OPTIONS TRADING

A SUCKER'S GAME FOR MOST

A SPECIAL REPORT BY MACRO OPS

Contents

Introduction 2
Part 1: Option Exposures and Mechanics 2
Part 2: Stop Trading Options For Directional Exposure 6
Part 3: Start Trading Options For Volatility Exposure 12
Closing Remarks 21

Introduction

Options truly are “A Sucker’s Game For Most.”

Why?

Because most investors that trade options fail to understand a key factor that heavily influences their P&L — **volatility**.

Too many traders treat options like stocks and futures. They use them to bet solely on the direction of an underlying asset. But this is wrong. Options are different. They have an implied volatility component. Disregarding this volatility component is what causes investors to lose again and again. Volatility ignorant investors are the fish at the trading poker table.

The following special report will dive into the volatility behind options and discuss it thoroughly. We’ll also talk about the pros and cons of options and how our team at Macro Ops takes advantage of them. By the end of this report, you’ll be a hell of a lot more prepared to actually *win* over the long haul in the options markets.

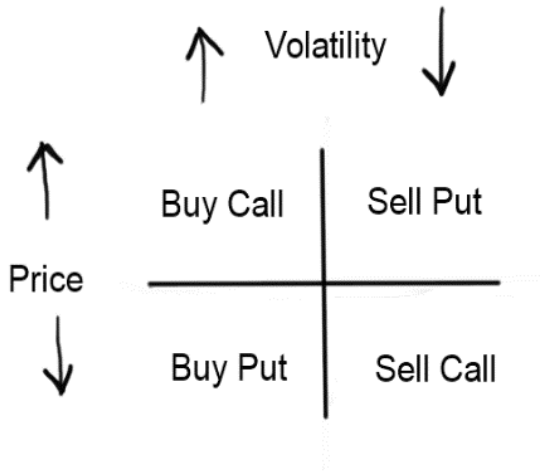
Thanks for taking the time to download and read our report. Now let’s get to it!

Part 1: Option Exposures and Mechanics

Let’s simplify things here and examine what you’re really doing when you buy or sell an option.

1. You’re betting on the direction of the underlying (stock, ETF, currency, bond, or future).
2. You’re betting on the volatility of the underlying (stock, ETF, currency, bond, or future).

There are four combinations of direction and vol that you can bet on with options. You can see the breakdown in the table to the right.



You can’t escape betting on both these factors at once. When you buy a call, you’re betting on both an increase in the price of the underlying and an increase in future volatility. When you buy a put, you’re betting on a decrease in the price of the underlying along with an increase in future volatility.

And if you sell options, you’re once again taking two simultaneous bets. By selling a call, you’re betting price will fall and future volatility will decrease. By selling a put, you’re betting price will rise and volatility will decrease.

Now we all know how to bet on direction… even the suckers. Our goal here is to learn the correct way to bet on volatility. That way we'll have a strong grasp of both components that impact the profit and loss of an options position.

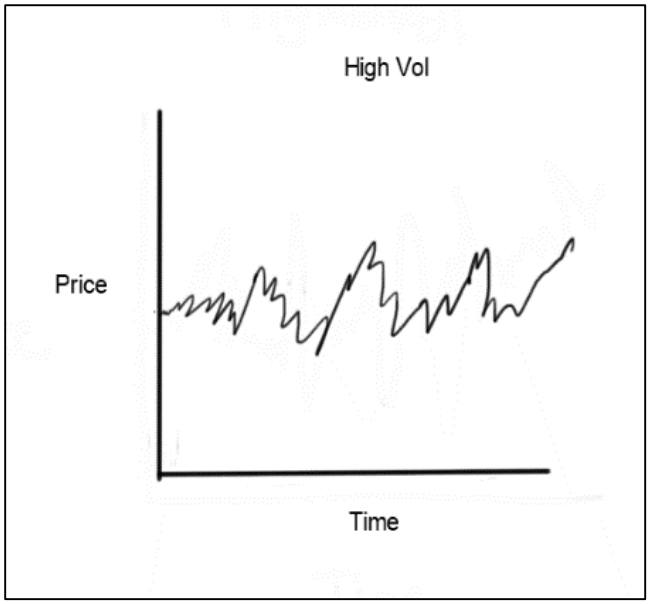
The importance of volatility cannot be stressed enough. Implied volatility (the volatility that we buy and sell in the options market) is a major determinant of an option's price. The higher the implied volatility, the more expensive the option. The lower the implied volatility, the cheaper the option.

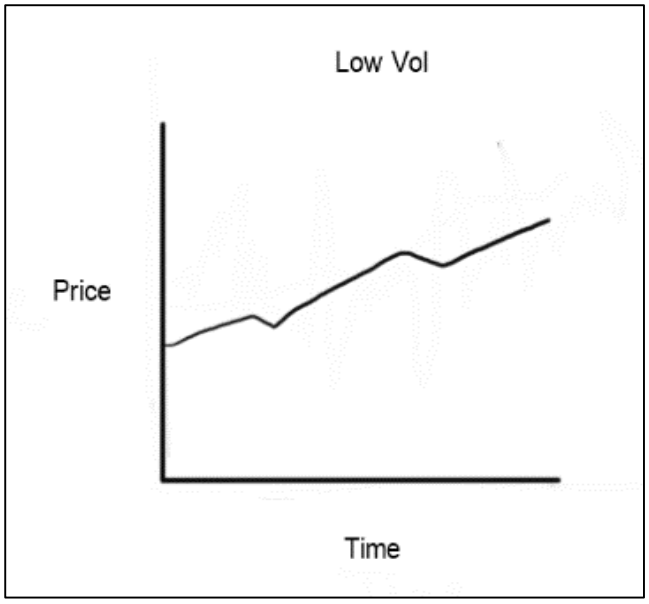
So what *is* volatility?

In mathematical terms: Volatility is the standard deviation of log returns.

For a more intuitive definition: Volatility is a statistical measure of the dispersion of returns.

And a layman's description: High volatility means something is moving around a lot. And low volatility means it's steady with a smooth price path.





Now make sure you don't confuse volatility with trend. Something can trend with low volatility (slow grind higher in US equities for example) or something can trend with high volatility (the crude oil drop in 2014). Volatility is all about the fluctuation of daily returns. Do they fluctuate a lot… or a little?

In options land there are two important components of volatility. Implied volatility (IV) and realized volatility (also known as historical volatility or HV for short).

Implied volatility is derived from the price of the options themselves. IV is the market's best guess at what volatility will be in the future.

Realized/historical volatility (RV/HV) is what actually happened to the underlying in the past.

You will see both of these volatility measurements accompanied by a time frame. 30 days, 60 days, 90 days, etc.

