Synthetic option positions for your portfolio

Colin Songer: Thank you everyone for coming out and joining us here today to discuss about synthetic option positions, why and how they are used. Before we get started, let me give you a little information about what Konstantin and myself do on the Trading Strategy Desk. So we're here to help coach and educate self-directed investors by challenging and refining their approaches to their trading strategies in regards to charting, option, and option concepts. With that being stated, we run classes, virtual classes online to be able to help educated clients in their approach, as well as having one-on-one discussions. As we pointed out, you can always contact us to set that appointment with our desk.

Now that we've discussed what we're going to be cover and what Konstantin and myself do on a day-to-day basis, let's talk about disclosures. Now, option trade entails significant risk, is not appropriate for all investors. Certain complex options strategies carry additional risk. Before trading options, please review the characteristics of risk as standardized options. Examples in this presentation do not include transaction costs, things like commissions, margin interests, fees, or even tax implications, but they should be considered prior to entering into any transactions. There are additional costs with options

strategies that call for multiple purchases and sales of options, such as spreads, straddles, and collars, as compare with single-option trades. The information is presentation, including examples using actual securities of price data, is strictly for illustrative and educational purposes only, and is not to be construed as an endorsement or recommendation. Profit, probability shows how likely a particularly option trade or combination of trades will be profitable, based on a calculation that takes into account the price of the trade and the expected distribution of stock prices based on the 90-day historical volatility.

Now that we got to the fun stuff, let me hand it over to my colleague, Konstantin, to not only introduce himself, but go over some of the goals that we're looking to achieve today.

Konstantin Vrandopulo: Thank you, Colin. My name is Konstantin and I just want to start by saying thank you very much to everyone who joined Colin and myself today. We know that your time is valuable, and we promise that every one of you will walk away with something new and useful from today's presentation. So let's talk about the goals for what we're going to be covering today. The main reason why we're gathered here today is to learn how to create basic synthetic option positions. Towards the very end of today's presentation, we

will show you a few things that are going to be kicking it up a notch and taking

it maybe from a basic to a little bit of a more advanced concepts, so stay tuned

for that.

I'm not going to beat around the bush today. The content of the presentation

is definitely more advanced in nature. So for those of you who are newer to

options trading, I would like to say first and foremost, please do not be

discouraged and stick with us. Colin and I have worked very hard to prepare

today's slides, and we break down the complexity of the topic in a very

straightforward manner in my view.

So first thing's first. We're going to go over six foundational synthetic position

basics. We all know that as market participants, that we can be long or short

stock. We could be long or short calls. And we could be long or short puts.

So, those are the six foundational factors that we're going to be discussing.

What we as traders, of course, need to fundamentally understand is that with

every one of these positions, regardless of which one you choose, we have

risks and we have potential rewards. That's the whole point of why we trade.

So we're going to take these six foundational pieces a few steps further to

show you how, by using combinations of these six positions, we can actually

recreate others with almost identical risk-reward profile. All of you know that if

we put on the trade, and it's working, the only thing that we have to really

worry about is taking profit, right? We as traders call that "ring of the register."

The time that we have to actually worry about what to do is when the trade is

not working as we originally intended it to. So, when the market is proving us

wrong, our analysis from origin was wrong, and we're actually losing money.

That's the time when we probably want to make some sort of an adjustment.

So notice that I'm focusing quite a bit on risk reward language in the

introductory slide. The reason why I'm doing that is because in my opinion,

the only way, right, that we can understand the risk-reward profiles of any

given positions fully is, you know, if we understand what benefits us and what

hurts us with any one of these things that I've mentioned, long stock, short

stock, long call, short call, long put, short put, right? So if we understand the

things that are actually hurting us or benefiting us, we then know how to make

an appropriate adjustment if the trade is not working as intended.

So, in this slide, where we're thinking about profit and loss synthetics, or

components, what we're looking at is what's known as hockey stick diagrams.

If you've ever taken formal options training, you're most likely familiar with

this. It looks very simple on the slide, but it's really kind of a genius concept.

(laughs) So, what we're looking at is these relative risk-rewards for each

individual position. So, before I go any further on the slide, I would like to

emphasize that, for the purpose of today's presentation on synthetics, we're

talking about true synthetic positions, and that means that we're using options

with at the money strike prices when we're discussing these. They're going to

have at the money strikes and they're going to have the same expiration dates.

