Ophir Gottlieb (00:00):

This is the back test tab and as it tells you, you enter a ticker in the top left corner. Let's enter the ticker Microsoft. Across the top, you'll pick your back test length. If you click three years, you can actually see the dates fill in. You can also go to any dates you like. These are calendars. Here is where you would enter your days to expiration. That is the length of the options you want to backtest. This is not a closing rule, so if you were to put one day to expiration trade machine would simply look for the options that are the closest to one day expiration, which will probably be a week. So again, days to expiration sets the type of options you want to backtest it is not a closing rule. Then we come to the settings which are quite important. First, you can set the number of contracts that you want to backtest.

(00:52):

I'll note that it doesn't actually matter how many contracts you backtest if you're looking at average trade returns and win rates. That doesn't change for one contract or a thousand contracts. This is only if you wanted to look at total returns and amount risked. If you're doing a stock back test, which you can do a five would mean 500 shares. Next become to execution fill type. This is how you want the back test to assume fills are occurring. Rather than go through a detailed discussion, there is a video right here. If you click on what is execution fill type, it will open in the learn tab and there will be a discussion of this. Next, you could set your commissions, your stock commissions of which there are normally no commissions, and your option commissions. You can set the ticket fee, so that is the cost per trade, the minimum cost per trade, or you can set a per contract fee or both.

(01:45):

Finally, this is where you would set your custom deltas. Delta is one of the most important parts of options trading and for using trade machine, it may be the most important part. You can click on what's a delta to understand the importance and it's so important we're going to discuss it. Now a delta measures the moneys of an option, so it's the amount by which an options price will change for a one point change in the stock price. So for example, a 90 delta option will move about 90 cents. If the stock moves about $1, a 50 delta option will move about 50 cents. If the stock moves about $1 and a 10 delta option will move about 10 cents if the stock moves $1. We note that delta itself is also a function and delta changes by something called gamma. So anything above 50 is considered in the money.

(02:37):

An option at a 50 delta is at the money and deltas that are below 50 are out of the money. You can read real world examples from November 29th, 2016 with Apple. If you want to finally just remember these numbers, 60, 50, 50, 30, 20. And remember these blue highlighted boxes, they'll matter in a, now we're ready for a backtest. So let's backtest a 30 day option in Microsoft over the last three years. We'll get a call and we'll go long. This backtest is testing the results of being long a 30 day call and then rolling it every 30 days in Microsoft for the last three years. Of course Microsoft is one of the magnificent seven, one of the largest companies in the world, which has been going straight up. So just buying calls is probably going to make money over this three year period. And you can see the 60 delta calls had a total return of 72%.

(03:36):

The at the money calls, the 50 delta calls had 153%. This is the same tile, 1550, the 30 delta calls 574% and the 20 delta calls 868%. But you'll notice that the win rates are going down. This is the nature of deltas and please don't consider this an actual option strategy. It's not a useful back test to look at a stock that has gone straight up and see if buying calls had worked. One thing I'll draw your attention to is the deltas 60, 50, 50, 30 and 20. Those numbers came from the settings that we had here, 60, 50, 50, 30 and 20. We can change those if we like. You can always see the details behind a back test by just

clicking on the tile and now you can see how the stock has done. It started at $203. It is as of July 25th, $337. Here are the details of all of the trades and you can actually see every single trade step by step across all three years and you can even download them into Excel.

([04:35](#)):

But what if we wanted to back test more than one ticker, for example, the entire magnificent seven. We can enter all seven tickers on the same back test and now trade machine won't show you tiles. It'll show you the results in a list, but the question is which Delta is being tested here? If you recall, when we were doing Microsoft, there were five different choices and you can see that it's choosing the 50 deltas. That is the middle delta. That's what will be chosen when you're doing a multi stock backtest. That's why these are circled in blue. If you were doing a spread, it would do a 50 30 spread, but we'll get to that. Alright, so far we have looked at some of the functionality of the back test tab, but we haven't really done anything particularly interesting. Let's go down to earnings handling.

([05:23](#)):

Nothing special means trade machine is not paying attention to earnings at all. Let's do the opposite. Let's do this exact same trade but always avoid earnings. That is two days before any earnings, all positions are closed. There's a four day blackout window and then two days after earnings, those options can be opened again, we'll do never trade earnings, alright? We can also do only trade earnings, which is to say only trade two days before earnings all the way through two days after earnings. These would be only earnings speculations, but let's do more interesting. Let's do custom earnings here. We will open this call 14 days before earnings and we will close it one day before earnings. This is a pre earnings momentum trade. Let's see what we get. We see in total a 49% win rate and the average two week trade is 20%. That's pretty good.