For example, 60 day IV is guessing how volatile things will become in the next 60 days. 60 day HV reports how volatile the underlying was in the last 60 days.

The standard timeframe for volatility is 30 days.

Remember: ***Implied vol is forward looking and realized vol is backward looking.***

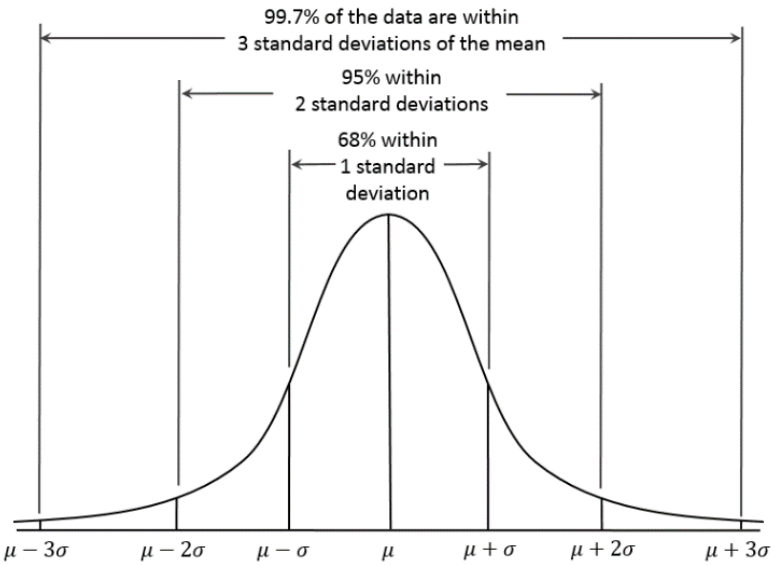
<u>We never know what vol is at the current moment. All we know is what happened and what the option market is expecting to happen.</u>

The VIX is the most watched implied volatility index in the market. It tells us the S&P 500 option market's expected value of volatility over the next 30 days. The VIX derives its value from options expiring in 30 days.

On popular options platforms you'll see volatility quoted as a percentage. For example, implied volatility may equal 10%. This percentage is always quoted in annualized terms. The VIX also follows this convention.

Let's use the VIX as an example to illustrate this concept. Say the VIX is at 20%. That means that the 30-day S&P option market is saying that the S&P has a 68% chance of landing between 20% higher and 20% lower over the next 12 months. The 68% comes from the fact that volatility is just another word for standard deviation.

If you're unfamiliar with normal distribution probability theory, refer to the graph below:



There's a 68% probability of price staying within one standard deviation of current levels. That probability jumps to 95% within two standard deviations and so on. Exceeding that two standard deviation boundary would be considered a rare event — occurring only 1 in 20 times.

If you're interested in finding the expected move in the S&P 500 over the next month, instead of the next year, you take the annualized term (20% in this case) and divide it by the square root of 12. (Why the square root of 12? That's outside the scope of this report and not really important for someone looking to use options as a trading vehicle.)

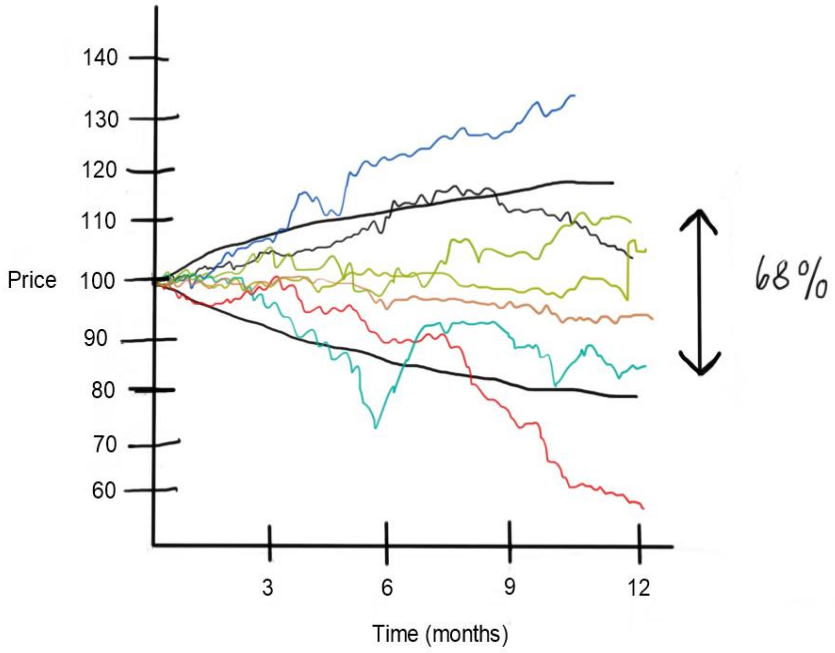
So if we take 20% and divide it by the square root of 12, we get 5.77%. This means the VIX is telling us to expect SPX to stay within 5.77% higher and 5.77% lower from current levels in the next 30 days, about 68% of the time.

Now let's pivot to an ultra-simplified example to better understand this concept.

Take a look at the graph to the right. Let's say that SPX is trading at 100 with VIX at 20.

The black cone illustrates prices the options market is projecting, also known as the implied volatility estimation. When the VIX is at 20, the market thinks there's a 68% chance that SPX falls somewhere within that black cone ($120-$80) in the next 12 months.

The colored price series are various scenarios that could play out. Most of them end within the range of the cone. But some end outside the cone.



If price ends outside the cone, like with the red line, then the volatility predicted by VIX was incorrect. VIX underestimated volatility. This happens every so often — ending within the cone only has a 68% probability, not 100%.

If SPX ended at the edge of the cone, then the VIX perfectly predicted the volatility level. Implied volatility equaled historical volatility.

If you look at the brown or one of the green lines, they all finished in the middle of the cone. This means that the VIX was incorrect. It thought the market would be more volatile than it actually was.

As explained before, both the directional component *and* the volatility component are important to trading options.

Many uninformed traders use options purely to speculate on direction. They have no clue about volatility's role. This is a recipe for disaster. If you're consistently buying expensive volatility,

you'll lose long-term. And if you're consistently selling cheap volatility, you'll lose long-term too. Getting the direction right won't be enough to overcome getting the volatility wrong.

Option market makers prey on this type of retail trader. Just like a casino, the "dumb money" looking to have fun gets their gambling fix and the smart money (market makers) make out with a hefty profit.

Professionals on the other hand primarily trade options for volatility exposure. Market makers and proprietary trading firms will "hedge out" the directional component of each option position by buying and selling the underlying asset. This gives them a pure play on volatility. This strategy is called delta hedging. When they see implied volatility too low, they buy options. And when they see it too high, they sell 'em. It's a completely different game that retail doesn't even know about!

