TRANSCRIPT

CBOE: Options, volatility and earnings

Jermal Chandler: Good morning everyone, glad to have you here with us once again. We're going to talk about how to do volatility earnings and options work together. And as you will see, sometimes they work together, and sometimes they don't, but it's important to understand the factors surrounding how volatility changes, and how that affects your options around earnings, because that's a huge binary event that it's really important to understand how those all kind of work together.

As always, we have our disclaimer slide. The biggest and most important points being in bold there. Options involve risks that are not suitable for all investors, and this information that is being provided to you today is solely for general education informational purposes, so those are the two main things there. But again, people should think, as you continue to -- some of you who have joined us before, or some of you who are new to us today coming in and taking in this information is key, you are working on how to understand more about options and trading.

So our webinar, before I start, I just want to make sure I give some props to Jonathan on this topic, he's actually the one who spearheaded this topic as we

were brainstorming, and it was, he thought that it would be a good idea to cover some of the intricacies as it relates to options and earnings, so thanks for that Jonathan. Today, we're going to start with earnings reports, just talking about a general overview of what those are. We're going to have an options pricing refresher, I think it's important to cover some of the ways that you price options or understanding the inherent difference, the inherent points of pricing and options. And then we're going to go to earnings volatility grid, this is a phenomenon that you typically see as we head into earnings. The idea of the expected move straddle, how can you calculate a move that you could reasonably expect on earnings, and how you can learn that from volatility. And then looking at the underlying stock move, what happens with that around earnings. Then we get to the idea, or the general thing, what happens after earnings, the earnings volatility crush, we'll explain more on that. And then finally, talk about future of trading strategies, and then recap, and then I will hand it over to Jonathan Deyeso.

So with earnings reports, as most of you probably know, public companies in the U.S. are required to report financial results on a quarterly basis and, you know, at the end of the year as well, so kind of give the annual overview. In 2000, Regulation FD, or Regulation Fair Disclosure was established to address selective disclosure of information by publicly traded companies. So, there used to be a point in time, and I think some of us definitely remember this,

where a lot of earnings data would just kind of leak out, whether it was, you know, towards the end of a trading day, the beginning of the trading day, without establishing when the actual earnings was, and after a while, of course regulations step in and made sure that this wrong was righted, so that everybody could receive the information at the same time. And that's kind of how we receive things now. So that press release, you know, is typically issued for earnings outside of market hours, whether it has something, you know, typically when you're looking at earnings, you'll see something that has BMO earnings, which is before the market open, or AMC, after the market close. Those earnings releases are typically issued outside of those market hours. I know sometimes early on, when I first started trading, which was about 2006, there would be a few companies that would issue earnings during the middle of the trading day, and that made for some interesting volatility within the names. But a lot of times those are probably overseas companies, ABRs, and even those have been rectified. So majority of the time, I would say these days, greater than 95% of the time, earnings for most companies are either issued before the market opened, or after the market closed.

And financial outlets, news outlets, typically report those highlights as quickly as possible. So that would, you know, you have the net income, the EPS is one of the big things that are reported, you'll hear like, you know, they reported EPS, earnings per share, you know, at XYZ. You have the revenues, you have

different segments of the companies, specific product sales and profit margins. And then potential outlook. So I want to go through each one in a way, because the first step to understanding the relationship between the price of the stock and its earnings is to look at that EPS, that earnings per share. That EPS tells you how much income the company is generating for each share of stock. After that, when you are looking on the earnings report, you want to know how well the different areas are performing, or how well certain products or different segments are performing. Obviously revenues are important too, I mean that's something, you want to know how much money the company's making, but how are they making that money in different areas, and different segments? So this type of breakdown is integral into figuring out what moves the stock.

Then you have your profit margin, that's one area of key profitability that investors and analysts sort of, they use those when they're evaluating the company. Consider it a good indicator of how efficiently a company is managing its expenses. Because it reveals the amount of revenue returned to a company once it's covered basically all of its cost, separate taxes and interest. So that EVPA type deal, for those, you know, types who look at those things.

Finally, it's important to know how well a company performs against expectations, which you'll typically, when you have a company report its revenues and earnings per share, the EPS, they will usually measure that against what analysts had in line for the company. So before most of the companies report their quarterly results, the analysts kind of predict an EPS for the quarter based on the guidance, and these other factors, and it's kind of common practice to sort of underestimate the earnings per share, and if a company beats the projected earnings, then the stock will typically go up. But as we'll find, you know, there's nothing typical about earnings at all. And you'll see several different things can often happen, but as we talked about, those results are a way to give the analyst, and then all of this kind of serves as a measure of how a company's doing from a possibility standpoint. That's the most important thing about it.