So, as an example, you know, if a stock is trading at 125 dollars a share, what

we're going to be doing is looking at a call with 125-dollar strike and a put with

125-dollar strike. If 125-dollar strike is not available, we're going to be looking

at options that are the closest to that at the money line.

So at the top here, we have the long version of the stock, a long version of a

call, and a long version of a put. And at the bottom we have the opposite,

right? So, how do we read these PNL graphs or these hockey stick diagrams,

and what do they really represent? Well, we think about the vertical line, the

y-axis of this diagram is actually our risk-rewards in dollar terms. So, the risk-

rewards are split in half in the middle, representing the gains at the top and

the losses at the bottom. The x-axis, which is the horizontal line, is actually the

price of the security, of the underlying security that we're trading. So, the

lower to the left we go, right, the closer to zero we get, and the further to the

left we go, we actually meet the y-axis. The lowest any underlying security can

actually go is zero, right? So it's capped on the downside. Some of you who

most likely traded through the technology bubble in the 2000s, and the most recent financial crisis, probably remember a few little stocks that cease to exist. I know that it's difficult to imagine that any given investment can go to zero, but as with all investing, we always face risks, including the risk of total loss, right? You probably commonly see that disclosure, and that's just the reality of things. Sometimes, stocks go bankrupt. The more to the right we go on the x-axis or in that horizontal line, the higher the price of the security actually gets with the underline, right? So it's uncapped on the right side to potential infinity. Why? Because we don't know where an underlying security will stop, right, on the top side between now and the expiration date.

So you notice that the bottom diagrams look just like mirror images or reverse views of one another. If you were to stick a piece of glass or a mirror right in between these, you would effectively see, right, the inverse or reverse view of it. Now that makes sense because there are two sides to a trade, right? To any given trade that we take, there's always two sides to it. If we're buying a call and someone else is selling it to us. And if we're selling a put, then someone else is buying it from us. Option trades really are reverse images with a zero-sum game, and that means that we always have a guaranteed counterparty. So what's good for us is bad for them and vice versa. For a stock, I would say that it's a little bit different because if you're buying a stock,

there is always a counterparty who is actually selling it to you, but it doesn't always mean that the counterparty is actually shorting the stock. But for today's presentation, for the purposes of the discussion today, we're going to be saying that this positioning that we're taking on is going along with a premise that the risk rewards are flipped for the two parties, OK? So if I'm going long stock, someone else is selling it, and if they sold it, they don't see additional upside if the stock goes up, right? So, long stock versus short stock, just kind of that flipped dynamic there.

So, what are we seeing on the very left-hand side, long stock. Why is it that the diagram looks the way it does? Well, we know that with a long stock, we have unlimited upside potential. That's the reason why we're buying it. We hope that the stock goes up. So you see that the line extends over from the left to the right, and the higher the stock goes in price terms on the horizontal axis or the x-axis, the more money we spend to make. The risk is, of course, that the stock goes to zero, goes bankrupt, and that's the reason why the line extends all the way to the left of the downside. With a call option, we have unlimited upside potential, and we're having to pay a premium upfront to purchase a call. That's the reason why we have a flat line at the bottom, and then we actually start to extend over to the right. With a put it's the opposite. What are we trying to engage or, I guess, hope for when we're purchasing a

put? Well, we're hoping the stock goes lower. That's how we actually make money. So the line extends horizontally, right, from the right-hand side and then extends over to the left, expressing the fact that if the stock goes lower past my break-even point, I actually stand to make money on the put. The opposites, of course, are going to be true for whoever is selling us the call. They're receiving upfront credit, and that's the total amount that I could make, and I have unlimited upside risk in the stock. If the stock continues to go higher, and higher, and higher between now and expiration, I don't have a capped loss, right? With a naked put, similarly, I guess you have it capped because the stock only has the potential of going to zero and no further. So we know what the maximum risk is, but it is quite substantial.

So, we've described each and every position on this profit and loss sort of hockey stick diagram here, so what we're going to be doing now is taking any two of these positions and replicating a behavior of another. So what I would like to do is turn it over to Colin at this point to show us how to quantify the risk-rewards of each individual position that's on this slide using option Greeks, because those are the things that we're going want to start offsetting to recreate another.