So if you're someone who likes to buy options, make sure the volatility is priced lower than where you think it should be. And if you don't have an opinion on the volatility, then skip using the options altogether, and just buy or short the underlying.

Part 1 Takeaways:

- Trading options involves speculating on both direction and volatility
- Implied volatility is the market's best guess at where the underlying will end up
- Realized/historical volatility is a measurement for how volatile the underlying was in the past
- Don't trade options if you don't have a good grasp of volatility and its effect on options prices

Part 2: Stop Trading Options For Directional Exposure

As I explained, most retail traders use options to bet on direction. If they think a stock is going up, they load up on the calls. And if they think the market is going to crash, they load up on puts.

I get why they do it. Going long options is a comfortable trade. Risk is defined no matter what because the max you can lose is the option premium. People love this certainty and naturally gravitate towards it. On top of that, reward is unlimited. Who doesn't like to risk 1 to make 10, or even 100? You get a great asymmetric risk-to-reward setup.

But options come with many complications too. First and foremost, they expire. An option's value decreases each day you hold it. Time decay continually chips away at the price until expiration, when it becomes worthless.

Your timing with options has to be impeccable to overcome this time decay and still get a nice payout. If you're too early, the option can become worthless right before the trend takes off. And sometimes you may even get the move, but it's too close to the option's expiration. When this happens, the majority of your returns get canceled out by the time decay. Timing becomes very tricky with this strategy. It's a huge downside.

With pure directional instruments like stock or futures there is no time decay. You don't have to pay to sit and wait. In fact, you actually get paid to wait if you're long a stock that has a dividend. It's a much better deal most of the time.

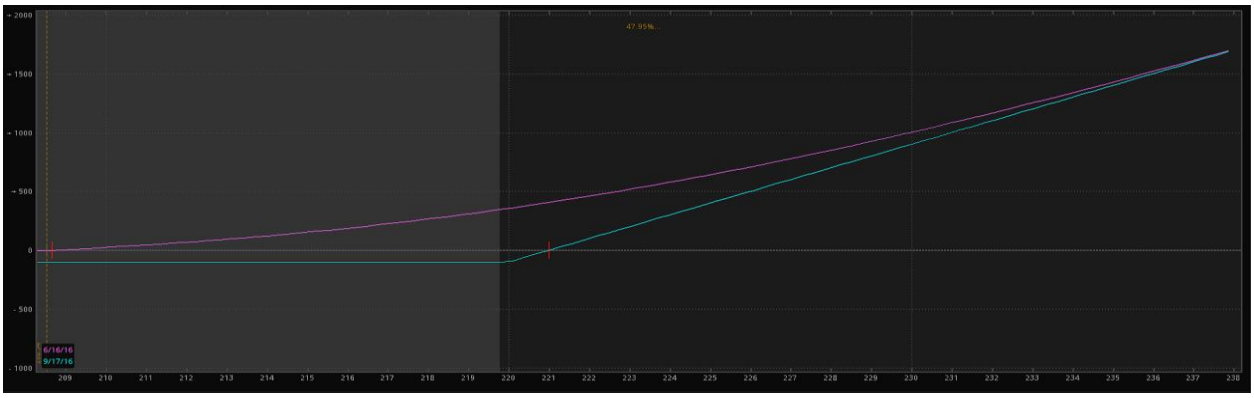
And on top of your option's time decay, you'll also have to deal with the volatility component we previously discussed.

That's why at Macro Ops we shy away from options when we want to make a directional bet. It's more efficient to execute the trade in the underlying asset. That way we avoid being forced to bet on implied volatility levels and can just focus on direction.

And you don't have to worry about missing out on long option's asymmetric risk/reward either. It's very easy to replicate this asymmetry by using a risk point and taking the underlying long or short.

Let's say we thought SPY was going to go to $225 from its current price of $208.37

If we wanted to use options, we could buy the calls struck at 220, expiring in 92 days, for $1.00. You can see the payoff diagram for that call option below:



Our risk is defined to the premium we paid for the call — $100. Now because of the complexity of options, our reward depends on how "fast" SPY gets to the target of $225. The pink exponential line in the graph is the option's profit if SPY moved directly to the target in one day. The blue line is the payoff function for the call at expiration. Over the life of this option, the pink line will slowly converge into the blue line. Potential profit decreases because of the time decay we discussed before.

If SPY jumped right to our target of $225 in one day, we would have a profit of $640. If SPY took the entire 92 days to get there, the call would have a $400 profit. The difference in profit is due to the difference in time that price took to get to its target.

Now don't get me wrong, those are damn good returns! $640 on $100 is a 6.4x return on risk. And $400 on $100 is a 4x return.

But watch how we can achieve these same returns by simply going long SPY stock and using a stop to define our risk.

Here's the chart of SPY again.

Instead of buying a call option, we could buy stock at $208.37 and put a stop loss order at $205.31 — the candle low. If price was to breach that level it would invalidate our trade idea. And in that case we're fine with exiting the position for a loss.

We also need to make the trades equal from a risk perspective. This requires the correct amount of shares of SPY so we only lose $100 if we stop out.

To calculate the right amount of shares, just solve the following:

$100 = ($208.37 - $205.31) * X

We get X = 32.67

So we need to buy about 32 shares of SPY to make sure the trade only loses $100 if we're wrong.

Now let's look at the reward on those 32 shares if we hit our price target.

Reward = ($225 - $208.37) * 32
Reward = $532.16

So our reward is $532.16 and our risk on a stop out is about $100. That's a 5.32x return on our risk. Look familiar?

By adding a risk point to the stock trade we're able to replicate the payoff profile of the long call! We create our own asymmetric payout while avoiding both time decay *and* a bet on implied volatility.

What's important to understand is that the market is far from precise or accurate. There's a ton of noise. Emotions run wild and trades RARELY go as planned. A trade playing out perfectly happens maybe 5-10% of the time…if that. What's far more common is the "in between" scenarios. These are the scenarios where the stock kind of goes your way, but not as far as you thought. Or it went halfway to your target and then turned around, forcing you to exit.

These "in between" scenarios dominate trading. And it's in these scenarios where the disadvantages of options become clear.

When Buying Options Fails

We know from earlier that when we buy an option we're speculating on the volatility of the underlying. Our timing has to be impeccable to get the full payout.

If you've bought out of the money calls, you've likely had this scenario happen to you. You buy a call. The stock rallies. But not as hard and fast as you thought. The call then expires worthless and you're left wondering why you lost money even though the stock went up…

The answer is you paid too high a price for volatility on that call option. The call ran out of time and time decay ate away at the position until it expired.