So after that, managers typically host a conference call to discuss results, and answer questions, and that's usually, you know, that can either be before, you can look up when these conference calls will happen, sometimes they will be, you know, concurrent with the, when they release the results. Or sometimes it can be, you know, a couple of hours later, it just really depends company to company. The majority of the companies announce their earnings in January, April, July, and October each year. Like the earnings season officially usually will begin the first week of those months. After that, each consecutive week

just, if you ever look at, you can sort of see a histogram of, you know, the top times when earnings are at their height, you know, like say the second, the first full week in January earnings will start, but by maybe the third week or towards -- the third week of January, or towards the end of Jan, like the last week, that's when a majority of the earnings will come out for like say, the S&P 500 companies. So, and if you've seen this before, it's just, there's a time where it kind of starts, as far as the earnings starting to begin, and then you'll see the time where earnings are basically like, being released every day. So that's what people are referring to when they're talking about earnings seasons.

So after the earnings announcements stop, we'll typically trade outside of the market hours. So like what that means is, you know, as we said, earnings will come out before the market opens, and as soon as those earnings are released, and we kind of have a conference call say, for example, with that company, usually the stock will trade on those earnings that are just received. So you'll typically see it trading different than the market on the night before. So wherever the stock might have closed, you'll typically see an indicative market, right? Like right before they open, where the bid and ask are, and it could be varying from what it was with the close before. And that's because those earnings have come out, so the stock is already moving on that.

The Reg FD information that we talked about, it really changed the impact of the earnings announcements. So now that you're getting all the news at once, you know, whether it's all of it before the market opened, or all of it after the market closed, you'll see more dramatic moves with respect to stock changes, and what we used to see is, you know, it would happen over a couple of days. Something would come out with earnings, but people really didn't know. I mean it's kind of wild, wild west sometimes. So luckily, regulation has sort of helped that part of the market out. The stock price is potentially volatile for many companies, based on the content of their results. And what that means for option traders is that earnings are this, you know, tradeable, they're tradeable binary events, as they're typically called. You have so many different things happening with it, but it's a great opportunity to trade and make money, and that's why people love to trade earnings. But you really have to know the key components with regards to earnings and options trade, I mean we all know that options trading. Like we've said before, they have risks that are not suitable for all investors, and they really are, you know, complicated at times, and earnings only adds to that complication. But we can try and demystify some of those things today. And as I had, you know, kind of down here at the bottom too, some stocks are sometimes halted during their earnings announcements. So sometimes you won't see the bid and ask markets moving around. And I think, you know, one of these is like Apple, Amazon, a lot of times right after the close. They typically will report right after

the close, and their stock is halted, because they don't want a lot of shenanigans. People are, you know, kind of trying to maybe -- potentially trying to move the stock around with different (inaudible). So they usually halt those right before they announce earnings.

So a quick options pricing refresher. We're talking about, so these six option pricing factors, you'll have the price of the stock, the options strike price that you're trading, time until expiration, the interest rates and dividends, and implied volatility. And for all intents and purposes, the big changing things here are in the blue. You know, the price of the stock would typically move around a good bit. Time until expiration is constantly whittling down, right? We all know that options eventually will expire. And the implied volatility. And implied volatility is always a big variable here, but it's even a larger variable with respect to earnings, and we'll see why.

So, as you may kind of know already, you get that options pricing can be broken down into two components. Intrinsic and extrinsic, OK? Those are the brief overview we use to sort of get you prepared for what we step into. So our intrinsic value, in this case, we have a stock XYZ that's trading $55, and the XYZ June 50 strike call is $8. So the price is at $8. So just right there alone, knowing that our strike is the 50 call strike, and we have the stock trading 55, our intrinsic value for this option was $5. That option is $5 in the money. So

that would leave another $3 left over to give to us, to our 8, and that's the extrinsic value, or a lot of times, that's considered our, you know, our time value. So that's also considered volatility value. So that's kind of the volatility of our option, right? And so the latter part is that that extrinsic value, that represents the risk premium in the option. So it's a pursuit of certainty in that, and the stock price increasing or moving around, or going, you know, going lower, and the demand for that option contract as a security rises. So when this happens, the extrinsic value of the option increases in value, which can be observed through rising implied volatility, as we said, that's extrinsic value, that $3 is considered volatility value. It can change at any given time. Meaning if the stock is trading at $55, and that June call strike is the 50 call strike, as we said, expiration being tomorrow, so just all of a sudden, expiration is tomorrow, well that $3 is going to go away, and that call option will be worth $5. So we will lose $3 of extrinsic value, or volatility value. If expiration were to close, or expiration were to come tomorrow, and that option were to settle based on the 55 stock. OK? So that's $5 that that option is worth. So it's important to understand how volatility value can change as expiration approaches, or as the earnings date approaches.