Colin Songer: Thanks, Konstantin. So, we've gone through and showed how you can have these individual components. Now, this is all based on the put call parody, where the option price will come in line. When you look at the same strike, as Konstantin pointed out, for a call, as well as a put. And really that pricing component is kind of the focus of what creates these synthetics. But let's whittle this down even further. Let's put a microscope on this thing. Let's dive into the details. So for those out there who really like to get their hands dirty with looking at the individual option Greeks -- now option Greeks are mathematical calculations used to determine the effect of various factors on the options and their option prices. With that being stated, we have all six components that Konstantin just covered. What we're going to do is we're going to break it down by Delta, Gamma, Theta, and Vega. Yes, there is a fifth one, but that's really not going to be the focus for us here today. Let me give you a quick little recap of what each one of these mean. Before I do that, yes this is a very complicated topic, so for those who are going to want -- maybe not grasping all of this, just remember, this is like drinking from a fire hose, OK? If you walk away with 10 percent of this, that is success, and that's really what we're going to obtain. If you get more, that's great. But really, in essence, try to capture as much of this as you can.

So Delta. Delta is basically quantifying the idea of the underlying movement by one point, how much that will change the option price. It also is a measurement of directional exposure, right? Next is Gamma. Gamma is telling us with a one-point move of the underlying, how much is Delta going to change? And we have Theta. Theta's telling us the impact on the option price with one day of passing. And then there's Vega. Now Vega is representing the impact on the option price with a one percent change in an implied volatility level, and that's one point of implied volatility change. So these are used to help understand the impact of the time value of the option, because intrinsic value's not changed from any one of these Greeks. So the time value change from the underlying, from time passing, as well as change in applied volatility. That's funny because with every option trade, we have three pillars of outlooks that we need to have: outlook on price, outlook on time, and outlook on volatility.

So let's break this down. When we take a look at long stock, well long stock is a bullish trade. Bullish trade means the price goes up. It benefits my position. So one Delta represents one share. So if I have 100 shares of stock, I have 100 Delta. When you look on an option chain, though, it's going to represent one spot zero zero. That is the same as 100 Delta. Because if the option itself represents 100 shares. So if you divide that by the 100 that encompasses that

option, that will give you the one spot zero zero. So let's go down the short stock. Now, if you notice, a long stock doesn't have Gamma, doesn't have Theta; it doesn't have Vega. Why? Because it's stock. So as long as it's trading, you don't have to worry about it expiring. Now it's going to short stock. Short stock benefits from a downward move in the price. So this has negative Delta. So as you can probably figure out, is that positive Delta are bullish strategies, negative delta are bearish strategies. And once again, you'll see with short stock, it doesn't have Gamma; it doesn't have Theta; and it doesn't have Vega.

Now let's go to the option piece of the puzzle. First one, long call. So, long calls benefit from upper movement, gives us positive Delta. But now we're going to dive into these other option Greeks. So, with Gamma, if you buy an option, you have positive Gamma. If it moves in your direction, it's going to accelerate your gains and decelerate your losses. Now, with Theta, we see that it's negative. Well, with each passing the day, the option price will go down by an increment. Now, that's going to work against someone who is looking to make their options more expensive. When you buy an option, you want it to be more expensive. So, time is actually working against us, so that's why it's negative. So it's negative for any options that are purchased. And then Vega is positive. Think of implied volatility as a measurement of supply

and demand. The more buying, the more expensive it gets; the more selling, the more inexpensive it gets. Since I bought my option, I want it to be more expensive. I have positive Vega. I want implied volatility to go up.

Let's go to short call. So short call, like Konstantin said, mirror image, right? So, the long call's bullish. The short call is bearish, right? So, downward movement benefits the position. Now you'll notice that Gamma is negative. So, once again, just the opposite. If I purchased an option, Gamma is positive. Well, with a short call, since I sold it, it's negative. And this is where the term "My trade is growing teeth," because it accelerates your losses and decelerates your gains. But here's the opposite side of that, is Theta. One thing we know is that there is going to be a calendar day that is going to pass, which is going to incrementally devalue the option price, which is in the favor for someone who sold an option, because you sold it when you thought it was expensive, and you're looking to buy it when it's inexpensive. So Theta's positive when you sell an option. And then Vega. Look, "I sold that when I thought it was expensive." "Oh, I want to buy one that's inexpensive," which is why you want implied volatility to go down, so you have negative Vega. Now, if I pair up the long call and the short call, notice that it has -- the long call has positive Gamma while the short call has negative gamma. We're going to

dive into that further, but to start thinking about seeing this little breakdown of the option Greeks.