In our SPY example above we bought the 225 calls expiring in 92 days. Guess what happens if SPY only gets to $220 by expiration day…

Hypothetical Sceanrio For SPY To $220

We lose 100% on the option. Every single penny. We bought the option for $1.00 and needed SPY to finish above $221 by expiration to make *any* money at all. But instead, SPY went to $220 and the option expired for a full loss.

Compare that to simply buying the underlying stock and setting a stop loss at the low of the candle. If we bought 32 shares at $208.37 and SPY went to $220, we would have a profit of ($220 - $208.37) * 32 or $372. That's drastically different than the $100 loss that the calls took.

The long stock position with a stop is more forgiving. We don't have a time clock ticking over our heads. We can be sort of right or 50% right and *still* make a nice profit. If SPY trades up to 220 we realize a 3.72x return on our original risk!

You'll realize the importance of coming out with profits in all these "in between" scenarios the more you trade. The frequency of "in between" trades far outweighs the frequency of perfect trades. Trades that go "as planned" are the exception, not the rule.

By buying a call you really only make money if everything goes exactly according to plan. But if you purchase the underlying instead, you can make money on a myriad of scenarios. And by using a stop you can still create the call's "perfect" payoff scenario anyway!

When Options Actually Help

Apart from the many downsides of trading options over the underlying, there is one benefit.

Options protect you from The Whipsaw.

The Whipsaw happens when price swings back and forth, faking out both bulls and bears till they're exhausted and defeated. Everyone from beginners to billion dollar hedge fund managers suffer from The Whipsaw. Here's what it looks like:

The Whipsaw occurs when your stop is hit and you exit the trade, but price rebounds and reaches your target anyway.

It's a frustrating experience to say the least.

In our previous example, if we were long the underlying, we would have taken a loss of $100 only to see price turn around and hit our target.

Traders who bought the call weren't knocked out by a stop. They still profited. This is the advantage you get with tactically trading options. You're not subjected to any Whipsaw. If the trade plays out by expiration, you win. If it doesn't, you lose. There's no getting stopped out and being forced to watch the stock rip to the target without you.

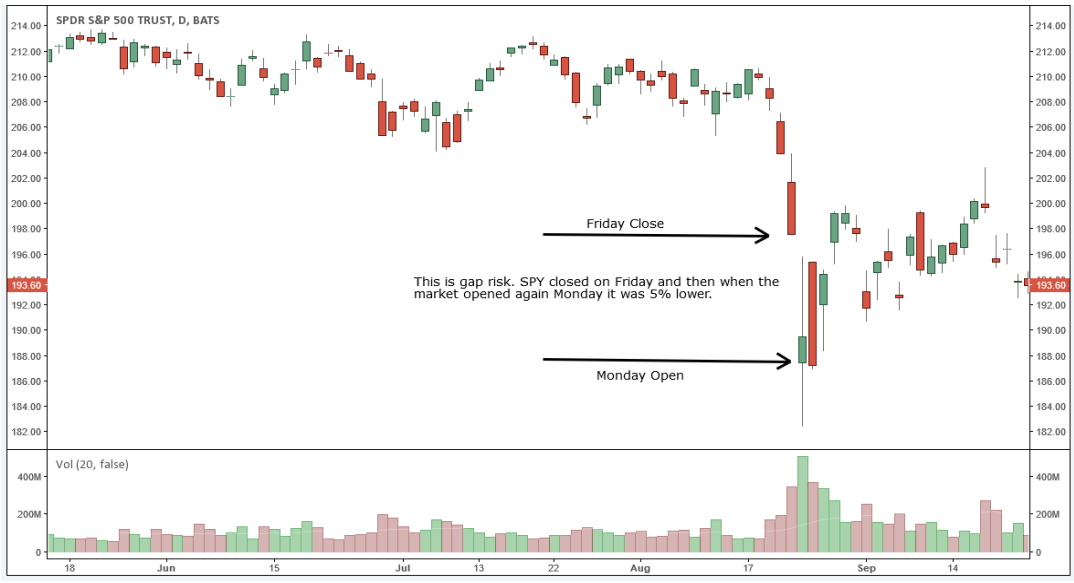
Despite this benefit, our team at Macro Ops still chooses to play the underlying with a stop in almost every scenario. The Whipsaw hurts, but it hurts less over the long haul compared to the time decay in options. The pain you take from options expiring worthless in all those "in-between" scenarios ends up being much worse.

And as for stop out points, they should be placed in an area where your trade thesis is invalidated. The stop should signal the trade has a low chance of playing out and isn't worth it. This is the correct approach. If something hits your stop you should want to be out of the trade regardless of what happens next.

If you choose to sit in an option position as price moves against you, time will continue to tick away and the option will slowly pick your pocket...all while the trade looks like a loser anyway.

A Note On Gap Risk

It's also worth mentioning that options protect you from "gap risk." Gap risk occurs when price moves overnight and opens the next day past your planned risk / stop out point. You end up taking a larger loss than anticipated.



Now luckily in the futures market, gaps are relatively rare because they trade every day except Saturday. But large gaps can still occur in stocks.

Traders usually expose themselves to gap risk by taking large and levered positions into binary events. A binary event can be something like a central bank meeting or earnings announcement. It's in these situations where the probability increases of price gapping a risk point.

At Macro Ops we still trade the underlying, but stay privy to these binary events and derisk when necessary. And of course there *are* situations where prices will gap from unknown, surprise events. In these cases, our strategy's level of leverage is able to absorb the gap losses and not blow out. Either way, the amount of time decay in an option is normally so large that we rarely purchase it over the underlying, even when considering gap risk.

Part 2 Takeaways:

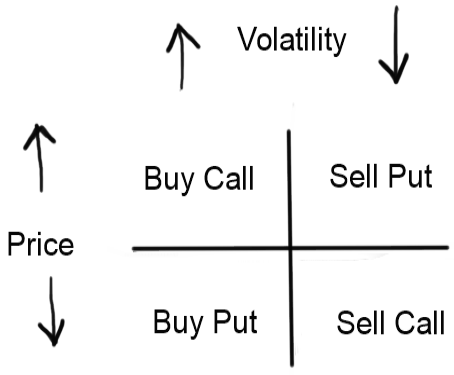
- Speculating on direction by buying options is a bad idea because of the volatility component and time decay
- Executing a position with a stop replicates a long option's payoff without any of the time decay
- The position with a stop will win in all the "in-between" scenarios, the option will not
- Options help alleviate The Whipsaw and gap risk
- The negatives outweigh the positives with directional options, which is why we try to execute everything through the underlying

Part 3: Start Trading Options For Volatility Exposure

Options have a lot of problems when using them to bet on direction. But they're great if you want to bet on volatility!

