of the option, the short January call position will become exposed to the upside. Therefore, I would suggest structuring the calendar spread in which the long calls have at least two months remaining until expiration, and exiting the position with at least two weeks to go until those calls expire. If the deal fails to materialize before those front month options expire, you will find yourself naked short the longed dated calls you sold, exposing yourself to unlimited losses -- the type of losses that can take you out of the trading game altogether.

Also, be aware that while the above strategy offers very attractive potential returns, they are capped by the width between the strike prices, meaning if a big takeover premium is offered, some money would be left on the table.

Earnings Plays

Earnings are always tricky in that there are many moving parts that need to be gauged; what is expected, what the actual results are, what the options are pricing in, and what the reaction will be.

One can usually assume that implied volatility will decline immediately following an earnings report. For this reason, I always suggest using some type of spread when playing earnings, whether vertical, butterfly, or condor, as described in previous articles (see the list below), to offset a decline in IV. Also, it makes sense to keep the size of earnings-driven trades small as these are often speculative singular events in which you won't have time for a thesis to play out, or for a position to recover if you are wrong.

For example, **Digital River** (DRIV) is set to report earnings on Thursday. The implied volatility of the May options is running around 55%, higher than the 30-day average of 41%, and also well above the 30-day historical volatility at 35%. Following the report, no matter what the results turn out to be, one can expect implied volatility to revert to the mean, or around the 41% level.

This means that all else being equal, the May $19 calls, currently trading around $0.80, will lose about $0.15, or 18% of their value after the report. That likely decline in implied volatility means the purchaser of calls has a major headwind to overcome. To help mitigate this "post earnings premium crush" (PEPC), one could consider selling the $21 calls for around $0.30 to create a $19/$21 vertical spread. Again, no matter what happens, those $21 calls sold against the $19s will also suffer a PEPC, helping offset the implied volatility value lost in the long calls.

Extreme Moves

These occur when a company warns of a profit shortfall and or raises guidance before the official earnings release, a sudden change in management, or other unscheduled news events such as lawsuits or accounting issues. I generally stay away from issues of lawsuits and accounting as they fall under the "cockroach theory" -- that is, there are usually more of those bad buggers around than first appear. In most cases, the best move is no move.

Fading the News

However, on warnings and shortfalls, I will usually take a "fade" approach. That is, if a stock gets whacked on an earnings warning, I might sell some put spreads to set up a moderately bullish position. When big news hits, the first move is usually an overreaction, and implied volatility will initially jump dramatically. Subsequently, one can expect both price and implied volatility to stabilize once the news is digested.

One example of this came back in January, when **JC Penney** (JCP) shares jumped some 25% on the announcement that Ron Johnson -- the brains behind the **Apple Store** (AAPL), gush gush -- was taking over. He may be a genius, but the stock was clearly pricing in a lot of good things that would take some time to play out. Selling call spreads proved to be a safe and simple way to fade the news.