Chapter 22 Wow, That's a lot of Risk

Making a fortune trading options is a piece of cake. All you need to do is figure out what the market will do, and by when, and then pick the ideal strategy for that scenario that has the highest probability of a profit using the appropriate strike prices and expirations to limit losses and maximize your profits. Then land a perfect exit to lock in those profits. Once you have that mastered, you are on your way to riches.
Okay, so maybe trading options is not so easy after all. Trading is loaded with risk and to keep you on your toes, options come with even more. The longer you trade, the more you will realize that there is no Holy Grail in trading, even the best back-tested strategy with amazing probabilities will lose you money at times and for extended periods of time at that. Even something that may seem riskless, like selling a ridiculous far out of the money 1 Delta puts in the SPY, that can make you money for 8 years straight, can also wiped you out in a flash when the market unexpectedly crashes.

TYPES OF RISK

There are 3 types of risks you need to consider when making trades.

1. Market or Systemic risk
This is the risk that some outside force can collapse an entire economy. It may not happen often but this risk does occur, like the 2008 housing crisis or in 2020 when Covid shut the world down, or 2022 with Russia's invasion of the Ukraine. These are events that took down the whole financial system. For the most part, all stocks and sectors will do down when this happens, and there is not much you can do about it. Another systemic risk is that interest rates will rise all year, bringing the market down with it. Today was a good example of market risk, I woke up to the see the major index futures down almost 2%, because people in China were rioting about their everlasting Covid lockdowns. Some big shot must have hit his giant "sell everything" button because every symbol on my radar screen was red, with no sector being spared.

The only protection you have against these systemic risks is to make sure your portfolio's Beta-weighted Delta is not too high in either direction, otherwise you do expose yourself too much. By keeping as Delta neutral as possible, you will reduce some market risk, but not all, especially if you have naked options. I am not saying you can't have a directional bias, I am just saying it will come with risk. While a strangle or iron condor are Delta neutral to start with, they don't stay that way after a market moves, so that is not how to lower your systemic risk. Being diversified may help a little, but when everything moves together, it won't help much. Instead the only way to protect yourself is to have positions on both sides of the market. If I am bullish in general, I will also try to have a few credit call spreads on bearish-looking stocks to counterbalance some long Delta I may have. Another method is to simply buy cheap out of the money options as a protection for your portfolio in case a monster move against you hits. You can do this with SPY, QQQ, APPLE, etc. I prefer using downward trending low volatility stocks.

Overall, the simplest way to protect against systemic risk is quite easy: keeping your position size and total capital used at a level you can afford to lose. By not having all your money in the market at once, you can never get wiped out. Sure you may not make as much in good times, but in the long run you will be better off.

2. Sector Risk
Sector risks are events affecting a specific sector, like the semi-conductors, oil producers, banks, consumer staples, etc. Some people love to trade all the same types of stocks and be in eight different oil drillers or semi-conductor stocks at once. The induvial stocks in a particular sector will tend to trade as one big position and if the Saudis deicide to increase oil production or the U.S. bans exports of semi-conductor

chips to china, they all move together. It's easy to protect yourself from sector risk just by being diversified equally into different unrelated sectors or trading the major indices. However, this doesn't protect you from systematic risk.

3. Company Risks

And last is any given company's personal risk, like bad earnings, or a CEO getting arrested, a product recall, or Elon Musk buying Twitter and sucking out 20 billion worth of Tesla stock to pay for it. This is considered unsystematic risk that will only affect that company and, to a small extent, others in the same sector. This is the easiest risk to protect against and it's done by trading many other stocks in a diversified portfolio, while not having a huge position in any company in particular. Trading ETFs and indices helps protect against one bad apple. I have had some horrible trades this year with a few stocks losing 25% overnight on earnings, but luckily they weren't huge positions and I have had many winners to offset them. But if I had had all my money in Tesla, Facebook, Netflix, or NVidia this past year (2022), I would be in bad shape. But by trading reasonable sizes, being diversified with many sectors, using different strategies, and being on both sides of the market, I have been able to make money in an awful year for the stock market.

Avoid Risk Through Diversification

I really cannot stress enough how diversification can protect your portfolio. Make a cognizant effort to have multiple unrelated sectors represented in your portfolio, while not having any one sector represent more than 20% of the portfolio.