Refer to the diagram to the right once again:

(Remember: Implied volatility (IV) is the market's best guess at what volatility will be in the future. Realized/historical volatility (HV) is what actually happened in the past. IV is forward looking and HV is backward looking.)



The objective of trading volatility is simple.

If we think the option market is pricing volatility too low [a low implied volatility (IV)], we buy options because they're underpriced and cheap. If the realized/historical volatility (HV) of the underlying ends up being higher than the IV, we win. If HV ends up being lower than the IV, we lose.

If we believe the option market is pricing in too much volatility (high IV), then we sell options because they're overvalued and expensive. If the subsequent HV of the underlying comes in lower than the IV, we win money. And if the HV of the underlying ends up higher than the IV, we lose.

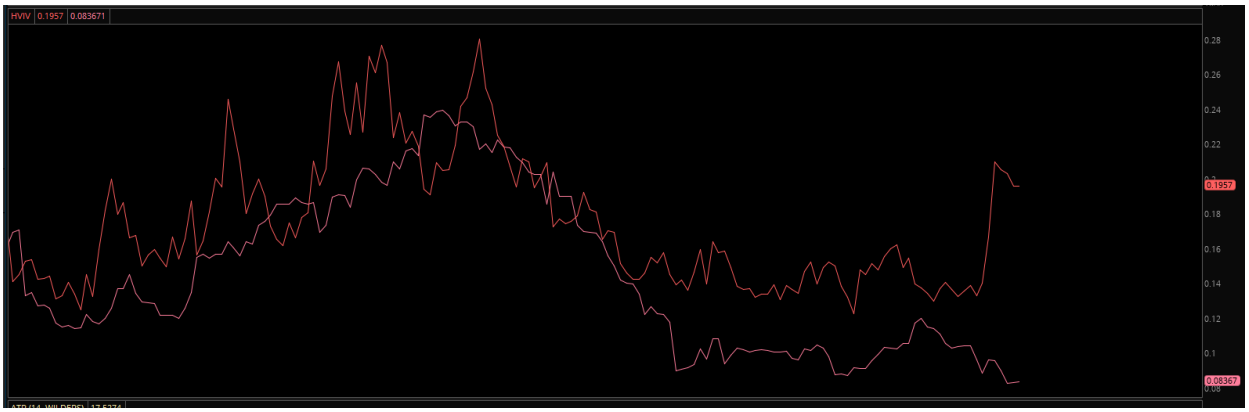
Here's an example to help demonstrate:

If IV is 20% and we think HV will be 10%, we short options.

Or

If IV is 20% and we think HV will be 30%, we long options.

Check out the graph below:



The red line is the 30 day IV of the SPX options market. The pink line is the 30 day HV. The IV of the SPX options is 19.57%, while the HV is 8.37%. So right now the option market is pricing in a big increase in volatility over the next month. If you think the market is wrong, you would sell options at a 19.57% vol and hope that HV comes out lower than that.

Now maybe you thought a crisis was coming and 19.57% was actually cheap. In that case you would buy options and hope the pink HV line had a swift and fast rally into the highs 20s. If that happened your long volatility bet would be profitable.

But remember, buying or selling an option gives you exposure to both volatility AND direction. So we need to address how to isolate just the volatility component.

Professional firms usually isolate volatility with a process called delta hedging. Here's a basic explanation of how it works. Say you think IV is too high and you sell a call betting that HV will be lower. But by shorting the call, you're also technically shorting the underlying stock. To hedge out this short directional component (also known as delta) you buy an equivalent amount of stock to what you're shorting through your option. This ensures that any move in the price of the underlying cancels out and doesn't affect your p&l. That way you have a pure play on volatility without the directional risk. That's delta hedging.

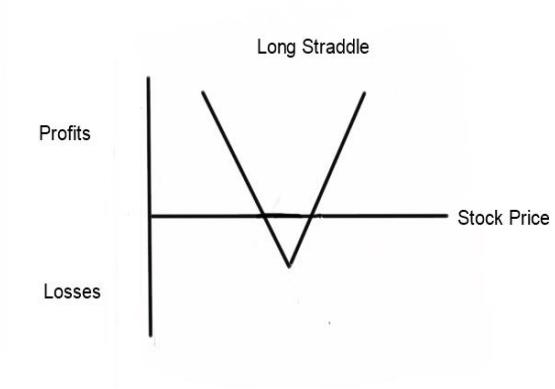
Now as a retail trader, this strategy doesn't make sense to use. The total commissions needed to execute the strategy end up costing too much for an individual. But as a market maker or prop firm, it works.

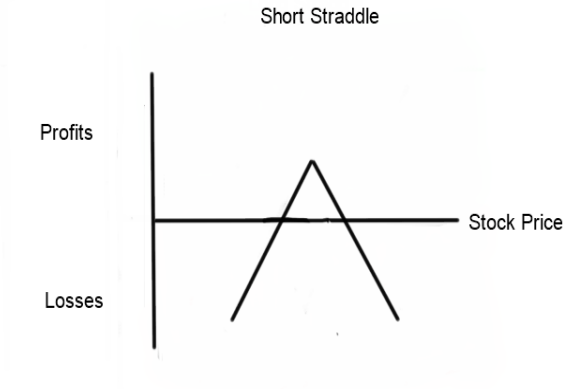
The best way to bet on volatility as a retail trader is by using a simple option spread.

There are two option spreads we can use to bet on volatility. The straddle and the strangle.

(Note: Selling a straddle or strangle does not 100% nullify directional exposure throughout the entire trade. The only way to do that is to delta hedge every day. But that's not cost effective for a retail trader. These spreads are the next best thing and the long run profit and losses are similar to if you were to delta hedge.)

The straddle involves buying or selling both the at the money call and put at the same time. If you buy both the call and put, you're long the straddle and want to see volatility increase. If you sell both, you're short the straddle and want to see volatility decrease.