So now we're getting into this idea for earnings, right? So what we have here, we're looking at the graph here, we're looking at the volatility draft of a stock. And what you see, what the gold line is, sort of is implied volatility index that

we're looking at for this stock. So this is the implied volatility of this stock, and it's kind of an average of a 30-day volatility. And then, on the blue line, we're looking at a 30-day historical volatility. So the historical volatility is the volatility that is derived from the prices, from the movement in the prices of a stock over time. In this case, it's a 30-day period. And the implied volatility is what the options are pricing based on actions in the stock, and based on how option traders are treating that stock over a, in this case, kind of a 30-day period as well.

So implied volatility, as some of you have been on with us before, you kind of know the deal, implied volatility represents the current market price volatility. Implied volatility is the theoretical measure of how much a stock may change within a given time period. So with respect to earnings, you know, the EPS and the revenues, and the profit, there's a large amount of uncertainty coming around these corporate earnings. I mean you have literally no idea what the company might say. Sometimes you do with bigger companies, you have an idea that they're not going to say, "we're going bankrupt," but some companies you really are not sure how their quarter went, right? And so there's a large amount of uncertainty, and so that uncertainty is reflected within the implied volatility each quarter. So therefore typically, you'll have implied volatility rise as you go into the event. Because it's expecting, you're expecting something to change the pricing of these options, you're not

necessarily sure which way the stock may go, and so with those two things coming together, that affects the price of the options.

So in this case, I want you to focus on this, these two areas right here. And let me explain these. So as we see here, in this case we have an option, to which we have a stock that's going to have earnings, and let's just say today is May 28th, and we have a stock that's going to have earnings after the close on May 29th. I'm sorry, let's just say this is after the close on May 29th, and the stock has earnings tomorrow morning on May 30th, OK? What this is showing, these options expire May 31st, which is a Friday, and there was two days to go until expiration. So again, we're on May 29th. Why does it say at the money, so up top it says at the money implied volatility, OK? At the money implied volatility for these options that expire in two days is 112. So what that means is that those options are going to move as if they're on 112 volatility. So to kind of make this make more sense to you, if you look at where it says June 21, that's 23 days out, that's close to about 30 days out. That's 30-day, those options that are going to expire in 23 days are closer to a 30-day in volatility, implied volatility, so that is almost more comparable to the gold line that we see. We see the gold line up top in this graph is around 38 volatility, options that are expiring in 23 days are closer to that, in our chart here we see those are 40.52. So those, that volatility is, for those options that are expiring in 30, in 23 days. OK?

And I think it's important to understand that the options that carry the earnings, that expire within two days on, you know, this is the May 31 expiration, those are 112 because that's saying on that day, within the next two days, those options will catch earnings movement, and they will move on 112 volatility. That means they have wild expectations for those options. That's why you see that a lot of times, if you look at any stock that has options, that has earnings coming up, if you look at the most front month options, those will receive the brunt of the earnings move, because they will just, they will be experiencing the large volatility that's taking place on earnings. So that's why they typically have a much higher earnings. Now again, I want to make sure you understood that, because that doesn't -- I'm sure you look at that like, "112, that doesn't correlate to the gold line." Yeah, it doesn't, because these options expire in two days, and the gold line is representing something that expires within 30 days or so. So there's during the leadup to announcement, the most important thing here to understand is that there's a huge excitement factor in anticipation of how those numbers are going to come out. And as a result, the implied volatility just goes through the roof, it gets completely, what we call, bid. So you'll see the earnings volatility, you'll see the implied volatility get bid as it goes into earnings. And it happens every time, right? And so, the gold line represents the implied volatility gradually rising into each earnings announcement, and we'll be -- these earnings

announcements, as we said before, are tradeable by their events, basically because you'll have the stock going to move, and you'll have the earnings come out, and then you'll have the volatility change.

And so on the day of the earnings announcement, or say the night before, or as it's going into earnings, volatility peaks, and so these -- because the uncertainty peaks right before the event. So this means the underlying experience, some of the most extreme levels of volatility as we're going into earnings, it hasn't happened. So, you'd like to trade based on volatility. That means you have a great opportunity to exploit the volatility as it spikes going into earnings. So when that -- and so you're probably saying OK, well I'll just wait until the earnings month comes out, and I'll just buy that right up top. Well typically, when the earnings month is introduced, like there's a lot of stocks right now where you could look at the options, you could say oh, OK, the next earnings month is going to be, you know, right now we're in June, you could say the next one's going to be in September, I'll go ahead and buy the September earnings. Well they might not have the Septembers listed already. So they typically don't always list the earnings month so far out. They typically come out maybe within a month leading up to earnings.

