MODULE 5 UNIT 2
Video 1 Transcript

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NIR VULKAN: In the previous unit, we have looked at the four rules for evaluating an algorithmic model from the perspective of selling a model that you have built or if you're buying a model that's being pitched to you. In this unit, we want to change it around a little bit, and this time look at the perspective of a large corporation, perhaps a hedge fund, considering whether to build a model or to invest in a model. What should you be thinking of when making that decision?

So I'm going to make a few suggestions here for you to consider. I guess the first thing you should consider is whether you want to do it yourself or outsource it. Most large funds can easily employ a number of individuals. Perhaps one person who has done this before for a different fund, or – with a group of scientists.

You know, we've heard before from Stefan Zohren about the advantage of hiring people that already have a postdoc or have done a PhD, and know how to work in teams on their own. So that is a possibility. Of course, there is a lot of issues with that. And if you are not really feeling comfortable with that, that may not be the right way for you. You can outsource it quite easily.

When doing that, obviously the first thing to remember is this is a hedge fund. So this model has to provide some kind of hedge. It has to do something that you don't already do. Now the easiest way of doing that is by trading different types of markets. So if your fund mostly invests in stock exchanges, having an algorithmic model that trade in futures might be ideal, because the chances, or the correlation is likely to be low. And so that would be the first thing to consider. Now, within the same market, you can still have different types of model and that's another thing to consider.

The next thing to consider is what we call the scale and capacity of the model. Some of the very attractive high-frequency models trade very short-term positions, maybe a few minutes, possibly an hour or so, and they do that in one or two markets. These models can achieve very high returns, but they tend to have very low capacity. In other words, they can handle 100, or 200, or 300 thousand dollars, maybe, but not much more than that. And if your fund is such that, really, you want to have a model that you can invest a sizable amount of money into it, then this model isn't really worth investing so much money and time in.

Trend model, which we talked about, or carry models that trade in many different kind of future markets tend to have lower performance and they have mediocre years, but they do have very good years and they can handle huge amounts of money.

One way of thinking about capacity is looking at your position and trade sizes. And that's, actually, when you work with an algorithmic model, it's very easy to simulate those. So you can see what the model would look like with 10 million, 50 million, 200 million, yeah? You can see what the position in the trade sizes would be.

Now, positions, I don't think you should worry too much about, but trades you do, because if your model, when, let's say trading 100 million in a market, let's say the future of orange juices, has a trade size, an average trade size, that's really, really large, it may not be able to get that positions very quickly.

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And remember that you are – simulations are assuming that your model does not affect the markets, because of course, the simulation, your model doesn't exist. So if your model is going to start impacting, through the trades, the market itself, then that means your simulations are invalid.

So watch out for your trade sizes, and some people use rules like the trade size must never be more than 1% of daily volume and so on, and then there's various other rules like that, that you could use as a proxy to see what the capacity of the model is.

Once the model is connected, you have to monitor the model. What does it mean to monitor the models? It means to, obviously, to look at the performance, how the models perform, and compare that to what you had in simulation. Now of course, it's not going to match – the future is not the same as the past. But what you're looking for is some kind of difference in slippage on the assumptions or some kind of general behaviour that you haven't seen before.

Finally, my last point is obviously watch out for drawdowns, and particularly how the model and how the modeller is behaving during drawdowns. Drawdowns are a normal part of every discretionary or systematic trading – traders, but you want to see, you know, how they respond and how the models deal with that, because you… that has to be something that you know how to deal with, and particularly to see that the people writing the model are comfortable with that. And we heard from Daryl about the linkage between the personality and the type of models that people trade and it would be wise to think about that.

We now looked at the rules for evaluating a model from the perspective of an institution that is either building, creating their own model, or investing in a model like that. In the unit – later in the unit, you will hear from a number of experts more about this process.

Did you understand all of the concepts in this video? If you would like to review any of the questions, click on the corresponding button.

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