I'm going to quickly run through the long put here. So the long put benefits, as we saw from the profit-loss diagram, when the price goes down, the put increases in value. So this is a bearish strategy. I bought the options. That's positive gamma. But time is against me, so that's negative theta, and I have positive Vega, which means I have implied volatility to go up, and the short put, which some of those -- some people are probably familiar with, is a bullish strategy, bullish neutral. And you'll notice that since we sold the option, we have negative Gamma, but time is on our side, right, so we have positive Theta, and finally negative Vega. We want that implied volatility to come down. So that is a breakdown of each one of these components, that as I hinted to, we're going to talk about how we mix and mingle these together. Since we did such a microscope view on each one of these positions, let's see how they react when we start combining them. Almost like a chemistry set. Konstantin, do you want to run us through the first one?

Konstantin Vrandopulo: Perfect, Colin. So, thank you so much for doing a great job walking us through the Greeks of each position individually. There's definitely a lot of information on that slide, and I just want to take the moment here to

reiterate how helpful today's deck is for reference purposes. So, please make sure, if you haven't done so already, take the opportunity right now to actually download the deck, and maybe use the previous side of the Greek as a cheat sheet. Some of the information that we're covering here today might be, you know, going over your head, or maybe you're going to forget it in the week. So it's great to have the deck as a reference for help moving forward. Of course, additional questions are going to arise along the way. So, you know, make sure you have the deck downloaded. I would definitely encourage everyone to do so again. So, Colin, the critical takeaway from the previous slide to me is that if we're using the same strike, and we're using the same expiration for calls and puts that we're talking about, they are the same, right? And they offset each other if the put-call parody holds, right? So what we're talking about -- well, you know, why are we actually bringing up, you know, same strike and same exploration options for true synthetics? Why are we doing that? Well, the pricing factors of these option-centric risks, right, for option positions that have similar values, are basically opposites of each other for puts and calls. And you notice that option-centric risks, what I mean by that are those pricing factors, those additional things that the long stock and the short stock doesn't have. We have Gamma exposure. We have Theta. We have time exposure and we have volatility exposure in Vega terms.

So, start thinking about the position that you're actually trying to create, and what exposures does that have to direction, up or down, right? Do we want it to be going up? Do we want it to be going down? The rate of change of directional movement, right, so how quickly, right, how fast does it go up or down? Time passing between now and expiration, and volatility actually changing. And all we're doing is translating it into, you know, kind of scientific terms by calling them Delta, Gamma, Theta, Vega, all right? So, let's take this first one: synthetic long stock. What we're thinking about with long stocks is a bullish view, right? What do we want to happen? We want the stock to go up. So the benefit is when it goes up, and the risk is when it goes down, we lose. We don't care about time, right? And we don't care about volatility changes. All we care about is direction. So if you look at the downloaded slides, hopefully at this time, for the Greeks of a long stock, you would see that it only has a positive Delta exposure, and the rest, the Greeks are n/a, right? They're not applicable. So what components can we use to create the same exposures? Well, buying a call and shorting a put at the same strike price actually takes care of that, right? Let's think about it. What is happening here? If we buy a call option, we have a net cash outlay. We're paying something for it. We have a bullish outlook. We won't be underlying to go up. And we have an uncapped upside potential. The further up it goes, the better it is for me if I'm a long call holder. Now, have we created the upside potential like we

would with a long stock by buying a long call? Well, we did part of it, right?