And just to show you again, you know, as you can see, you know, the other two black circle that just came up. That's just showing you how each quarter,

you'll see implied volatility rising into earnings, and then they'll kind of stay steady across that earnings, and then they'll have another phenomenon, which we'll get into later on. So expected straddle elect, this is an interesting thing to look at. You can sometimes use straddles to determine your potential stock move. Implied volatility kind of tells us what an underlying market is expecting. It tells us the kind of movement you can, that the options are anticipating. Now it's not an exact science, it's not completely right. But it gives you an idea of what to expect on the earnings move. And so, straddles are designed to take advantage of implied volatility, and therefore can be used to calculate the anticipated magnitude of the move. Now when we're talking about straddles, for those who may be uninitiated, you're looking at the call and the put, right? So you're looking at the call market. If we could just look at the 17 and a half strike, so 17 and a half calls are 80 at 95, and the 17 and a half splits are 90 at 105. So if you're looking at midmarket, that would be 87 and a half, and 97 and a half cents. Eighty-seven and a half cents for the call, and 97 and a half cents for the put. So that gives you a total value for that straddle, if you add them together, call and put, you bought them both, that would be $1.85, OK? And if the underlying market is trading $17.50, and the midmarket on the straddle is $1.85, well that represents a 10.6% move on the stock until expiration, or in this case, June 14th. So if something had earnings, let's say something had earnings tomorrow, and these options expired on this Friday, well then there's a -- that's including earnings, and the earnings are pricing a

10.6% move in that straddle, or it's pricing in the possibility of the stock moving 10% on earnings is basically what it's showing you. Again, this is not an exact science, it's not showing it's completely right, but what people will do is compare this type of move to what it's done in the past.

And a lot of people will look at the stock, or you do have some things that, you know, kind of calculate that potential path move for you, or a lot of times people will look at the stock chart, and look at past earnings, and see what moves have been made then? What move did it make then? As you can see, a lot of times we're -- when a trade, when it comes to trading options or stock, right, a lot of people will use historical data. I'm sure that a lot of you out there do that. And so, a lot of people will use the straddle prices and say OK, on this earnings, it was pricing a 10% move, but it eventually only moved, you know, 9%, or something like that. And that kind of gives you an idea of whether you want to buy the earnings or sell the earnings, as you've probably heard some people say. So that earnings move is largely factored into the pricing of those options, and implied volatility is a reflection of that expected move. My squares didn't line up, but we'll move on.

So now, we get to the point, we talked about volatility, and that effect on earnings. Now we're going to talk about the underlying stock moves. So that relationship between a company stock price and corporate earnings can be

rather complicated, OK? If we said you have several things you're looking at when it comes to that, you're talking about the earnings per share, the revenue, the different segments of the company. So there's a lot going on with that. And there's, the stocks have -- every stock has their own trading characteristics, kind of react differently to earnings reports. You know, whether it's the individual stock, or also across different industries, right? So there's a potential for the stock to have a large move in either direction on that first trading day of the earnings, as we already discussed. So the other thing about it is that high profits won't necessarily mean high stock price, and big losses don't necessarily equate to, you know, low stock prices. I mean it really is kind of a crapshoot. You never know what you're going to get.

Earnings surprises can either be positive or negative. Positive occurs when the reported earnings are significantly above the earnings per share. Or revenue comes in way higher. Negative earnings reported, negative moves can, negative surprises occur when the reported earnings are significantly below EPS, as kind of would make sense. I mean you all, I've also seen those flip. I mean it just really depends.

So in a nutshell, I think the most important thing is that there's two influential factors. Current earnings and the promise of future earnings.

So this here, I know there's a lot going on here, and I'll kind of have your eyes focus on it. But there's plenty of data to dissect over a given time period. So, you see the tickers, if you look right next to that, we'll see max loss, max gain, and max loss. So this is two years of data. So over eight quarters, let's take Amazon for example, over eight quarters of time, and on earnings days, Amazon has had the largest move it's had over the past two years with a 13.2% gain. And the largest move they had to the downside was a 7.8% loss. OK? So that's kind of how you read this. If you look at the average implied stock move, so what that's saying is that looking at the straddle of Amazon, at the money straddle as it was going into earnings, those options were implying a 4.93% average stock move, OK? And the average actual stock move, again, these are averages, has been 4.8%. So it's kind of like the options in this case have been perfectly priced to some degree, as option traders would say. They've been kind of in line. It just so happens that last quarter, the stock moved up 2.5%. So that one's relatively in line, but you'll have some that are, you know, that are a little bit off, and a little bit different. It just really depends.

