TRANSCRIPT

Buying an option? 5 things to know before you place the trade

Presenters: Jacob Ellis and Peter Janssen

Jacob Ellis: Good afternoon, and thank you Trey, glad to be with you, I am Jacob Ellis, and it is Peter Janssen who will be joining me from Fidelity's Trading Strategy Desk. The Trading Strategy Desk, for those of you who are unaware, is a small group of traders dedicated to your education and development as a trader. Let's jump right into the material and really address the agenda for today. We're going to go from the very beginning of how do we identify which of the various option-buying strategies best fits our outlook, then jump into strike and expiration dates, and selecting between them, a quick discussion on the exercise of options, before talking about the options liquidity and options pricing, and how they factor into our decision-making. Finally, we'll jump over to Active Trader Pro and demonstrate how to actually review some of these same tools on our platforms, and even place an option trade. So we'll be going through those line by line, and I'm really looking forward to doing this together with you. The very first thing, and without further ado, let me pass it over to you, Peter, to tell us about the various option buying strategies.

Peter Janssen: Yeah, absolutely, and thanks for that, Jacob. You know, when it

comes to buying options, there are really many reasons for why traders may consider utilizing, you know, these strategies, which I'm sure some of you in the audience may already be aware of. You know, I actually think as we get further into the material today, many more reasons will actually become apparent and jump out at everyone. So let's begin with a, you know, quick review of some of the thought process and characteristics involved here to really just ensure that everyone has a firm understanding from the get-go, regardless of how familiar you are up to this point. So to start with, you know, strategies where we are buying options, you know, can give ourselves market exposure in the direction that we want. And really, the only requirement is having the cash to pay the premium. You know, there's no need to already own shares of stock, or have cash in our account above and beyond the premium, you just pay upfront when you enter that trade. Which of course can be beneficial. And what is it that we're paying for? You know, when I say, you know, buy a call, or buy a put, what are we getting? Well, you know, ultimately what we are paying for is the right to do something. And this is what really distinguishes between buying and selling options strategies, so that's, you know, definitely important to recognize. You know, when we buy options, we give ourselves the right to take action, you know, if it is favorable, and if we choose to do so. When we buy calls, we're giving ourselves the right to buy shares of the stock, you know, and that's an area we're bullish. You know,

we're actually looking to profit from a rise in the price of the stock. When we buy puts, we're actually giving ourselves the right to sell shares of the stock. You know, we are bearish in that scenario, and we're looking to profit from a decline in the stock price. And of course we always want to make sure that you understand that we have these rights to buy or sell shares at a specific price, which is called the strike price, and for a certain period of time, which is the expiration date. And we'll cover those, you know, more in-depth shortly, uh, and what considerations as a trader you're going to make before choosing which might be the best for your specific outlook. But at this point, I'm sure, you know, some of you are thinking, if the real basis for buying calls or, you know, buying puts is a bullish or bearish outlook, you know, why not just buy stock? Or why not maybe just sell short? You know, what are the real benefits to these types of strategies? And the overall theme here is really just defined risk. You know, one of the reasons that traders can utilize option buying strategies is that your loss potential is limited to the premium that you're paying, you know, plus any commissions. So you can actually go into trades looking for, you know, profitable potential, and favorable situations, but you know, really know upfront the most that you can lose if things do not go according to plan. So whether you decide on a bullish or bearish trade based on your analysis and your outlook, you know, through the use of buying options, you have that maximum loss built into your trade, which can be