TRADE SELECTION RISK

The next set of risks involves making the right trade, combining several factors. If you make a mistake in any step you can easily have a losing trade. This starts by trying to make the right trading assumptions for what the market will do and then picking the appropriate trade for it. Every one of these many variables has the risk that your assumption or action is wrong, and that the market doesn't react as you think it should. There are no real solutions to these but you should have an answer to what you will you do if you are wrong? Some of these risks include:

1. Price Direction Risk

What are your predictions about where a stock is going correct? Do you believe it is going higher lower or stay range bound?

2. Volatility Assumption Risk

What about volatility? which way do you think it is going?

3. Strategy Selection Risk

What is proper strategy for your trade? Is an iron condor better than a ratio spread?

4. Stock Selection Risk

Did you choose the right stock? Maybe you chose one with too little liquidity or too high IV

5. Time Frame

Did you pick the right time frame? Is it too far or too close to expiration?

6. Trade Size Risk

This is more money management, but did you trade 5 contracts when you could only really afford 2?

7. Holding Time Risk

When do you plan to exit? Sometime one more week can turn a winner into a loser and vice versa.

A FEW MORE RISKS

Risk by Trade Type

Aside from market risk, all trades will come with risk, but short naked positions, ratio spreads, strangles and straddles will have the most. These are trades that should be made with moderation, yes they can be very rewarding with their high probability of success, but one bad one can wipe out 50 small winners if you are not careful.

Naked Options

I know there will be new traders out there in the future who will have never seen a bad bear market and feel they can sell OTM calls to generate money, and may get more aggressive on every dip, but at some point maybe in 3 or 5 years there will be that one move that will be devastating. These naive traders will mostly focus first on how much easy money they can receive and not really consider the enormous risk involved in excessive selling of naked options. Only when it's too late will they realize the risk involved.

Whenever you sell options you need to consider the worst case scenario and trade with a position size accordingly to our money management limitations, and when wrong, you need to acknowledge it and get out. This applies to strangles and straddles as well. You can't let one side get away from you.

I strongly recommend not selling very low Delta options with little premium that have almost no chance of going in the money. The rewards aren't worth the unlikely risk you take. Even in limited risk trades like an iron condor, collecting $30 and risking $970 for a $10 wide iron condor just isn't worth it. It's bound to happen at least once where you will achieve the max loss and wipe out 30 times it worked. Even if you get out with a smaller loss like $300, it still takes 10 trades to make that back.

Limited Risk Trades

Don't make the mistake of assuming that because a trade has defined risk, that you shouldn't be paying careful attention to it. This is not an excuse to let it alone and see what happens with hopes of it being profitable in 4 weeks, or from coming back from a loser to a profit. Manage all trades, and when you know you are wrong take a loss, why lose $300 on a trade when you can only lose $200. At the end of the year all those extra few bucks add up.

Outlier Risk

This is the risk you never think could happen. The best of traders with decades of experience can get blindsided by a 3+ standard deviation move that comes out of nowhere. Even a 2 SD will be a big shocker. Statically a 2 SD move should happen 5% of the time, that doesn't sound like much but that's about 12 times a trading year. It may not happen that often but even a few times a year will hurt. The S&P has had several 2 SD of about 120 point moves in the last 2 months and even a 3 SD up move of 208 points (5.54%) on a weak Consumer Price Index report on 11/20/22. This type of move, may happen once every 3 years, so you may not expect it, but they are real and anyone who was short coming into it, was in shock afterwards. Stocks are more prone to have these 3SD moves on earnings and have greater outlier risk in general over indices and ETFs. Which is why they are a bit more dangerous to trade.

The options market does take into consideration these outlier moves, and that is why options that are way out of the money have some value to them. Their prices are sustained by people buying them for protection or speculating.

BLACK SWANS

The above aren't even considered black swan events. Black swans are so rare and unpredictable, that you can't calculate the possibility of something happening, sometimes the moves can exceed 5 standard deviations. While rare, it is important to always assume that a black swan event, whatever it may be is always looming, and be prepared risk wise. This is not to say not to have naked options on but do so only at a small enough level that you can afford a ridiculous loss. It should never make sense to risk $1000s to make $25, by selling a way OTM put. At least if you're going to lose $1000 on a bad trade get paid better to do so.