You know, again you'll have the outliers of the max gain and max loss, so those are big moves. But on average, it would seem that the stock has moved about 4.8%. So this is the kind of data that people will look at and sort of try and dissect. And then they'll use this to try and determine, you know, for example let's look at Netflix. Netflix had a largest net max gain of 13.5% to the

upside, and 5% loss to the downside, right? But then some people will look at the average implied stock move and say OK, average implied is 7.76%, but the average actual move is 6.2%. So when the, when that volatility comes in, that volatility is a little higher than it should be, I'm going to sell it. Well you can sell it, but your risk is what if Netflix moves 13.5%? If you're selling those options and you're short options, you're short gamma, then the stock moves on you in a way that you don't want it to. So that's the risk when it comes to earnings, right? That's the risk/reward, but that's, you know, the thing that people love to trade.

So people will typically, they'll typically compare that average implied and that average actual move, and they'll typically -- then they'll look at that and say what those earnings reveal. What quarter had the biggest moves, what quarter had the smallest moves? And then what was the market condition based on the particular time or year? So a lot of times, there's average -- though that average move that we talk about in Netflix, that could have been happening at a time when the market was just in a huge bull run, like in the last two years. I mean the mark-- and it could have happened in 2017, when the market was just continuing to make new highs every day. So it's important to understand when do certain moves happen.

This is the perfect thing to look at. This is a person who has like a Felix the Cat emoji here. I love the stock market, they're looking at the Canada Goose stock, which makes jackets. Their revenues rose a stunning 25%, they hit expectations almost on the nose, 156.2 million versus a 156.8. And yet the stock was down 25%. So this speaks to the incredible amount of uncertainty that happens on earnings. This stock had great earnings. They were in line with their revenues, and the revenues rose 25%. But yet it wasn't measuring up to what analysts expected, and so it had a huge fall in the stock. So obviously uncertainty is even greater when the companies have less data and they're newer to the market. This stock I think hasn't been trading, you know, for -- it's been trading less than five years, and so with that, you can expect a little bit more volatility, but I think it's interesting to see how things don't always line up when it comes to earnings.

So another important part of the earnings is the volatility crush. So after the announcement, the uncertainty is removed. And so traders will experience that whole earnings volatility crush, as you can see here, this is our same implied volatility chart. If you look up at the chart again, you'll see the gold line has retreated. Once earnings happen, it drops down to, you know, let's say around a 23 implied volatility level. So those traders who were clamoring for those options prior to the earnings announcement, well now they're looking to take a profit and sell. And so, prior to earnings, there was a known

event that was coming out, there was a known options earnings event that could move the stock price, and afterwards, those options have lost appeal. So it would reasonably make sense. And the post-earnings volatility crush is even more pronounced in the out of the money options, because those didn't even get reached. So if a stock is trading, you know, let's say a stock is trading, an at the money is 50 prior to earnings, and somebody, you know, is trading the $10 upside call, so they're trading the 60 call, and say after earnings it moves, and the stock is trading 55, well that out of the money call, that 60 call, that volatility -- the volatility's going to come in a lot harder, and if you've done any studies of volatility, volatility comes in a lot harder if it's coming in, it retreats a lot harder, the out of the money options, versus the at the money options. OK?

So just looking back at our graph that we looked at earlier, we see the -- (coughs) excuse me. We see the May 31, the options expires May 31st, with now, with one day to go, after options came out, well now it's no longer trading on 112 volatility, now that at the money is a 34 volatility. So we see that came in big time. And the options that we were talking about that was closer to a 30-day, so the one that expired on the 21st of June, now there's 22 days left, as opposed to 21 days. I'm sorry, as opposed to 23 days. Those were trading on a 40 volatility, now they're trading around the 23 vol level, which is about where that implied volatility line is. The gold line. So we could

see that volatility comes in across the board, OK? And so any trading strategy that you employ, it should take you to account the post-earnings volatility crush, that's a very important thing. You can understand that the stock is going to move, but you also have to understand that the volatility is going to come in pretty hard.