extremely desirable for traders in a number of different circumstances, you know, different market environments, and actually even helps a tremendous amount with position sizing and risk management, which is a, you know, crucial part of the planning process. So I think an example can really help illustrate some of these concepts, so let's take a closer look here now, and let's start by laying out this scenario with these details. Now remember, this is an example of buying a call, which is that bullish strategy. So, you know, we're envisioning that the stock will go up. You know, in our example, you know, XYZ is trading here at $42 a share. You know, we think XYZ is going to trade higher, you know, we don't know if it will go up by, you know, $5 or $10, you name it, but we know that we want to take advantage of that, and make money if the stock rises. However, at the same time we don't want to risk buying, you know, say 100 shares, which would cost, you know, $4,200. We don't want to risk that much on the trade if it were to decline, we want a limited loss potential, and only want to risk a fraction of that amount, so in the event that our outlook was incorrect, well we know exactly how much we have at stake, and how much we can stand to lose. So in this example, you know, we're going to go in and buy the April call option with a $42.50 strike price for $2.10. And you notice when we write out the premium, it's in that per-share amount but of course the total is $210, as you see there. You know, also recognize that that strike price of $42.50, well that's 50 cents higher than the

stock price is currently trading at. This is what could be known as an out of the money contract, just slightly, which means that with calls, you know, that strike price is higher than the current stock price. So the full amount of the $2.10 premium that we are paying for, you know, also recognizes what's called extrinsic value. Now for anyone that has not heard of some of those terms that I just mentioned in throughout there, don't worry, we're going to discuss those shortly and provide some additional context. But before we do, you know, Jacob, now that I've kind of laid out this situation of the example, why don't you walk us through some of the potential scenarios and really show us what we could stand to gain or lose, given various outcomes here?

Jacob Ellis: Yeah, assuming we are bullish, we went out, we bought one of this XYZ April 42 and a half call, and we paid $2.10 for it, what happens? Specifically, right now, we're going to evaluate what happens at expiration. At expiration, if the stock were to have risen up to $50, given that we paid $2.10 for the option, we'd be sitting at a profit of $5.40. how do we get to 5.40? Well we recognize the option itself will have a value of $7.50 at expiration if the stock is going for $50 per share. Why? Because we can turn around and buy shares at 42.50, because of our call option, by exercising, and then sell them in the open market for $50 per share, pocketing that 7.50 in difference. Once we account for the cost of $2.10, we're sitting at a profit, in that scenario, of $5.40 per

share. But, depending on where the stock price ends, our gain or loss will be dramatically different. Even the very next line, now at $45, remember, the stock price began, in our scenario, at 42, rising to 45 is now small change. We've still paid the $2.10 for our option, but now it has only grown in value to $2.50, netting us an overall profit of 40 cents. As a result, our break even on this trade is this next line down, $44.60, the point at which we would expect to have the exact same value on our option at expiration as our initial cost, or outlay. That takes us to a break even just exactly zero, not really very excited about that trade. And notice again, that required the stock to rise from the 42 start point up to 44.60 just for us to break even. Finally, anything below 44.60 is going to be some form of a loss for us. But we noticed that whether it's at 42.50, 40, or 37.50, our loss will be exactly the same, and matches the cost on our option. Why? If the stock is below 42.50, we're under no obligation to exercise our right to buy shares at 42.50. Remember, as the owner of an option, you have the option to buy the shares, you are not required to do so. As a result, it drops in value simply to zero, we're certainly unhappy with this trade overall, but at 42.50, we would have lost our entire initial premium, same at 40, same at 37.50, and if I may extrapolate, that would be the same even if the stock were to fall to $20, $10, or $5. Our maximum loss on the trade is $2.10. Once we've given some thought to these potential outcomes on a trade, we can put it into a picture format called a profit and loss diagram. We

see our first of these on the screen now. Buy one XYZ April 42 and a half call at 2.10, yields this overall gain/loss scenario. These profit and loss diagrams are a little strange when you first see them, but they dictate the stock price itself, left to right. Stock rises means goes to the right. And it is our gain or loss on the option trade that is charted up and down. So if we take a look at 42.50, our strike price of the option, we see a hinge point in this line. To the left, or down in stock price, we flatline. We can lose no additional funds, and we notice it's just at that $2 mark, the $2.10, to be precise. But if it gets above 42.50, we start making back some of that initial cost of the option, breaking even at 44.60, continuing on to profits any price there above. This one diagram immediately tells us all the information from the previous table, and helps us point out aha, what do I want to have happen if I own this call? Well I want the stock over here on the right-hand side, I want it to rise. The further it rises, the better this scenario is for me. Profit and loss diagrams are hugely beneficial. I recommend that you understand them, and then use them, especially as you consider the beginning stages of options trading, so you can identify where and when you would expect to have a profit in different scenarios. This works very well in this case for a bullish outlook. If we expect the stock to rise, buying this call would be one way to put ourselves in line to profit from a rise in stock price movement. But a bullish outlook is not the only outlook that can exist. Perhaps you instead are a little bit on the bearish side of the camp