Here a few black swans, I can vividly remember.

1987 Stock Market Crash
Dow falls 22.6% in a day. Which was a 21 standard deviation move. I actually took my Series 7 to become a stock broker on the Saturday 2 days before the Monday crash. I was informed I passed early that morning and told to come in the next day. I had been eagerly looking forward to start my career in the previous day, but needless to say cold calling people to invest in the stock market the day after it crash didn't go well for me.

Oct. 13, 1989 Mini Crash
Dow drops 6.91% in afternoon**,** There was no real reason for this except a failed buyout of United Airlines and some unloading of positions on Friday after a weak 2 days. I remember this one oh so well as it was my first major blow up when I started trading on the floor. I had just sold 5 way out of the puts, at a level just below I thought the market could drop to, to hedge a short futures position that I had wanted to hold for a few days. By the end of day the market blew past that level and those calls ended up outweighing the short futures position at a 5 to 1 ratio. I was down $10,000 in my $28000 account and panicked. I left without closing out my positions, and had a miserable weekend. Monday morning the clearing house liquidated my position, gave me a lecture, and forced me to come up with $7,000 in order to be allowed to trade in the pit again. The worse part of it was, I predicted that the market was going down, I just didn't execute properly and ignored the possibility of a crash.

2000-2001 Dot Com Bubble
It started on April 14th with the NASDAQ falling 9% for the day and 25% for the week, eventually losing a total of 78% by end of 2001. This was after a ridiculous strong overvaluation of many worthless companies. Very similar to many stocks in 2021. The September 11 terrorist attacks in 2001 didn't help and put extra pressure on the markets that year.

2008 Recession
The crash of the U.S. housing market in 2006 that ignited the 2008 financial crisis with the downfall of Lehman Brothers and the lead to a big recession. The Dow dropped 6% on Sept 29th and over 50% in nine months.

2010 Flash Crash
The Dow dropped 9% in a few minutes, as one trader manipulated the markets with futures contracts while market makers dropped their quotes as the markets plunged. The market did rally mostly back an hour later, but a lot of people were liquidated by their brokerage house for a hefty loss. I was lucky on this one, being short some E-mini S&P and Dow futures and covering before it started to rally.

August 20-24 2015
S&P drops 10% over 3 days caused by slowdown in China's economic growth and devaluation of the Yuan. I wasn't so lucky on this one.

2016 Brexit
Stocks fall 3.5% when England announces they plan to leave European Union.

2020 Covid
Dow drops 8% in a day and 10% in another and 37% in 6 weeks.

2022 Inflation Worries
After two years of out of control inflation, the Fed raises interest rates and makes it clear they will keep doing it. This starts a yearlong downward spiral in stocks including what many considered to be safest stocks of the last decade. Overvalued Tech stocks lead the way, with some losing 80% to 90% of their value pretty fast. Others saw a slower steady grind down.

PROTECTING AGAINST OUTLIERS

Trade Small
The only real protection is to trade small, so that if something happens you don't lose a big chunk of your total capital all at once. Though you can limit the amount any particular trade can hurt you, when the whole market makes a more than 2 standard deviation move and you are all in on the wrong side, there is not much you can do. If you invest in stocks and aren't overly margined, at least you know, for the most part, that quality stocks will weather out the storm and rally back in time. Options don't give you that luxury, a bunch of positions gone bad at once, may not have the time to come back to recoup their losses. That's way you shouldn't use all your trading money at once and have some reserved funds just in case.

Being On Both Sides
You can always protect yourself by having positions on both sides of market and keeping your Beta-weighted Delta fairly neutral, as I mentioned before.