So as far as trading strategies go, and these are just a few, just to kind of give you an idea of how you can look at these. So looking, if you want to be long volatility and direction specific, so that means you're looking for large deviation stock moves, directionally. You could have a bull call, or a bull call spread. That means you're expecting stocks to go up, and you have to understand, you bought a call when you bought a call spread, which means you're long volatility, so that means you're long that volatility that's already kind of bid up. So the way that you're expecting to make money is directionally more than anything. So it's a directional play, but you do have to understand that you're also long volatility. Same thing with buying a put, you know, a bear put, or a bear put spread, when you're buying that put, or buying that put spread, you are long volatility in that sense, and you're looking for directional moves. And you're long that volatility of earnings, but you're hoping to overcome the volatility crush by the stock moving in the favor of your option, OK? With situations where you're long volatility, and you're direction agnostic, you just want it to move big-time, right? So you're looking

for a large standard deviation move in any given direction, and that's typically the case when you trade a long shot or a long strangle. And just taking the volatility and the earnings part out of it, when you're long straddle or you're long strangle, you want the stock to move in a direction that's overcoming your break even on any one of those, and moving so that you can make money in either direction. Well even more so when it comes to the earnings, and so you're making that play because you know that -- you're at least hoping, I should say, that you're expecting a large standard deviation move with the earnings. So again, where you would lose on that is if it doesn't move that much, and of course, the volatility is going to come in anyway, then you're really going to lose a lot of money, because you're long volatility, being long the straddle and long the strangle.

Short volatility and direction adverse, so from these you would benefit from a volatility crush and a low standard deviation move. Well there's a couple of different plays that you can make there. You could have a, you know, short call spread, a bear call spread, meaning you're short volatility in that sense, and you know, a lot of times people when employ those, they're kind of more out of the money, because they're expecting the out of moneys to come in a little more. Same thing with a bull put spread, which is a short put spread, as some of those understand, a lot of times people will be short those spreads, a little further out of the money, because they are trying to be on the further end

of the standard deviation move so that they don't necessarily get hit by that. You know, these are also, if you have a naked bear collar, naked bear put, those are rather directional. But again, sometimes people will employ those on the further out of the money options, so that they're hoping that they don't have a large standard deviation with the earnings.

You know, same thing again, we talk -- it's the reverse when we're talking about our short straddle and the short strangle, as we said before. The long ones were long volatility, the short straddle and the short strangle, those are short volatility. And those are, you know, these are all rather risky, the truth is, is like -- but again, when you're -- we know from the past, if you're short options, you eventually will have an obligation to buy or sell stocks. It's important to be aware that, it's important to understand with all of this, whether you're long volatility or short volatility going into earnings, and whether you're directional or not, you have to understand that you have a directional move in stock to anticipate, and a move in volatility that's going to bring in volatility, or crush volatility. So those are the two big things to understand when it comes to earnings. It's a one-day move that's going to move the stock, and move the volatility. Thus, binary events.

So, as we start to recap here, you know, you have a stock chart with a corresponding volatility chart, and we're looking at that implied volatility as we

see pre-earnings, we see the implied volatility can bid up as we go into earnings. And then post-earnings, you'll have that volatility crush. One thing to note here is that you can have times where the move is so big, as you see here on the graph, the stock graph, you see this black circle, this was a huge earnings move, and as a result it eventually created a situation where it changed the historical volatility for a little bit of time there. You see the historical volatility changed as a result of such a huge move. So that can happen sometimes, and that kind of resets the fair volatility of an option, because it resets the fair volatility of options within a name sometimes. Because of such a huge standard deviation, well that was unexpected, but it's something to note. You can see this on the graph. And then eventually as you see, if you just follow that blue line, right around that September earnings, I mean or I should say yeah, those September earnings, you had a huge move that changed the volatility of the stock, but then eventually it kind of came back down. That's kind of a process known as mean reversion, which you'll see sometimes. But the important part here to understand is the implied volatility, this gold line, you have a bid going into earnings, and then you have a crush post earnings, once the news comes out.

So, to recap here, we talked about earning supports, we talked about pricing and options, that whole intrinsic value of an option, and then the extrinsic value, which is the time value of the volatility value. We talked about how

earnings, you get volatility bid up as you go into earnings. And then you have that expected straddle move, it's something that you can calculate and look at, give you a general idea of what the options are being priced at, based on implied volatility. You have an underlying stock move that you always have to account for, sometimes it's big, sometimes it's not as big, it just really depends, that determines whether people will decide whether they want to sell or buy the options. Of course you don't know that ahead of time, but you do know that you have to expect, account for a stock move that's going to be maybe volatile or not, depending on what the company says, based on their earnings. And then you have the volatility earnings crush. And then we discussed a few strategies after that.

Once again, I always like to talk about risk on the Fidelity site. You can look at the expert options analysis. Myself and my colleague Kevin Davitt here at the Options Institute, we do a lot of these writeups. We'll do them on different companies, we'll give an overview of the company, and then we'll talk about a strategy, and typically give an idea of how you can look at that strategy. Sometimes we'll talk about earnings as a package heading into earnings. So, I would advise you to take a look at those, it's under the news and research tab, and options, and trading ideas, and then expert option analysis. So take a look at that, hopefully maybe there could be something there to help you out.