currently. You would like to have the opportunity to sell the underlying at a fixed price, and profit if it were to fall in price. Buying a put allows us that opportunity, and gives us the ability to access that bearish sentiment with a limited risk potential. Just as Peter mentioned, that limited capital allocation is a great draw to options trading. For a small sum, we can potentially have access to a large potential move. In this case, a put could have a maximum profit, if the stock were to fall all the way down near zero. Allowing us to go out and buy the shares in the open market at roughly zero, and then turn around and sell them using our option at a fixed price. That gives us a maximum profit potential of the strike price minus our initial cost on the trade. And that's what we want to evaluate as we think through it. We can see the same sort of scenario if we put it into an example. If XYZ is now trading at 42 and a half per share, but we have that bearish outlook and want to limit our overall risk on this trade, one way to do that would be by buying a 42 and a half strike price put. Here, the price was $2.30. So we would actually pay $230. Maybe Peter, you could give us the same kind of walkthrough, what would happen in various scenarios if we were to buy this put.

Peter Janssen: Yeah, of course. And honestly, I love these tables, you know, early on they definitely helped me learn a tremendous amount, so just to reiterate how these are laid out. You know, the column on that far left we see the, you

know, various potential prices of the stock at expiration, you know, we also see the cost of that option, which of course is that $2.30, which isn't going to change. Once again, that's the most that we can lose, just as Jacob had said. Also we see that value at expiration, referring to the value of the option contract, and then finally that profit/loss column on the far right, displaying what our net gain or loss would be, you know, after factoring in the cost of that option upfront. And for anyone, you know, newer to these tables, or perhaps just less confident, given all the numbers that are being thrown around, just realize I always found it helpful to kind of ask myself from the start, you know, would you rather. And what I mean by that is kind of starting with some of the facts that we know, and then working through each scenario. So when we take a look here, you know, we have the right to sell shares at 42.50. We know that for a fact, that's the right that we bought. So let's work with our first line. You know, would you rather sell shares in the open market at $50? You know, or at the $42.50 strike price of our contract? Well I'm sure probably everyone out there would agree, you would rather sell at $50. You know, this is why our option value is zero. You know, it's not worth anything. The same thought process there is carried to the $45 example, and so forth, you know, if it's not going to be advantageous to sell through your contract rather than in the open market, well your contract's not going to drive any value. So let's take a look there at that lowest stock price on our table, down there at that $37.50 price.

Well with that same thought process in mind, I certainly would rather sell, you know, through my contract at $42.50, you know, rather than that 37.50 in the open market where everyone else is having to sell at. You know, that's of course why our contract is going to have value, that's why we see here, it's that $5 worth of value, which is simply the difference between our strike price and the current price there at 37.50. Now in order to determine our profit, of course, towards the far right of that $2.70, well we take that $5 value, less the $2.30 premium that we paid to go ahead and show that $2.70. Now just as Jacob had walked us through, it's important to recognize those break even points, which are found by taking, in this point, for puts, the strike price less the premium that we paid of that $2.30, which is how we find our break even there at $40.20. And that's the point where we're really on the edge of making or, you know, losing money, and that's definitely an important concept to, you know, keep in mind. So, you know, definitely notice as the stock price falls, we are making larger and larger profits, but once again, going back to the whole scenario here and that theme that I started off with of defined risk as the stock price rises further and further, and goes against us, our loss doesn't change. It's there capped at that $2.30. So, I think just as Jacob had showed us previously, let's quickly show a profit/loss diagram for, you know, this example as well, really just kind of emphasize that point. As we had seen here, our max loss of that $2.30, as characterized by the, you know, horizontal shape of the

