

Jason Hitchings (00:00):

Just wanted to look at adjusted close price here for a second. So we see price and we see adjusted stock, and those can be very different. And the reason for that is when stocks split, when you're looking back historically, there's kind of two things going on. So if you're doing an options calculation or something, you need to know what the stock price was at the time relative to the strikes and the bid and the ask in order to figure out what the option calculations are and to figure out how in the money it is and that kind of thing. When you're just holding onto stock for a long period of time, when you have a stock split, so if your stock price goes from a hundred to 25, you now have four times as many shares sitting in your account. So obviously you don't look at that as a \$75 loss, you're saying I now have four times as many shares.

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So it's actually nothing changed. It just had a stock split. So that's the typical way, that's the most basic way to do a stock split, is you're saying, okay, the performance of this stock factors in the fact that there are splits, and therefore, if I'm doing a moving average, I'm not going to show a huge drop in price when there's a stock split. So as you're going backwards in time, you're saying, okay, well before the stock split, if it was at a hundred, and if the day before that the stock was at 95, when we're actually looking at that price, and in an adjusted terms, now you're saying, okay, that stock price, the day before the split was 25, and then if it's down 5%, then it's going to be roughly 24 or something like that. So you look at those stock prices and you factor in the fact that it had splits. Now, what a lot of places don't do that we do is that they don't factor in dividends.

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Logically, that's pretty odd because if you're trying to look at the performance of a stock, but you're not factoring in the dividends, and they probably would if you just wanted to look at buying a stock or stock performance over time, but let's say a stock, there are different kinds of dividends. One's like a 50 cent dividend on a \$200 stock, and you could say, okay, even if the moving average moves down slightly, if the stock was at 200 and the next day it's at a hundred ninety nine fifty, okay, the moving average goes down slightly. The RSI goes down slightly, but that doesn't matter that much, but there's lots of kinds of dividends. Occasionally they can just have large dispersions. Not all stocks just do a very small, 2%, 1% quarterly dividend or something, or half percent. And sometimes there are

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Spinoffs or tenure offers or special distributions for various reasons. They take a company and decide to sell it off to someone, and everyone that owns a piece of the company all of a sudden gets \$20 in cash because they just also lost a big chunk of value in the stock. They spun off some part of the company. So there's lots of special situations like that, or there's just places that offer once a year, a \$5 dividend. So if you're going to say that, okay, it's a \$65 stock and it has a \$5 dividend, if you aren't adjusting your historical prices in the stock, you are saying that all of your technical indicators treat receiving that dividend as a negative event. You're saying, okay, I was holding stock and I received \$5, but now all the technical indicators say that the stock is weaker today than it was yesterday. It went down \$5.

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I think just on its face, that's very hard to justify that. I think the only reason that companies do it, and a lot of the, if you look at moving averages, most do not factor in dividends that way. They just kind of look at the stock. Yes, they smooth out splits, but they don't smooth out dividends. And I think it's just maybe because what people are expecting or what they're used to, but if you're looking at the technical movement of a stock, treating a dividend as a negative event for the stock is a little hard to justify. And additionally, it's just we've built everything that way, and that's the way the back tests occur. And so the

system is built that way, and it's all the back tests, all the machine learning, all of the algorithms are built in that way. And so all of the, when it says this thing won five times and lost one time, it's based on models which are smoothing out those dividends and not treating them as negative events, but treating them as added value to the stock price.

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One further point is that options markets, actually there's something called, this is getting kind of into the technical weeds, but there's something called put called parity in the options world where it says that you can actually create stock using calls and puts, basically if you're long a call and short the put, then you have the upside gain and you have the downside loss, the downside risk, and that's you can actually create a stock which synthetic stock based off of the options markets. But if you look out at the options markets post dividend, you can actually look at the options market and you can say, this is the price that the market is implying where the stock is going to be just based off of the math. This is an area I've worked in a lot, so I won't bore you with the details. The markets, when you look at the options montages in the future, all of those strikes and calculations are factoring in the market's expectations for dividends. And so the market itself is baking in to the stock price, the dividends, it's kind of forward adjusting for the dividends. So just for consistency all across the board, we just have a lot of conviction. That's definitely the right way to do it. And it's also what all of our back testing is predicated upon.