([06:17](#)):

But let's go further. Let's go down the left side of the back test tab and let's go to the stops and limits. Let's say if there's a 40% gain on any trade, we'll close it and equally, if there's a 40% loss, we'll close it. And let's go back to the results. What was once a 49% win rate now goes to 57% and the average trade remains a 20% win over two weeks. And let's go further into the power of the back test tab. We'll go to the technical open and now we will revisit the remarkable finding we found about our proprietary measure of skew and ketosis. We will add the one year kurtosis and we'll say only open this trade not only if it's 14 days before earnings, but also if and only if the past year ketosis is greater than one. We can see now a 69% win rate and the average trade has now gone up to 29% in just 14 days.

([07:17](#)):

That would be 60% a month. And now you're starting to see the power of the back test tab. We started with some trivialities, then we looked at a pre earnings momentum trade, which we have discussed for the last seven years. Then we added stops and limits to increase the win rates. And finally we touched on some of the most remarkable data we have ever come across. Taking the win rates from 49% to 69% and the average trade from 20% to 29% over just 14 days. Now let's explore more sophisticated strategies. Let's take this down. Two stocks, Microsoft and Apple. So we can see that over the last three years Microsoft has five wins, three losses with a 75.6% total return, and apple's got six wins and four losses and 125% return. That's a great strategy. Let's now go to creating a custom strategy. Click the custom button. In this case, let's look at a calendar call spread. So let's get long a 50 delta call. That's an at the money call. 14 days to expiration. So this is still a 14 day call, but now I also want to get short a further out of the money. Call 30 delta with seven days to expiration. You'll note that when you're creating a custom strategy, you could have up to four legs calls and puts different expirations, different sizes, any ratios you like. We'll call this a call diagonal

Spread and I want to close the entire strategy when the seven day options expire. So this 14 day option and the seven day option will close at the same time, but we'll keep all the same rules we had to open 14 days before earnings. Microsoft has gone from five wins and three losses and a 70% return to 136% return. And Apple has gone from six wins and four losses and 125% return to eight wins and two losses with 189% return. And that's by using a custom strategy that we've created. So now we're getting more in depth use of the backtest app. If we like these two back tests and would like to get alerted when Microsoft and Apple are 14 days before earnings if and only if the kurtosis in the past year is greater than one. We can now click add alert and this will take us to the alerts tab. You can see the tickers Microsoft and Apple days before earnings, 14 days before earnings with the technical setting that kurtosis over the last year is greater than one. I'll get an email and I can get a text message as well. I'll even write myself a note pre earnings call diagonal. The trade machine link is included in there and now I'll click add alert.

And now I've created two more alerts when Apple and Microsoft are 14 days before earnings. If they're kurtosis over the last year is greater than one, I will get an alert for each of them. Let's go back to the back test tab. So we've seen a plain vanilla long call, we've created a custom strategy. You can use any other built-in strategy or create your own strategy in the back test tab. But while some traders like to create their own trades, their own technical opens and their own back tests, others prefer to see back tests which have been vetted by the CML team. And that's how we go to the pro scanner. In the pro scanner, you can choose which ticker group you're looking at. Let's do the NASDAQ 100 and then you can choose from dozens of strategies, whether it's strategies that never trade earnings, so they always avoid earnings or that only trade earnings or that come right after earnings or that are before earnings.

So for example, the 14 days pre earnings long call is actually a scan and if you click on it, you'll see the results from the NASDAQ 100 that have performed well over the last year, two years and three years. And you can choose any time periods you like, sort by ticker, sort by the number of wins. And if you like any of these trades, you can simply check them and add them to alerts. Click add three alerts. I've just created three alerts from the scan tab. One feature of the pro scanner that few people know is that you don't just have to search by strategy, you can search by ticker. So for example, if you're interested in looking at the results of the magnificent seven, we can just enter those seven tickers and the pro scanner will pull up every single strategy that has worked for all of these tickers.

You can add as many tickers as you like and scroll through them. You can sort by ticker if you like or you can sort by strategy. For example, if you wanted to look at one month after earnings technical short put spreads and see which companies it works for. Or you can look at the back test that have had the most wins in these companies or the highest win rate or the largest average trade return. So you can go buy ticker or buy strategy, but perhaps we want to do a little bit more investigating. Let's take a look at the fade, the dip, technical trade, and let's look at Adobe. We just click on the ticker and this strategy will open in the back test app. So what is this trade? Well, it looks like it's short a put spread and it looks like it's the 40 30 delta put spread.