green line that's being shown. Once again that is capped, even as the stock price were to rise against us, as I had just mentioned. Now the increasing gains, as the stock price declines further and further down to zero, is identified there with that upward sloping and to the left green line. And as we see, our gain is going to grow as the stock price is falling, all the way down to a lower price. Of course once again that break even point is right where those two lines are going to intersect. Once again, that's that strike price of our contract, minus the cost of our option, you know, in this scenario down just over that $40 that we had discussed. So, I really think, you know, diagrams can help, you know, quickly visualize the data and shape the, you know, kind of curvature of our gains or loss lines for really an infinite number of possible outcomes, without having to scroll through, you know, pages and pages of data, just like on that previous table, which is why I really love kind of the mathematics behind this, and then being able to really implement some types of tools that really help us visualize it. But Jacob, now that we covered I think a couple examples, and kind of illustrated how price changes affect our returns. It's probably about time that we talk about some other factors to consider when determining, you know, specific contracts that kind of may be best in line with our outlook as traders.

Jacob Ellis: Sure thing, Peter. I couldn't agree more, a picture is worth 1,000 words,

especially on these profit and loss diagrams. Once we've honed in on one of these strategies, we've decided we're bullish, we're going to buy a call, we're bearish, we're going to buy a put, well the next thing we need to really delineate between is the strike price and expiration date, because there are many different strike prices and potentially a lot of different expiration dates from which we can choose as we evaluate our trade. We've mentioned the term several times, let's define them a little more precisely, the strike price is the price at which we would actually execute our trade if we were to buy the shares, in the case of a call, or to sell the shares in the case of a put. It is the transaction price, in each of the examples previously, that was at $42.50. The expiration data is the last date at which you could actually exercise your stock option. Any point after that, the option simply ceases to exist. It no longer has an option to be exercised. In other words, these are decaying assets, they expire, they actually will die in the future. As a result, we need to start weighing the pros and cons of which strike price we will look at, and which expiration we will match for our trade. First, we'll evaluate the strikes. There's three kind of categories or classifications of option strike prices. In the money is those options at which there is already an inherent value. Imagine the ability to buy shares for 42 and a half when the stock is trading for 45, or $50 per share. Buying at a lower price than is available in the market is an inherent value, or in other words, intrinsic value. Those options are in the money. The

same goes for puts. An option to sell shares at a higher price than the current market price is an in the money option. Why? Because it has that intrinsic value. To answer Peter's question, would we rather? Yes we would. On in the money options, here we actually have a reason to prefer exercising over purchasing or selling the shares in the open market. In the money options are contrasted by option three over here on the right-hand side, out of the money options. This is simply a call for which you can buy shares for more than the current option price. That would be a situation where the stock is trading for 40 or 35, and we have the right to buy shares at 42 and a half. There is no intrinsic value in that contract in and of itself. It is out of the money. On a put, the same applies. The ability to sell shares for less than the going market price is an out of the money put. Well then at the money is simply that middle ground. The point at which the strike price of the option is very near, or matches exactly the current market price of the option. We saw that in some of our examples, where the stock price was already trading, right, at 42.50, and we chose the 42.50 strike price on the option. Well this is all a sliding scale, the in the money options will have the highest premium, they're the most expensive. Why? Because they already have an intrinsic value to the option. The out of the money options will be the cheapest, because they have no current intrinsic value. While those that are at the money will be somewhere in the middle, and will tend to have the most time value, as those particular

options are still balanced standing on the fence, if you will, teetering between in the money or out of the money, and only time will tell where that will actually line up. No one of these options is correct, is best. It is all a preference. Would you rather have lower premiums and get even more leverage, but perhaps require a larger move in the underlying in order to turn a high profit? Or would you prefer the at the money or in the money, where you're going to pay a bit more for the option itself, have more on the table that you could lose if you are wrong, but perhaps turn a profit faster than on those out of the money options? It's always a preference, a personal decision, on which one you will select, but this is the type of tradeoff you should be evaluating as you give it some thought. The same types of tradeoffs go on in the expiration selection, and maybe you could walk us through a couple of the considerations on the expiration scale, Peter.