And with that, I will pass it over to John.

John Deyeso:

Thanks Jermal, great job as usual. I'm sure I speak on behalf of everybody. As Jonathan had said in the upfront, I work as a regional brokerage consultant here at Fidelity. So the men and women in my position spread across the branch network in the country, we work with clients like yourselves on strategy, risk management, and pairing your strategy with our products, tools, resources, and research. So the second part of this demonstration today, as with our previous webinars, will be the video demonstration piece. We want to put some of the things Jermal had talked about into application, and navigate the website for you.

First off, I think a natural one here is we're going to look at a stock, and I'm going to use Facebook as an example, any stocks referenced here are not a recommendation, but just used for educational purposes. I want to use a stock as an example to take you through where do I find the earnings information. I'm going to also show you how you can screen for stocks with upcoming earnings. Jermal had showed a few times an implied volatility index, or that chart, again, implied volatility, we're going to show you where you can find that. And then reading and analyzing an option chain is how we'll tie a bow on it.

So without further ado, just jumping in here, all I did folks was put in a symbol on the top right here on Fidelity.com, search or get a quote, put in a stock symbol, and up will pop our all in one research dashboard, it really makes researching equities very easy. All the information is in front of you at once, all you've got to do to remember is scroll down on the page.

And the first stop I want to make here is the chart. And so our chart comes with the capability to add events. And what I've done is clicked on the earnings. And you can see here that there are several triangles, actually four of them, denoting the earnings dates. And if I hover over any one of them for Facebook, it's going to tell me the earnings date and the earnings per share that were announced. And I can even back this out to a longer timeframe. So I can start to formulate a strategy of how I maybe want to attack the market on a particular stock.

As I come down on the page, we have a section complete with earnings analysis for the stock in question. So we'll show you three previous quarters, and whether they beat or missed, and you can click on the amounts, and it'll tell you what the expectations were, and where the stock actually came in at. We're also going to show you some important information like earnings per share over the last 12 months compared to industry averages. So compare this stock to its peers, how has it been performing? Also earnings per share

growth over different timeframes. If you'd like to take a look at a longer lens of earnings, you can simply hit more right here, and actually under earnings details, you can access up to 10 years of earnings data information. So again, the report dates, how much did they report, what were analysts looking for? So I think it's important to show you, when you have a particular stock in mind, where can I go to find earnings information on that stock?

A second part that I want to show you is where could I maybe find stocks that are going to report earnings? And so, I'm in the stock screener here. So if I go to news and research, stocks on the right-hand side, I can go to find stocks, and jump right into the stock screener. And I've added a few criteria here. So what we give you the ability to do in the stock screener is engineer a search using the criteria here on the left-hand side to narrow down the vast landscape that is the equity market here in the U.S., I think you've got 5,500-plus names. I want to try and narrow it down with specific criteria. So I focused on this earnings section, and I added two segments. I did earnings announcement upcoming, so somebody that's announcing earnings within the next 8 to 30 days, and I also added optionable. Because this is the focus of this webinar, right? I want to try to position myself around earnings using the options market. And what this tool allows you to do is narrow it down. OK, here's 78 names that have an upcoming earnings announcement that do have an underlying options market. From here, I could do different criteria, like maybe

I want to look at a particular sector, or a particular market cap. So I could really narrow down the search to find opportunities, so that when I'm preparing myself to interact with stocks and upcoming earnings, I know that they're optionable, and then I can put on the options strategy that I was game planning ahead of time. That's the stock screener.

Jermal had talked about it, if I go to news and research on Fidelity.com, and I come down to options, I'm going to be on our options landing page. And one of the key areas I want to show you here, I'm just going to stick with the common stocks, we're going to stay with Facebook, I'll put in the options symbol, and right below codes and tools, I'm dropped right on the option chain, but before we get there, I want to come over to this IV index tool. I'm going to click on that. And what this is, is both a chart and graphical representation of implied and historical volatility. So implied volatility, you know, the forecast, if you will, historical volatility looking in the rearview mirror, what have we experienced in the marketplace for volatility. And so I feel like the chart representation, or sorry, graphical, then here we go, over different timeframes for both implied at the top and historical at the bottom. I like to take at the chart representation, and this is a one-year average of implied volatility in the lighter shaded line. And historical volatility in the darker shaded line.