Looks like it never trades earning, but there are some technicals. Let's see what those are. This back test waits for the day that the stock crosses up through the 200 day moving average, which means it was below the 200 day moving average and came up through it. The stock is also above the 10 day

exponential moving average, and the RSI is less than 70. So it's not overbought. This technical condition or combination of technical conditions we call fading the dip. So it's a stock that is recovering, its 200 day moving average with short-term momentum and we're selling the put spread and these are the results for Adobe. If we wanted to change the Deltas, we're back testing in this case 40 30, we go to our settings and we go right to that middle area colored in blue. So perhaps we want to do the 40 20 put spread and we get the same number of wins and losses, but the total return is lower.

([13:58](#)):

Now we've seen a use of the back test tab to look at a long call pre earnings to use a custom strategy, pre earnings to look at getting short of put spread, never trading earnings with a special technical open. We've added alerts from the back test tab. We've added alerts from the ProScan tab. Anytime you want to know one of the strategies that capital Market laboratories looks at and you don't know how to set it up, the easiest way to do it all is to go to the ProScan tab. You pick any ticker group and you pick any strategy that you are interested in like the Bollinger by the dip, which has done so well and it's a fair question. Well, what is the Bollinger by the Dip? Just click on any ticker, it will load in the back test tab, show you the results and you can scroll down and look what's going on.

([14:48](#)):

First we'll take a look at the technical open. This strategy triggers when the RSI is below 30, so it's oversold and the stock price crosses down through the lower band of a two standard deviation wide Bollinger Band, for example, right here when the stock dipped below. This scan is also using a custom strategy. We can see what it is by clicking edit. This strategy gets long a two month 50 delta option and gets short a one month 20 delta option. So it's getting long a diagonal call spread, but it's a two month to one month spread and it closes when the 30 day options expire. Again, for any strategy we have built into the pro scanner, the easiest way to see what's going on is to go to the scanner, pull up any ticker, and then go back to the back test tab and investigate.

([15:42](#)):

So thus far we've looked at how to enter a ticker, how to choose your test length, the fact that a test length can actually be used with a calendar, how to set your days to expiration, what your settings mean and how to save them. How a back test comes out as a tile. And if you click on the tile, you can see the details. You can even download the trades, how to choose different strategies or create a custom strategy, how to use your own earnings handling, whether it's just ignoring earnings altogether, avoiding earnings trading during earnings, or doing something custom with the earnings date, like 14 days before earnings. How to set a technical open and use either technicals like moving averages or Bollinger Bands or our Kurtosis in our sku, how to set stops and limits, how to add alerts from the back test tab, how to use the pro scanner to add alerts and to load back tests into the back test tab to investigate what the technical settings are.

([16:37](#)):

So we've done the back test tab, the pro scan tab, and the alerts tab. Now we'll do the today tab. The today tab takes a subset of the strategies in the scanner and looks for those that are triggering on the day. You can actually read a definition of what is the today tab by clicking on the link. This takes us to the learn tab and it tells us that the today tab has a selection of some of the prebuilt strategies in the scanner and checks every 30 minutes during market hours to see if anything is triggering. And just like alerts, these strategies are scanned intraday. So once a ticker appears on the today tab, it will remain there even if the technical conditions change later in the trading day. You can come to this help page and see which strategies are on the today tab. This list will grow as we add kurtosis and skew filtering. And you can read about the requirements as powerful as the back test tab is. That is the Brains of Trade

machine and the pro scanner is a subset of the back test tab. The today tab is a subset of the pro scan tab, and when you log into trade machine, you will first land here to see which tickers and which strategies are triggering. Right now

([17:48](#)):

You change which ticker groups you want to look at on the today tab across the top. You can also set alerts just from the today tab. You go to set today tab alerts. You enter your email address and you select which strategies you want to be alerted to when they trigger on the day and which groups of stocks. So for example, I want to know if any company in the Dow 30, the NASDAQ 100 or the largest 500 by market cap trigger in the Bollinger by the dip buy the sell off fade, the dip technical or the custom diagonal 14 days pre earnings trigger that we looked at. That's that custom strategy. You can add alerts simply by clicking. So this too is a way to set your own alerts. Once you're done, you save it. And that is the today tab and an overview of the power and the functionality of trade machine from the brains in the back test tab to the pro scanner, which takes the hundreds of millions of different interactions you can have on the Bact test tab to thousands. And then combined with alerts turns into the today tab, which takes those thousands or hundreds of thousands into hundreds. Thanks for watching.