Peter Janssen: Yeah no, absolutely Jacob. And there's a lot of choices out there, like you're saying, so sifting through it is important, and learning some of these characteristics, because it's such an important piece that goes into this decision making, just as, you know, traders, we need to balance our expectations for the stock price, and which strike to select. But we also need to balance our views on the time it will take for that outlook to unfold, which is what of course I'll discuss here now. You know, when buying options, you

know, you absolutely must consider time decay, which is the decline of an options value based on the passage of time. Now for anyone newer to options trading, I think you will quickly recognize that profits will derive from, you know, how correct you are, not only on the direction of the stock, you know, the magnitude of that price movement, but also on the timing of that movement to take place. So let's talk about that timing component. And I really want to start with some, you know, basic facts or kind of concepts that are accepted among the traders as the norm, that everyone should be aware of, and honestly once you've seen this a couple times, it's all going to become second nature. So first, let's recognize that, you know, very simply put, you know, time is money. I'm sure everyone out there has heard that saying before, right? Well this is absolutely a must to recognize here. You know, the longer time to expiration of a contract, the more you will pay in premiums. And that should make sense, right? I mean you're buying more time to act on your right, you know, more time means that there are really a wider range of outcomes for the stock, and for really uncertain events to occur. So hopefully that makes kind of intuitive sense. You know, next also let's recognize that the time decay we're referring to, it's dynamic. And what I mean by that is that it does not change, you know, at the exact same rate for each and every option that are out there. You know, generally speaking, longer dated will lose value at a slower rate, or slower pace, than shorter dated options, which is definitely

going to be crucial to recognize as an option buyer in making decisions on longer dated versus shorter dated options. And that's the reason I like to start with these fundamental characteristics. So of course, let's take a step back, you know, the goal here is to be aware of what goes into, you know, option premiums, and recognize the benefits and drawbacks to each of them. You know, over time this is what's going to help you specifically determine the optimal trade in different scenarios that you come across, and kind of gauge what's best according to your specific outlook. So understand here, with expirations, just as Jacob mentioned earlier with strike price selection, that there is no best expiration, so to speak, and there's no real right or wrong answer, you just need to be able to balance those tradeoffs that are involved. You know, for instance when buying shorter term options, well that's going to result in the option losing more value on a day to day basis from that time decay. However, the options price is going to be much more sensitive to directional movement and lower premium would require less upfront capital. So the tradeoff is that you do need a faster directional move to offset that faster time decay. And maybe as a trader, you're okay with that. You know, maybe that is exactly what you want out of your trade, and that's what your analysis has led you to believe is for a quick, you know, directional move. On the other hand, you know, buying longer term options, they will cost you more upfront, and they're going to require more capital, but the benefit is that that

time decay will have less of an impact, you know, day over day, and of course you're going to have more time for your outlook to play out. So that tradeoff, of course, is that there's going to be less sensitivity to those quick directional moves, and potentially a lower percentage return in comparison. Now of course I'm sure if anyone's feeling overwhelmed with all of the different strike prices, you know, all of the different expirations that you can choose from, you know, it can be a little bit draining at first, but I promise it's definitely an important piece to have as a foundational understanding for buying options strategies, and it's going to become second nature soon, I promise. But Jacob, how about you walk us through, you know, some of the actions that we can take through our right that we've purchased, and discuss, you know, that exercise process that we've talked about a couple times now?

Jacob Ellis: Thank you, Peter. When we talk about exercise and what is its important for our trade, we want to recognize, this is kind of an elephant in the room. We've been talking about what happens at expiration on an option, how can we exercise, what will be the cost or benefit? We're going to sell shares in the open market, we're going to buy shares in the open market. Well we want to recognize, option traders are, by nature, traders. They are option traders, not necessarily stock traders, and certainly not long-term investors. At least related to these specific trades. As a result, exercise is a rare occurrence.