The uncapped upside potential is what we've created. But we have to pay for

it. A net cash outlay and that debit. So what can I do to offset that net outlay

of cash? Well, what is the risk? I have to replicate the risk side of a long stock,

which is the stock going down. The further down it goes, the more it's going

to hurt me. So I'm going to be shorting a put at the same strike price as I'm

buying a call. If I'm shorting a put, I'm bringing in a net credit upfront. That

net credit actually takes care of the net debit or net cash outlay for the call, and

it opens myself and it opens me up to downside risk, right, from the price at

which I showed at the put all the way down to zero. So what I'm actually left

with in this trade, right, is positive hundred Delta. If we're talking about at-the-

money options if you look at an at-the-money call, it would have a positive

0.50 Delta. And a short put is going to have a positive 0.50 Delta as well. Both

of those things combined are giving us 100 Delta, right? So I'm offsetting my

positive Theta's on the long call with the negative Thetas on the short put. I'm

offsetting my positive Vegas on the long call with my negative Vegas on the

short put. So the option-centric risks are gone. All I'm left with is directional

exposure. If the stock goes down, I lose money. If the stock goes up, I make

money. Now, the key caveat here, and this is in the trader's note down below

here, is that can we use different strikes, maybe even different expirations, to

create relative synthetic positions? Well, sure you could, right? But it's not

fully going to offset the option-centric risks. It might offset them to a degree, but you're still going to be left with some. If we're not using the exact at-the-money same strikes, then we're probably going to be left with some Vega exposure, some Theta exposure, some Gamma exposure, all right? The closer to zero we could get with those, the better the synthetic or the true synthetic becomes. So we've included a link for further discussion on this topic down here that is going to lead you to the learning center on Fidelity.com for the further discussion, but, you know, point is, understand what the risk-rewards are, and what we're actually left with, right, at the end of the day.

So let's move on into, you know, something that's probably -- not a whole lot of folks are generally involved in or generally don't trade this way, right? Shorting stock. It might be a new or unique concept to some of you. Well, if I'm shorting stock, what am I trying to benefit from? I'm actually betting on the fact that the stock is going lower. If the stock goes down, I could buy it back for cheaper and make money. The best-case scenario for short stock position is that the company goes bankrupt. It goes to zero. Stock goes to zero, I make the maximum profit potential that I possibly could make. So let's think about how we could recreate that exposure using option positions. So what am I doing? What is my risk, right? Let's talk about the risk side of a short stock position. What is my risk? Well it's uncapped, right, to the upside. If the stock

continues to go higher once I've shorted something and it continues to go higher with a lot of momentum and it doesn't stop, and I am, you know, very adamant about keeping that position on and I never close it, what's the risk, right? Well, it's infinity. Infinite potential losses. And I know what my potential gains are from where I shorted it to zero. So what would give me a similar sort of an exposure to the upside in the stock, right? That infinite loss potential. Well, if I'm shorting a call, what am I doing? I am bringing in a credit upfront, and that's the maximum amount that I could actually make on a trade. So when I'm shorting a call, I hope that the stock stays exactly where it is, or it goes lower in order for me to make money on that trade. I've recreated the infinite upside risk potential with a short call. Now, how do I benefit from it, right? If the stock goes lower, how do I benefit? Well, a long put takes care of that. For a long put, I am creating a net cash outlay by the way that I'm paying for with a short call and that upfront credit. And the lower the stock goes, the more money I stand to make between the strike price at which you long the put and zero. So I've effectively recreated a synthetic short stock position. Now, the reason why I'm mentioning this, and probably this is a more common synthetic, is because what's true about shorting stock, right? We can't always have the opportunity to do so. In order to short a stock, we have to actually locate shares. Fidelity is, generally speaking, good about locating shares or having the ability of locating shares for you because of our institutional size

and access to capital markets. But there are still going to be situations where maybe short stock is just not available, all right? So if that's the situation and that's the case, I might actually use a synthetic in order to start the position or express my views in a bearish manner. All right, again, you know, we're using at-the-money strikes here. Can split strikes be used? Certainly. But they're going to, you know, still have some option-centric risks. So further discussion on that in this link below here that leads you to the learning center. But we're starting to get the crux of the matter solidified now, right? Think about the benefit; think about the risk, and what two positions could effectively recreate it. Colin, let's take us through a long call position.