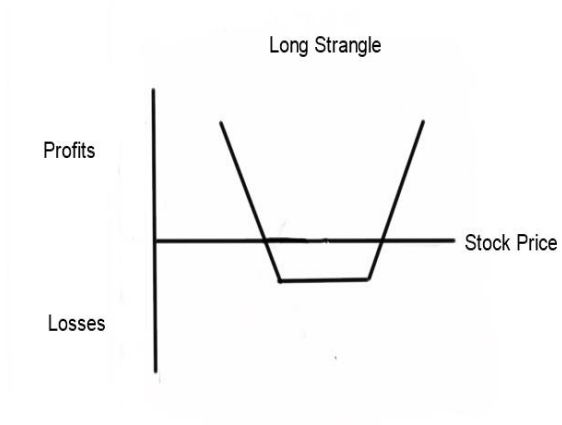


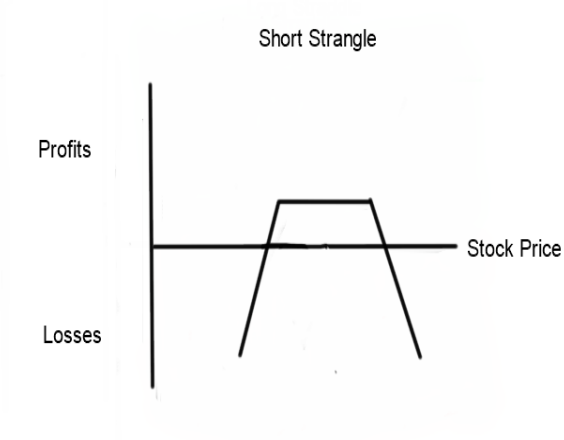


The diagram above shows how a straddle wins or loses. If you're long a straddle, you want the stock to move far to the upside or downside. Large movements in either direction mean an increase in volatility, which is what you bet on by going long the straddle. If you're short a straddle you want the stock to stay still. Less price movement equates to lower volatility, which is great for your short position.

By executing on both puts and calls, you remove the directional component of the trade and isolate volatility.

Another method very similar to the straddle is the strangle. The strangle involves buying or selling out of the money (otm) options instead of at the money options.





Just like the straddle, if we buy both the otm puts and calls, we want volatility to rise. And if we sell both the otm puts and calls, we want volatility to fall.

Long strangle holders profit the further the underlying stock moves. And short strangle holders profit the more the stock stays still.

In comparison to the straddle, the strangle has a wider range in which both options expire worthless. This results in a higher probability of earning max profit if you're a seller of options. The straddle on the other hand has a narrower range, but will deliver you more credit and therefore a larger max win. Which strategy you want to use is completely up to your preference. Both have advantages and disadvantages.

To quickly recap:

- Options can be used to speculate on the volatility of a market
- If you buy options, you want historical volatility (HV) to exceed the implied volatility (IV) that you bought
- If you sell options, you want HV to be lower than the IV that you sold
- Use strangles or straddles to isolate the volatility component

Correctly Forecasting Volatility

Just like with direction, the only way to make money with volatility is by correctly forecasting what it will be. You buy or sell options depending on how you believe the market is mispricing volatility.

Many quants will tell you that volatility is actually easier to forecast than price. It exhibits the same characteristics over and over again. Spend any amount of time looking at data and these volatility characteristics will become evident.

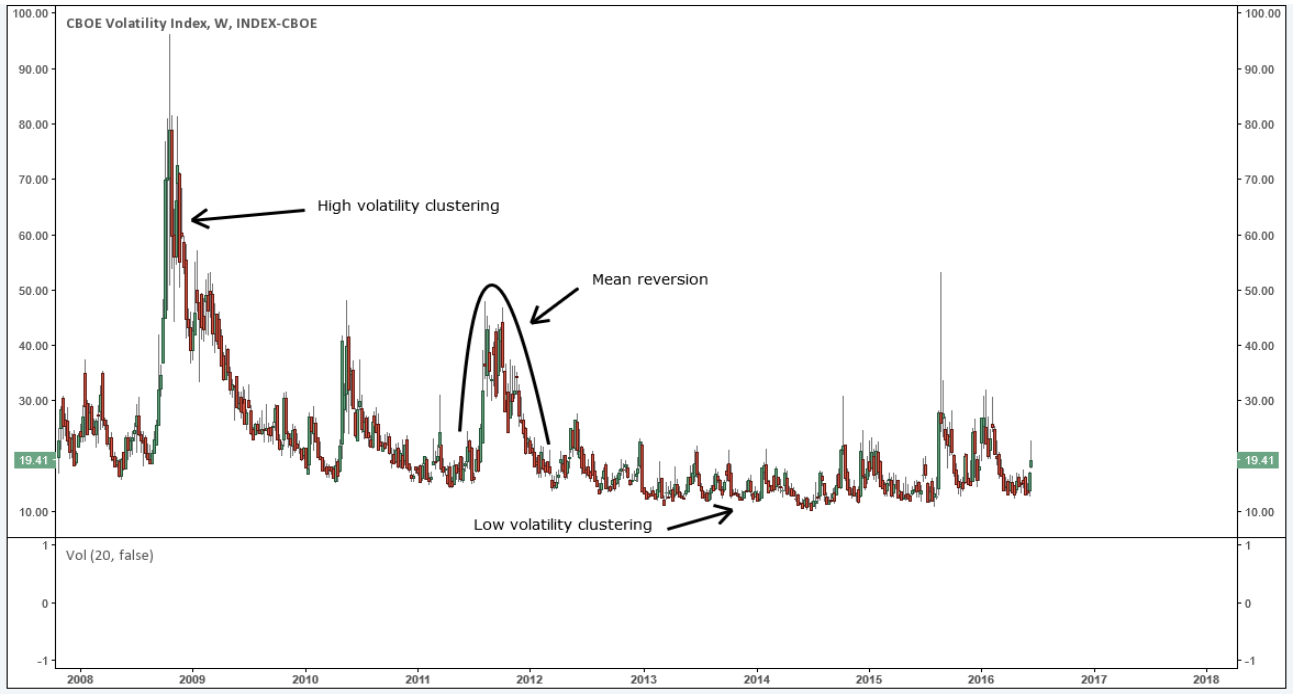
In trading we call these characteristics the "stylized facts" of volatility. These are generally accepted truisms about how volatility acts in our financial markets.

Stylized Facts of Volatility

- Volatility does not stay constant. It clusters in the short term and mean-reverts in the long term.
- Large returns are relatively frequent.
- In most markets when volatility goes up, the price of financial assets go down.
- Volatility and volume have a strong positive relationship.

Clustering & Mean-Reversion

Clustering and mean-reversion are pretty easy to observe in a volatility graph. Take a look at the VIX:



It's clear that volatility does not stay constant.

In the short term, it clusters. And in the long term, it mean-reverts.

Volatility tends to cluster in the short term, meaning you get a number of days in a row of similar volatility. Low volatility days lead to more low volatility days. And then every once in a while there's a market shock that sends volatility through the roof. This increased level then proceeds to cluster once again. When VIX spikes to 20, the next day's volatility will not drop back down to 12. It will be high again, most likely near 20. This is the concept of clustering.

Over the long term, volatility tends to mean-revert. After a market shock and spike in volatility, fear will eventually subside and the VIX will revert back to it lower long term mean.