Most options are not exercised. There are good reasons for them not to be exercised, and those will become more apparent the further we dive into this topic. But the key ideas that we do need to understand, and why we start here, for an understanding of options, is number one, if you should hold your option all the way through till expiration, if you do have even one cent worth of intrinsic value, your option will be automatically exercised, if that's a call, you're going to purchase shares. If it's a put, you're going to sell shares. Whether or not you have the money for it, whether or not you have the shares in your account. That, of course, could create a problem you'll have to deal with immediately thereafter. If you do not intend to go through that exercise and assignment process, ending up with shares or a lack thereof in your account, you should be closing your option prior to expiration, especially in situations where there's a possibility of it being an intrinsic value that you would have to capture. Finally, there are a few situations when it would be worthwhile to exercise your option early. They are rare, but they do occur. Typically, they will show up when your option is either very deep in the money, close to expiration, or both. Situations where your option is very deep in the money and it's close to expiration, we might see a situation like we have exemplified here on the right-hand side. A strike price call, $100, while the stock is trading for 105. Ask yourself right away, would I rather buy the shares at 100 using my call, or in the open market at 105? Certainly at 100. This

option has an intrinsic value of $5. Well, if the current bid price on that option were $4.50, meaning traders are only willing to pay you $4.50 for something that you and I can, on paper, prove to be worth $5, you would consider exercising your option, buying the shares right away in the market at 100, and immediately turning around and selling them at 105, allowing you to capitalize on the full $5 intrinsic value, as opposed to potentially selling at $4.50 and netting a small loss of that intrinsic value, just because of the bid/ask spread, that difference between the bid and the ask. In fact, it is that consideration of the bid and the ask which is defined as option liquidity, and we'll be exploring that next in great depth. In fact I believe that's for you to go over with us, Peter.

Peter Janssen: Yeah no, absolutely, that's a perfect segue. I mean the whole theme there of course of not giving up any of that intrinsic value is not giving up any of that, I guess, hard-earned money or your trading capital, and that's another reason why we want to discuss this liquidity. Now when it comes to liquidity and pricing of options, I wouldn't necessarily say that this will be the basis for your decision making by, you know, any means. You know, however I would say it's going to be important to be aware of upfront so that you can easily recognize or, you know, perhaps even avoid maybe some unfavorable pricing situations, and keep more money in your pocket, just like Jacob had walked us

through another example of. So when we say liquidity, if you're not familiar, we are referring to how easily a trader can buy or sell an asset. And I actually like to take it a step further and kind of add the thought process of, you know, how effectively you can buy or sell. And what I mean by that here is what we see with what's called the bid/ask spread. So once again, for those unfamiliar with this terminology, just be reminded that the bid is the highest price that a buyer is willing to pay, and that's the price that you could expect to receive when you are selling. You know, the ask is the lowest price that a seller is willing to accept, and that's the price that you would expect to pay when you're actually buying the contract. So the difference between those two is what I'm sure many of you have heard of, is called that bid/ask spread. Now, why don't I go through that, why is that important? Well, in this example here, we see towards the top, in this first example set, you know, that bid/ask spread on the first contract, you know, it's about 75 cents. So you would be buying at roughly 3.49, and selling at 2.75. You know, you instantly are putting yourself in an uphill battle, needing to make back 75 cents just to break even. But when we look at the lower examples, where the spread is, you know, maybe 5 cents or a nickel, let's say, you give yourself a much more advantageous entry and exit point. So I also want to emphasize, you know, keep in mind when I discussed earlier how options are quoted. And remember, when I say 75 cents, you know, that's $75. And also make it kind of relative in percentage