And if you look at this, so if you look back on the previous page you were looking at for Facebook, and the previous earnings dates, they announced in October of 2018, towards the end of the month. So if you look at implied volatility, and Jermal alluded to this during his presentation, you can see the drive up in the implied volatility over that period. They announced, I believe the last day of the month in October, look at the drop off in implied volatility. And it's important to note, implied volatility is accounted for in the pricing of options, like Jermal was talking about. It's measured by a metric called vega. And so, it's very important to know whether or not my options strategy puts me long vega, or short vega, or am I long implied volatility, or short implied volatility? Because I want to position myself accordingly. I don't want to get caught on the wrong side, or express the wrong sentiment, I want to make sure my strategy aligns with what I'm trying to do with volatility and earnings.

You can see here the drive up again, as they reported in January, and then the subsequent drop off. And a drive up again in April, followed by a drop off. And I like looking at the chart, because it gives perspective. There are different levels obviously here, of implied volatility, right? The drive and the drop off in October of last year were much steeper than the drive and drop off in April timeframe. So volatility, even when we're looking at a particular name, OK, in this case we're looking at Facebook, you know, it can change over time, how volatile is this market compared to where it's been in the past? It's a very

relative metric, so we don't, we want to be careful, you know, putting in a capsule, let's say, I want to take a look at how things have projected over the past year, so I can position myself accordingly. So that's the IV index, and I think a very important part as you try to prepare yourself for particular option strategies.

One of the things, I'm going to jump over to our trading platform, Active Trader Pro, this is a downloadable software, accessible to all you folks on the call, this is a streaming platform that also allows for customization. So I designed this layout, the nice part about it, the big benefit, is I can create the trading experience I want that makes me feel comfortable interacting with the markets in my accounts, and I can get the information I need. So everybody has their own unique process, this can allow you to express that a little bit better. One of the things I've done here, and I have the option chain up for Facebook, and I just have a few of the expirations. What you can do when the option chain comes up, you're going to select a strategy, I'm just going to show calls and puts, so you can see both sides of the aisle. So you could take a look at just calls or puts, or even skew the option chain based upon the strategy you want to look at. I'm showing 10 strike prices at each expiration. As you could see, I have July and August showing.

And one of the nice parts, Jermal alluded to it, there's in the money options, at the money, and out of the money. Well what we're going to do help you, maybe if you're getting started with options, or even just graphically making this a little bit easier to read, you can see that on the call side of the aisle, on the left-hand side, the in the money options have this lighter shading. Whereas the out of the money options have the black shading behind it. Conversely, with the put side, out of the money and in the money expressed the same way, really just an opposite in reverse. So that's going to give you an easier way to determine whether or not I'm buying or selling a call or a put that's in the money currently, or out of the money.

Another thing that Jermal talked about is the potential movement of the underlying security, based upon a straddle. So straddle is you're either buying calls and puts, or selling calls and puts at the same strike price. And so if I look at Facebook today in the top left, it's at 177.30, we'll call it. If I look at the available strike prices, that's really closest to probably the 175 strike price here. What I want to do is take a look at, if I look at the pricing on calls and the pricing on puts, and add them together, what I'm going to be able to do is try to determine what the market is expecting the movement to be by this expiration date. So if I take a look at, on the right-hand side, the 175 put is last trade at 5.25. If I follow to the left-hand side, to the call side of the aisle, I have 8.20 as the last trade. Because that's slightly in the money. So if you add them

together, you're upwards of almost $14 that the market has priced in as an expected move in either direction between now and this date. So that could help you to position yourself, all right, do I feel as though this is efficiently priced in, and the market is actually going to stay within that pricing range through an earnings announcement? Or do I believe that there's the expectation it may even exceed that amount? That's going to change what type of strategy I want to do, and whether or not I want to be long or short volatility. It may be how far away or near to the money I want to be in my strategy.

It's also important, the upcoming announcement I believe for Facebook is July 23rd, so you know, I want to take a look at expiration dates, you know, that may overlap or even exceed that date, so if I go with July 19th, yeah, that's going to expire before I even get to the earnings announcement. So whether I was long or short volatility, I may be part of the drive up, but if I wanted to position myself as taking advantage of maybe implied volatility crashing, like we had looked at on some of those charts, that it's important to me to position myself accordingly, and taking into account the earnings date.

So those are some of the key factors, looking at the individual stock research page for any company, looking at the historical earnings dates and information, and upcoming earning information. I showed you how you can

screen for stocks that have upcoming earnings announcements that are optionable. We look at a real-life example of the implied volatility index, how that changes over time, and then also too, looking at this option chain, trying to understand a little bit more about in the money, at the money, out of the money. What is a straddle, how is, what does it mean when something's "priced in," quote unquote. So hopefully that helps you to use our tools to execute your strategy.

END OF AUDIO FILE