Colin Songer: You know, I'm really glad I got the synthetic long call. And here's the reason why: the majority of time, when people do the synthetic, they don't realize that they do it. And I would say this is probably the second-most common of the synthetics that we're going to discuss or be focused on here today. And I'm going to do it this way, and the reason why I think this is really impactful is that sometimes people lose sight when they're doing just this very synthetic. So, let's start with the legs. And let's see if people out there can often go, "Oh, wait a minute. I've done this before." So let's say that you are long stock. "When have I bought my stock?" But then, I went out, and I said, "Oh, you know what? I want to have some protection. I don't want to lose

more than this particular amount." So I went out and I bought a put to basically put a floor. OK, so I went out and I spent money, the premium that I paid. And that's the most I can lose, is down to that strike. I won't lose more than that. If it goes up, I still continue to make money, unlimited to the upside. So let's review. Unlimited upside reward. Downside, basically the premium or the difference of what I paid for the shares down to the strike. Well, wait a minute. That sounds like a long call. It's because it is. It's synthetically a long call. The majority of time when I have discussion with traders, and this is why this is very impactful, is a lot of people get worried and tend to buy puts. "Well, I think it's going to fall," or "I think, at this point in time, I'm actually bearish now." Well, if you're long stock and you buy a put to protect the position, you can see from the profit-loss diagram, this is not a bearish trade. This is still a bullish trade. So I always say, "Well, would you buy a long call here?" And this can help put into perspective of what you're trying to accomplish. So if you're buying a put, if you had no position on right now, would you buy a long call on this particular underlying? Because this is still a bullish trade. Whether or not you're getting a little nervous about where it's at and want to buy a protection, OK. Makes sense. But that doesn't change the outlook of the strategy, which is still being bullish. So, to review, with the synthetic long call, being a long stock, and then you go out and you buy a put, where you're defining that loss or that downside risk.

Very common that we come across this, but since I just covered a common one that, I would say, a good portion of people could relate to, let me go over one that people probably can't relate to. This is not so common, which is the synthetic short call. Now, the synthetic short call, I'm going to do the exact same thing that Konstantin did with his, which is let's look at the risk and reward of this. So, with a short call, we know we have unlimited loss to the upside. We know that we make our premium when the price goes down. So it's a bearish strategy. OK, so first off, let's talk about that unlimited risk. So, from an unlimited risk standpoint, we can't be the short call because that's what we're synthetically creating. There's only one other thing that gives us unlimited risk to the upside, and that's that short stock. So that short stock brings that element of unlimited loss potential to the upside. But it also puts that bearish outlook on there, right? So we know that if the price goes down, guess what? That's going to be beneficial for the short stock. Well, we've got to bring in premium, because the short call -- brought in premium. That's our reward. Let's see, well we can't use a short call because that's what we're making, so that leaves us with the short put. Short put brings in that premium. But what it does is, and now it caps how much we make on that short stock. So up to that strike, it flattens it out, which is what creates that synthetic short call profit loss diagram.

So as you can see, incorporating a short stock and incorporating a short put --
so these are combination of using the stock and options, we can actually
create a synthetic option. So like, I said, the first one, probably common
people could relate to. This one, probably not so much. You know what? I'm
going to see if Konstantin can provide the same kind of experience of maybe
an uncommon one and maybe a very common one.

Konstantin Vrandopulo: Certainly, Colin. So, the less common one, I would say, is
this long put exposure. And you're probably starting to see a pattern here,
right? A pattern of, "OK, we're using the combination of two. Probably what
we want to start thinking about is if we already have one, could we quickly do
another to change our risk profile?" So a synthetic long put, let's talk about
that. What do we benefit from in a long put scenario? Well, we benefit from
the factor of the stock actually going lower, right? That's how we make
money. And we have a net cash outlay for it with basically limited downside,
because that's the total amount that I could possibly lose on the trade, is the
amount that I paid for it. So how could we recreate that? Well, if we start with
a short stock, if we have short stock position, we have unlimited upside on the
stock potential and we're benefiting if the stock goes lower. How could I cap
the unlimited upside risk in the short stock? Well, I could do that by buying a
call. I am paying on that outlay of cash in order to get rid of the unlimited risk

that I have with a short stock, right? So you're recreating a synthetic long put.