terms. When we look at percentage terms for that contract in the upper example set, you know, that's 20 percent or so, you know, right then and there, that you are effectively giving up if you were to buy those contracts, rather than the ones in the lower example set where that difference is maybe just 2 percent of that contract. So you're essentially just giving up funds right then and there if you're not seeing that liquidity. And that's what this all comes back to essentially is that with the tighter bid/ask spreads, you know, in general that's going to be an indication that the option is maybe traded more frequently, and that it's more liquid. But when you see those wide bid/ask spreads, you know, it can be perhaps specific to a certain strike price, you know, for that underlying, maybe a certain expiration, but it's going to indicate that that specific option will probably, you know, it trades less frequently, you know, less liquidity, which is the reason that you're seeing a little bit of a disadvantage there. So as traders, of course, I've gotten the question before, you know, can I start by looking at what the volume is for a stock? Yeah sure, I mean sometimes they will, you know, drive in comparisons, maybe an underlying stock that trades quite heavily will also have a tremendous amount of volume and, you know, open interest for their option contracts as well, you know, but make no mistake they are not always correlated. And just because a stock is extremely liquid doesn't necessarily mean that their options are going to be, as well. So, you know, I don't want to put too much emphasis on it, I

think once you've gone through it once or twice I think they will really, you know, jump out at you like a sore thumb. But I also think that quickly, you know, covering some of those concepts is helpful, put a little bit more money back in your pocket, especially with options, you know, lots of financial products have bid/ask spreads, but with options that multiplier can really add those pennies up over time. But Jacob, how about this, I think you'll cover this next bit of material to provide a little more context on some of the terminology that I used earlier, so that everyone has that better understanding of those two main components of options premiums when I was referring to that intrinsic and extrinsic value.

Jacob Ellis: Yeah, quite right Peter. Let's just break that down one more time. The intrinsic value, we've said that a number of times already, and the extrinsic. Well the intrinsic is the amount that the option has inherent in its value, the ability to buy shares for less than the market price, whatever amount of discount we are getting on our price, that is the intrinsic value. If we're looking at a put, it's the ability to sell shares for more than the market price, that extra that we're able to sell the shares for, that is the intrinsic value. An option that has intrinsic value then is those in the money contracts we talked about earlier. Those with no intrinsic value are out of the money. But there is also on this slide extrinsic value. Well the extrinsic value is simply all the rest of it, if you

are able to buy at a $5 discount to the market price, but you're paying $6 for the option, that extra is extrinsic value. Some will call it time value. And the aggregate of the intrinsic and extrinsic is the overall premium. That's how much we're paying for the option. An options premium can be broken up into three main factors. The stock price as it compares to the strike price, how much time until expiration, and the amount of volatility expected in the trade. When we think about the stock price, here we're evaluating the money-ness of an option. Is it in the money, is it out of the money, by how much? Second, the time until expiration. As Peter very succinctly told us, the more time we add to our contract, the more expensive that contract will be if everything else is equal about it. And finally, the volatility, this is why you might trade options, because you expect the stock to move up or move down. A stock that has larger swings up and down, a more volatile stock, will tend to have higher options prices, because there's more possibility for both profit and loss in those options as the price swings up and down. That's going to conclude what we're going to work directly from the slides, and at this point we're going to jump into Fidelity's Active Trader Pro platform to evaluate some of these things in real-time on the live market. Here we have Active Trader Pro, a nice blank starting screen, and we're going to come first and foremost to the options menu up here at the top of the screen, click on it, and we'll take the very first link, the option chain. When we open the option chain, we're

presented again with a nearly blank screen. I'm going to expand this to include my full screen. And then we're going to type in a symbol. We'll use Apple as an example. Currently trading at 167, up a little bit on the day, and we have a number of different selections presented here before us. How we can identify what type of option we might be looking at. In today's presentation, we've looked at both calls and puts. Let's leave it on this selection, though if we use the dropdown, we'll see a number of other strategies available to select from. Ten strikes. This is telling us how many strike prices we would like to evaluate at once. And then we can also filter down the type of options we would like to see. For example, I'm going to deselect this W here, which is indicating the showing or not of weekly options. For example, let's evaluate those options that are a few months out on June 17th. Here, we are presented now with strike prices listed right here in the middle of our screen, we have calls on the left side, and puts on the right. We already are seeing a few of the things we've talked through in today's presentation. We should notice the bid and the ask. We should immediately start wondering, how far is the difference between that bid and the ask? Is there good options liquidity? On the put side, we notice the same columns are available. As we continue to evaluate the different pieces, we also see a few other factors that maybe some of you in the audience are already familiar with. Delta, theta, there are a few other option Greeks, as they are known