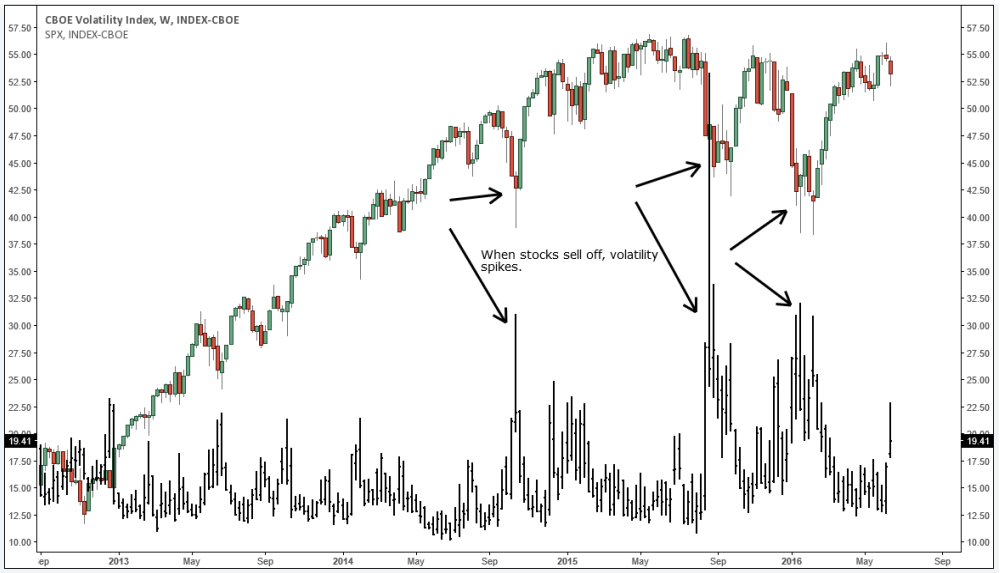
Large Returns Occur Frequently

Volatility doesn't act like price. It's more common to see large moves from a percentage basis. Take a look at VIX. There are multiple days of 10 to 20% returns. This tends to happen every few months. Even a 100% move is possible in a short amount of time.

When Volatility Goes Up, Prices Go Down

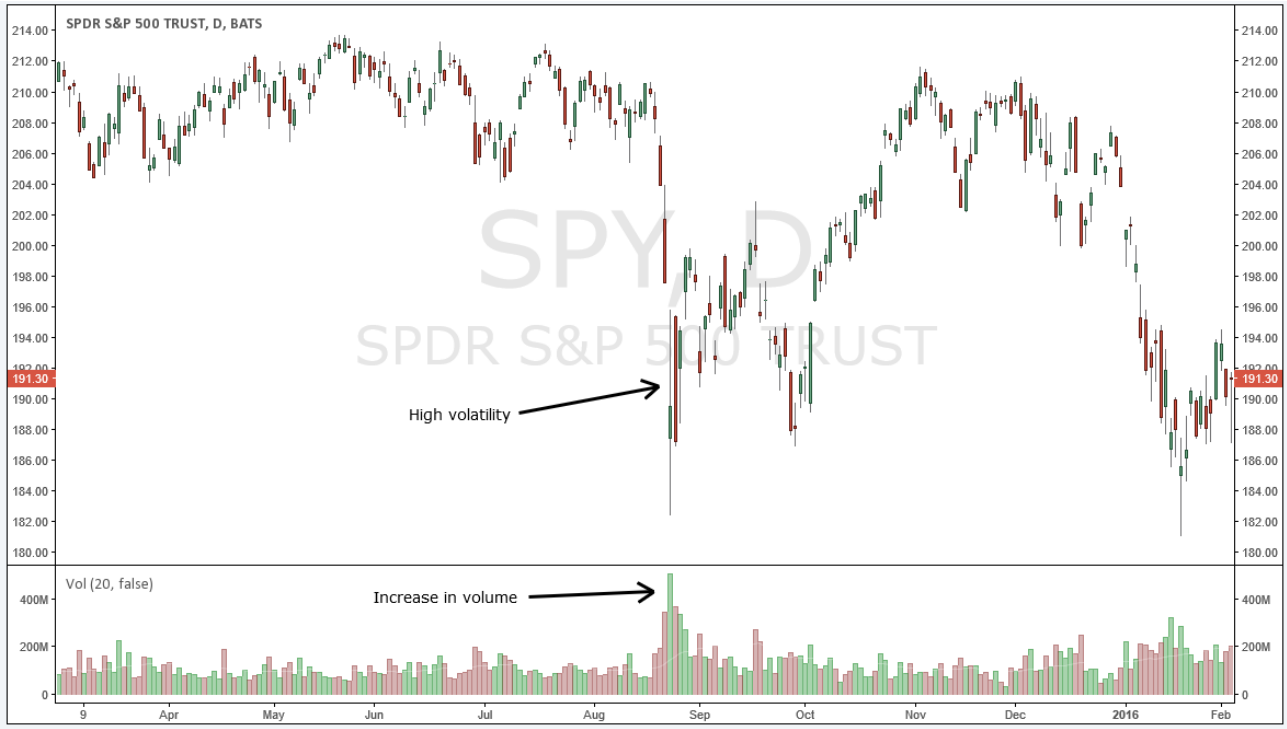
We've all heard the saying "escalator up, elevator down". Markets tend to slowly grind higher and then quickly crash.

Because panic leads to rapid moves lower, volatility will increase when stock prices decrease. The graph below shows the VIX overlaid with the SPX. Volatility spikes when the SPX takes a nosedive.



Volatility And Volume Have A Strong Positive Relationship

When volatility goes up, volume goes up. This make sense intuitively. People are more likely to take action when volatility is high and prices are moving fast and hard. This leads to increased volume. When assets move slowly and consolidate with low volatility, market participants become disinterested and uninvolved. Volume will be lower.