You would notice that, you know, a bearish trader, for example -- imagine that

you started with a short stock position. The bearish trader could actually

hedge his risk against the rally by buying a long call. A bullish trader on the

other hand, right, if I start with a long call option, can actually turn it into a

bearish strategy by shorting some stocks. So these are interchangeable,

relative adjustments that we could do very quickly in the open market given

the fact that, of course, market mechanics actually permit for it our account

types and, you know, our relative option levels actually allow for it. In either

case, you've created a risk-reward profile of a long put with both of these

strategies. Now, a more common one that we come across all the time -- and

most of you have probably done already in the past -- what is the most

common strategy that we normally do when we're introduced to options

trading? Well, we do covered calls, don't we? We buy a long stock, right? We

do a buy right -- we buy a long stock. We sell a call against it. Bring in a little

bit of premium, right? Upfront. Let the stock rally if you sell an out-of-the-

money call, right? Up to that strike and then we cap our upside potential for

the amount of premiums that we're bringing upfront. Well, what are we

effectively doing? A covered call strategy, right? So this is what we got here.

We've got long stock and we've got a short call, and a buy right trade, or an

override, if you will, or you own stock low and you're selling the call against it.

What you're creating is a synthetic short put. Whether you knew it or not, right, if you were to look at the same strike put that you are actually selling a call at, it would have an exactly the same risk-reward profile in terms of your net Delta exposure as well as your other Greeks, Gamma, Theta, and Vega. So, many traders start with a covered call strategy, or maybe, let's say that you actually shorted a put. Most of us generally short puts out of the money, so we go a little bit further out to the downside and we pick a price where we feel comfortable buying the stock if it went down to that level. Let's say that we did that and the stock actually did come down. We got a fine. What do you do? Well, you start selling calls against the stock that you got, right? So it's an infinite loop for a lot of traders, and it's truly synthetically identical. So a covered call is effectively a synthetic short put if done at the same strikes.

So, very important to start thinking about, again, coming back to the beginning of the slides, about which risk rewards I have and how could I replicate them, of if I have a certain risk reward, how can I offset some of it if my outlook has changed or, you know, the market dynamics are basically proven us to be wrong I our analysis.

Now, on this slide here about synthetic relationships, I just wanted to reemphasize. We obviously have a cheat sheet here for you, what makes up a

long stock or a short call, but what I would like you to start thinking about is your relative positions in your net Greek exposures. And Fidelity tools and resources provides you a great opportunity to actually look at your net positions in terms of Greeks. The more familiar you get with the Greeks, you do get on the first-name basis with the Greeks, everything becomes so much more clear. If you are looking at your positions in the Active Trader Pro for options by underlying, or options by expiration, or options summary in active trader pro, we give you the net Greeks for that particular underlying symbol or all of the positions that you have. So start looking at those values as, you know, beneficial ways of thinking about it. At the end of the day, if you are a large trader and you trade not only one position but several of them, right -- think about market makers; think about liquidity providers; think about institutional traders that, you know, maybe have 20 or 50 positions on the same underlying. Do they have the time to think about "Do I have the short call paired up against the short put, or a long stock versus a short call? Is it a covered call strategy? Is it a spread? Is it a collar?" Right? They don't have time for that. They have 50 positions on the same thing. So what they actually look at or think about is their relative Greek exposures, and once they understand which side they need to adjust, they go back and make appropriate adjustments by rolling, you know, legging in, adding some Delta,

decreasing Delta, so forth and so on. Colin, I know that you have a personal story that you probably can lead with on this side that will take us into spread.

Colin Songer: Yeah, so this is about five years ago when we started the desk. And this is to show you the real application of what we're talking about here today, is -- I received a phone call from a trader who a client called in, they placed a trade. They realized they placed the wrong trade, or what they thought was the wrong trade. They went out and they wanted to buy a call spread. But what they ended up doing was they ended up selling a put spread. Now, using the same strikes, what happened was they called, try to get a bus. They couldn't get the bus. So they brought me on to have a discussion about an adjustment or a potential adjustment. And I'm going to show you in our next piece here, which is there was an adjustment that needed to be made. So the client was, after I showed him, and walked him through, and -- Konstantin mentioned one of them. We had these powerful tools to help you analyze. When I walked him through and talked him through the risk and reward of the put spread that he sold, it was maybe a penny or two off, but almost the exact same risk-reward as the call spread that he was going to buy. That leads us to this next piece, is that bullish vertical spreads can be constructed with calls or puts. The bullish spreads are comprised of buying that lower strike and selling that higher strike. It doesn't matter if it's a bullish call spread or a bullish put