collectively, that tell us how an options price would change in relation to a change in some factor in the stock. For example, if the stock were to rise by some margin, how does that translate to a change in price in our option? That is quantified by delta. We also have a column here for the time value. Let's evaluate this 145 strike price option, specifically on the call side. We see that it is telling us there is $4.60 of time value. The option itself is going for somewhere in the $26 range, and given that the stock is trading at 167, compared to our ability to buy at 145, we can think through this and say you know, with a little quick math, that ought to be about $22 worth of intrinsic value. All of the rest if time value, 26, less our 22 of intrinsic, we've got our time value. And we are identifying on the options chain, just like we expected and presented on the slides, that the at the money strike price, the one closest to the current market price, has the most time value. There's a lot to be seen on this option chain, but it is also customizable. What are some of the things you like to add to your option chain, Peter?

Peter Janssen: Yeah absolutely, I'll grab the screen for just a moment. I think one that comes up, either in sessions that we're doing or even with the questions here, you know, from the audience that are perhaps going to come through is that you're going to find maybe adding extrinsic value, you know, that intrinsic value piece, you've already got time value, go ahead for me Jacob, if you don't

mind, go up towards that settings on the green background, and what you're going to find there is by clicking on settings, folks, you're going to have the ability to click on option chain. Now as Jacob's going to click on option chain for me, you're going to notice that there are a tremendous amount of settings, just as you had said, that you can choose between. Some of you are going to want more of the basic ones to start with, some of you perhaps are a little more advanced attending today, and you may want more advanced ones like the Greeks that you can add as you see there, you know, gamma, vega, some of those concepts that we didn't have time to cover. Go ahead and add the intrinsic value for me, Jacob, there towards the bottom. And what you're going to find is, when you hit apply, folks, that's going to go ahead and add that column just as it would for any others. And there's what Jacob was pointing out previously, is that intrinsic value. He was doing that math in his head of about $22 or so, but to just emphasize the fact that that intrinsic value piece, you know, it's not going to be as, I suppose, impacted by some of those more advanced concepts that you'll learn in time. Do this for me Jacob, if you would, add the, you know, furthest out expiration that we can go, perhaps all the way out, I think it's maybe 2024, and these numbers are within reason going to be spot on folks, they do take just a minute or two to update with the recent pricing, but as we're showing here, the concept is that $22.19 of intrinsic value, it doesn't matter if you're choosing a contract that's, you know,

106 days out, or if it is nearly two full years and 687 years out, that is not what goes into, or at least that is not what differentiates. It's going to be that time value piece that Jacob was referring to, and that's where we see that option there in June, it has time value of about $4 or so at that 145 strike, whereas all the way out further in the future, the 145 has time value nearly five times that amount there at $20. So I always like to try to show that, emphasize that, if anything, to just kind of show an exaggerated situation that folks come across quite often, and also can help a learning experience for folks that are a little bit newer to this type of, you know, illustration as well. So I think that that, you know, helps out a tremendous amount among other things. There's a number of other tools, like you mentioned, our strategy desk does a various host of different types of sessions on, you know, different tools that can be used from the, you know, option trade builder, from the profit and loss diagram, which is much like those tables and diagrams that we had seen earlier, right Jacob? They don't have to be so stagnant, you actually have the ability to harness many of those tools for yourself right here with this downloadable platform, as well as on Fidelity's website, but I think the platform works a little bit better, at least for my eyes, and how I like to change things, see what different variables will impact the options pricing, whether it's time, you know, whether it's directional movement, or even some of those concepts we didn't get into like volatility, perhaps, or the rate of change. So I think with that, Jacob, at this

point I'll let you go ahead and add any last words that you had before we perhaps have a few last minutes maybe to open it up to some questions.

Jacob Ellis: Yeah, thank you all for joining together with us for today's session.

END OF AUDIO FILE

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