Hedging Your Bets
You can always buy deep OTM calls or puts based on your position as a hedge or calls on the VIX to protect you against a big move down. If you were to buy a 5 or 10 Delta SPY puts with about 45 DTE it would cost about $70 and $150 respectively. If you match your Beta-weighted Delta with the appropriate number of puts, you could protect yourself from any big move down and would even make money on a really big move as 1) the protective put's Delta and Vega and Gamma will increase, 2) they will get inflated as more and more people start buying them and 3) their IV will explode further increasing the price.
The nice thing about these deep OTM puts is that their value tends to hold up over quite a wide range of prices and time. They don't have much Theta so if you held for two week you can get out only losing $35 to $60 a contract. You could repeatedly buy and sell them for protection every 2 weeks, not giving up too much money and walk away with a sigh of relieve if they ever do come in handy. I tend to only do this when I know there are market moving reports and I want to neutralize my risk and then sell them the next day for a small loss. You could even buy options with 1 Delta for $5 or $10 and they won't lose much value at all, but it would really take a big move for them to kick in.

LEVERAGE RISK

Let’s forget about market risk for a minute. When you trade options you can be taking on positions worth $20,000 with only a few $100 worth of capital. You can justify trades thinking, “I am only risking a few hundred per trade,” but with options, it’s a lot easier to lose 50% of your investment on a trade than it is to lose 5% if you were trading stocks. And if you use all your buying power at once and are maxed out on a lopsided directional portfolio, it doesn’t take long to lose a big chuck of your account.

If you have the ability to be short options, like with a strangle, you may only need to put up 10 to 30 percent of the stock value to do so, depending on the volatility of the stock. Though this leverage may allow you to make a nicer return on your capital it also makes you much more susceptible to a big move in the market. To protect you from the dangers of leverage risk, once again keep your size small, never be maxed out and always have money in reserve.

GREEKS RISKS

You really should understand the risks involved with the Greeks in your trade. Below id a little summary of the major points.

Delta Risk
This is the directional risk that the underlying market will move in one direction rather than another.

Vega Risk
The risk that volatility moves differently than you had thought. If you are short an option then an increase in Vega can hurt your position even if stock moves in right direction.

Theta Risk
The risk that your long options will lose money as they near expiration because what you need to happen, doesn’t in time frame you need it to.

Gamma Risk
The risk of a large move in the underlying contract that takes you from OTM to ITM when short, the higher the Gamma the more the change of that happening.

Volatility and Delta
As volatility increases, the Delta of an OTM call rises while the Delta of an ITM call falls both heading closer to 50. This is because as volatility increases an OTM call has a better chance of being in the money and ITM optoin has a better chance of going OTM. The risk here is what you once thought was a 20 Delta position can quickly become a 40 Delta position based on a change in volatility, without the stock evening moving much.

Delta and Theta
Deltas will move away from 50 the closer you get to expiration, this is the same concept as above because the less time you have, the harder it is for an option to move from ITM to OTM and vice versa . If you were short an option that was $10 OTM with 2 months to go it may have a 40 Delta giving it a 40% chance of being ITM, but with one week to go that option may have 20 Delta as there is a smaller chance of it moving $10 in a week. This causes the risk that a Delta neutral position will change more rapidly from Delta neural with a move in prices the closer to you get to expiration.

Theta and Gamma

These are always work oppositely, the more time decay you have in your favor the more Gamma risk you have against. And as I mentioned 412 times or so, the closer you get to expiration the higher Gamma risk is and the less likely your OTM option will expire OTM.

AND YET A FEW MORE RISKS

Over Trading Risk

I am not referring to money management here, but instead the risk of overextending yourself with too many positions on at once time. Having too many at once can over tax your brain and it make it hard to monitor them all properly. Make sure you stick to a manageable number of positions and not all expiring at once.

Money Management Risk

This is the risk of blowing up because you are risking too much money, which will be discussed in next chapter.

Liquidity Risk

I've already explained this, but make sure you trade liquid options, or you will be subjected to bad fills and wide spreads. Even in liquid markets when a trade is too far in or out of the money there may be no liquidity and it can become hard to get out of it. You may have to either take a horribly bad fill or hold to expiration leaving yourself at risk of it reversing or getting assigned.

Assignment Risk

Leaving an ITM short option on too long comes with assignment risk that you can avoid by getting out a trade with at least 14 days to expiration.

Risk of Yourself

Hope this chapter didn't depress you, but, as I said, there are a lot of risks in trading. Do your best to manage and negate them. You can have the best trading plan, rules, and intentions, but they mean nothing if you don't adhere to them.

Final Thought

Trading is full of risk. Trading small and diversifying is your best defense against some of it. If you always believe that the worse can happen, then one day you will be right.