spread. You're buying the lower, selling the higher strike. So, the bull call

spreads are opened up out of debit, and the bull put spreads are opened up

out of credit. You receive a credit when you sell that. But when you look at

the profit loss diagrams and you use the same strikes, they have almost

identical profit-loss diagrams. In most cases, it is identical. So when we had

that discussion to put the trader at ease when he realized all of this is the same

trade. Let me provide you with a little insight on they may be used differently,

because psychologically, when people look at these particular spreads, they

use them differently. So, in selling the put spread, more than likely traders will

view that as, "Maybe I'll sell in out of the money put spread," right? Below

where it's currently trading, instead of using, buying the call spread which

would be deep in the money. Probably something that they don't want to do

for what Konstantin was talking about earlier. Liquidity concerns and the bid

ask can get wider. It can be a little bit more difficult to get out of that trade.

Well, if I'm going above where it's currently trading or right at where it's

trading, typically, someone would use -- utilize something like buying a call

spread instead of selling a put spread that's already deep in the money. So

those are situations where they're used differently even though they're the

same trade. Another -- there is a differential that does separate the two, is

with the call spread -- you know, if there's any kind of x dividend date that's

involved -- there is a higher probability being assigned prior to expiration. Not

saying that you will, but just a higher probability of it. And more than likely, if you're doing a spread, you probably don't own that underlying. So if you don't own that underlying, and you get assigned prior to expiration, you might have to pay that dividend. Usually that assignment will happen the day before ex-dividend day, which means you're short on that day, which means on ex-dividend day, you'll have to pay that dividend. So that's really the only differential between the two. But that gets me to the next part. Does that mean that it also is similar with bearish spreads? Yes, they are. They are synthetically the same. So bearish, vertical spreads can be constructed with calls or puts, and it's the same concept, as that, with the strikes, just flipped. I'm buying the higher strike this time, and I'm selling that lower strike. So the bear call spread, or open up out of credit, you're receiving that credit from the onset of the trade, and a bear put spread, you're paying. It's a debit when you initialize that trade. Once again, the profit loss diagrams are the same when you use those same strikes. Once again, though, same concept applies here. They're usually utilized differently in terms of how are you utilizing them, what type of approach that you're looking to do.

Now that I've gone through the different spreads, what if we mashed them together? Konstantin, what's the outlook for when we mash them together?

Konstantin Vrandopulo: I did, Colin -- I did promise at the very beginning that we will take it up a notch, so hopefully if you've been following along, you're starting to see a pattern, right, really, really emerge and is starting to become clear. I often get asked a question, you know, "What's the difference? I want to do a long call condor or a long put condor. Or should I do short iron condor?" Well, the answer is, if you're doing them at the same strike prices, they're the same trade. (laughs) They have the exact same PnL breakdowns, right? What is long pull condor? Well, it's a bull call spread below a bear call spread, right? What is a long put condor? It's a bull put spread below, right, a bear put spread. But what is a short iron condor? It's a bull put spread below a bull call spread. So they're essentially the same exact trade with a similar PnL that you're just using this put call parody, and you're looking for, most likely, why would you be doing one or the other? You are looking for the best liquidity out there, right? Which one should I do? All right? If the options are trading deep in the money, they probably have less liquidity. The bid ask spreads are going to be wider, right? So there might be a benefit of doing the other side that's slightly out of the money and that has tighter spread. So, add these strategies to your appropriate Fidelity tools, analyze them, see which ones you can actually do for the best possible fill, and put that one through, OK?

Now, for the key takeaways, ladies and gentlemen, we talked about a lot of things today. You've obviously recognized that, you know, understanding the Greeks is going to be very important. We host sessions on option Greeks all the time, maybe even more in-depth topics of how implied volatility changes affect option Greeks and things of that nature, so please join us for those. You can obviously use the synthetic positions as a true adjustment, right, to the trade that you currently have and you might have changed your mind on very quickly. Make sure that you have a method for analyzing how much time is left, what directional exposure I have, up or down, where they're using charts or some sort of fundamental metric going into an earnings announcement based on earnings or revenues. And of course, implied volatility, which is only a factor for options trading, right, and implied volatility is a direct output out of the options market. So make sure that you have a way to analyze it again. Additional sessions and classes on all of these topics. We appreciate your time here today. Make sure you use the Fidelity notebook. Download the slides.

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