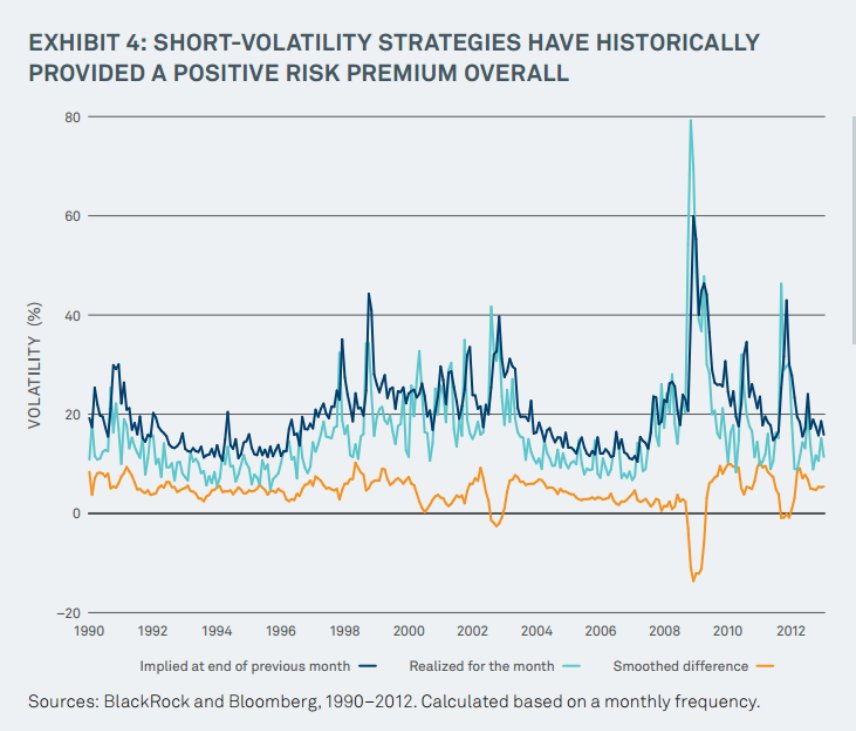
Understanding these stylized facts of volatility will help you select option trades that are likely to win in the long run.

A Volatility Edge

At Macro Ops we look to harvest one of the most robust volatility edges known to professionals. This edge is called the volatility risk premium or VRP. The VRP states that equity index volatility is always priced higher than what it should be. This means that options on the S&P 500 are consistently overpriced. This gives us the opportunity to sell volatility and continuously make money over the long haul.

Take a look at the graph courtesy of Blackrock and Bloomberg.

The blue line above is the 30 day implied volatility (IV) of the SPX options, aka the VIX. The teal line is the subsequent realized volatility (HV) of SPX. You can see that the amount of volatility the option market implies is consistently above the amount of volatility that actually plays out. IV is always higher than HV. This difference is shown by the yellow line at the bottom.



The IV-HV spread is almost always positive, creating an edge in selling index volatility. 2008 was the one exception where option sellers took some heat because there was more volatility than what was implied by the option market. Other than that, every other period has been favorable to option sellers.

The CBOE (Chicago Board Options Exchange) has also produced some insightful research on the VRP. One of their most extensive studies focused on selling at the money puts on equity market indices.

The light purple line above shows the performance of the CBOE PutWrite Index going back to June 1986. All the PutWrite Index does is sell cash-secured at the money puts on SPX. It then allocates the non-collateralized cash to T-bills.

Selling puts outperformed the simple buy and hold strategy because of the volatility risk premium. Sellers of puts were getting compensated for taking short volatility risk on top of their long equity risk.

From 1986 to Jan 2016, the put index returned 9.9% annualized compared to the S&P 500 at 9.5%. What's even more impressive is that the put writing portfolio produced a much lower standard deviation. The table to the right compares the standard deviation of returns between various assets. Put writing had a 10.2% standard deviation compared to the S&P 500's standard deviation of 15.3%.

This means that simple put writing produced more return per unit risk (as measured by standard deviation) than buy and hold, going all the way back to 1986! And that's including the terrible 2008 crisis, among other liquidity events like 1987 and the bear market after the 1999 internet bubble.

The VRP is not some secret held by a group of insiders or PhD academics. It's been widely studied and tested. Think of the VRP as a type of risk premium. Just like passive holders of equities and bonds earn dividends and yield over time, passive sellers of index options also accrue money over time. They earn this money because sellers of options need to be compensated for their risk. A short option has limited reward, but unlimited risk. If short sellers aren't paid for this unfavorable skew, no one would ever sell options!

The VRP phenomenon begs the question, who's taking the other side and consistently losing? Option trading is a zero sum game. If someone is consistently winning then someone else is consistently losing. And who in their right mind would want to consistently lose?

Comparing option sellers to insurance companies best explains this phenomenon.

When you go out and buy health insurance, you pay a small monthly premium to an insurance company that agrees to bail you out in times of disaster. If your health goes south, they've got your back. They'll make sure you have the funds to cover any and all medical bills. The insurance companies are able to do this and make money because they know the probability of

being on the hook for a huge medical bill is relatively small. Over time the premiums they charge exceed the cost of the large one off expenses they have to pay to policyholders when disaster strikes.

The buyers of the insurance are content with losing over the long haul because they're getting a safety net to protect them in case of a disaster.

An insurance transaction is basically a risk transfer between the buyer and seller. An individual buyer transfers unwanted risk to an insurance company willing to take on that risk for compensation.

This same sort of risk transfer occurs in the index option market.

The investors who hedge their downside by buying SPX optionality are pension funds, insurance funds, and other large investors who need to ensure they can meet their cash flow obligations. They knowingly reduce their profitability in order to secure certainty that their fund will not have a huge drawdown. This certainty allows them to guarantee the payments they need to make to their clients and fund holders.

How We Trade The VRP At Macro Ops

Even though the quantitative and systemic reasons behind the VRP are robust and solid, don't mistake it for a free lunch or something that's easy to harvest. Shorting options is hard. You have to deal with **large asymmetric risks**.

There are strike considerations and tenor considerations. What options do you sell? At the money or out of the money? Do you sell both calls and puts equally? Do you sell them at the same time? What tenor do you sell? 7 days, 30 days, 60 days, 90 days?

These are all variables and nuances where having a sound methodology is necessary.

The single most important variable in option selling (and all trading for that matter) is position size. If you position size too small, the returns won't be worth it. And if you get too greedy for high short-term returns, you risk a complete fund blow up. You can find plenty of option sellers that position sized too large in the trading graveyard.

At Macro Ops we like to sell 20 delta strangles on SPX options to harvest the VRP. 20 delta options are out of the money options and have a 80% chance of expiring worthless. We hedge a little bit by buying way far out of the money puts with a delta of 1-2. We then vary position size based on our macroeconomic outlook.

Part 5 Takeaways

- Options can be used to successfully bet on volatility
- If you think IV is higher than what it should be, you want to sell options
- If you think IV is lower than what it should be, you want to buy options
- Straddles and strangles are the best ways to efficiently speculate on volatility without delta hedging
- Volatility has several stylized factors that make it possible to predict
- The VRP is the most robust and well documented volatility edge
- We harvest this edge by selling equity index strangles

Closing Remarks

We hope this special report on options taught you something and will help you in your trading endeavors!

Do you agree with this report? Disagree? Questions or Comments?

Send us an email at:

tyler@macro-ops.com

We love to read feedback and talk markets with our readers.

If you want to see what we're doing with our option strategy in real time, be sure to check out the Macro Ops Hub and sign up for more information.

And if you want to learn more about our global macro strategy, you can check out our Global Macro Investing Handbook here.

Good luck trading!

Tyler and The Macro Ops Team