MODULE 5 UNIT 1
Video Set Video 2 Transcript

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NIR VULKAN: In Module 1, you were introduced to expert guest speaker Steve Mobbs, the co-founder and partner in Oxford Asset Management. In this video, Steve shares with us his thoughts and experiences on evaluating new model, the lifespan of models, as well as his advice for professionals who want to start working with an algo trading firm for the first time.

When you are approached by someone with a new model, how do you go about evaluating it?

STEVE MOBBS: The first thing I do is evaluate the person, and think, do I think this guy is fundamentally plausible? I try and get some sense of what they're trying to do, of the sorts of regularities they're trying to – they're trying to capture, they're trying to identify. I get them to talk me through both their research process and their thought process. I mean, one thing one's always concerned about is that if you look at a data set for long enough, you'll find some regularity in it. You'll find some way, something that, at least in-sample, appears to make money, but these things seldom work well out-of-sample.

So, you know, there are several ways that you can guard against that. I mean one is some notion of the inherent plausibility of the fact that the guy's trying to capture. The second is whether you think he's a genuine researcher or – actually most people are genuine researchers, but some people are perhaps a little eager to be, you know, eager to be persuaded that they've found the next big thing.

And the third thing is, to what extent have they tested these models out-of-sample? It's easy to find something that works on a data set when you've tuned it really hard, but does it work out-of-sample? Has the guy tested it out-of-sample?

So I think those are the main things. The other thing actually I guess which we do is check the – if possible – check the performance of the model against things that we already do, that we know work, which are, if you like, known regularities in markets, because you'd be surprised how often someone goes away and discovers and refines something that actually, has been in the financial literature for 25 years and just about everybody does already – so that's not terribly helpful. You know, you really looking for something that's value added.

But yeah, there are a lot of people who come along thinking they got the next big thing and you know, I mean, it's great that people are optimistic to do that. But sadly, it seldom works out quite as well as one would like.

When evaluating these models, how important is it to you that there is an economic rationale and story behind the model being presented?

STEVE MOBBS: Well, to me, it's very important. But then I'm something of an old-school guy who likes priors and hypotheses and, you know, who really judges things on their inherent plausibility, and that's possibly one of the reasons of having done it for so long is that you feel, sometimes erroneously, that you developed some intuition about the sorts of things that might work. There is, though, a different set of people, you know, who are much keener, I think, on mining the data, you know, who are, you know, used to working with

large data sets and looking for patterns without an underlying economic rationale. You know, there is, as I'm sure you're aware, a huge, you know, industry, you know, built around, you know, the mining of data and big data. And, you know, I shouldn't knock it, because, you know, some of these people seem to make money and… For me, that's – it's a concern that, you know, all you're doing is looking for a pattern in the data, and there's no presumption of understanding why that pattern exists. And, you know, if you don't know why it exists, you can't really form a view about whether it's stable or whether it's going to work out-of-sample. So, for me, having an underlying hypothesis is quite an important part of, you know, of developing and assessing models.

How do you think about the lifespan of a model? When do you retire models?

STEVE MOBBS: There are good reasons for thinking that models are not going to work, not going to last forever. I mean you're looking for, you know, for anomalies in markets, which unless they're capturing some well-defined risk premium, will ultimately get arbitraged away by the vast amount of money which is chasing alpha and chasing opportunities.

Having said that, there are some anomalies in markets which have persisted for really quite a long time. And so I don't think you could be categorical that, you know, about how long you think an anomaly is going to work. I think the best you can do is, you know, monitor it very closely and when it stops working, you know, you reduce the size of it, you reduce the size some more.

We're disinclined to completely retire models, you know. We would typically run a lot of things in relatively small size to force ourselves to look at them and force ourselves to continually assess them. It's quite often models, you know, come in and out of fashion, you know, they're something that works for a while, then stops working, and then starts working again as people forget about it and there's less money chasing it.

So we try and remember what we discovered 10, 15 years ago. And even though it stopped working, we keep, you know, going back to it and seeing whether this, you know, seeing whether it's started working again or whether there's some modification to it based on new things we've discovered that, you know, can resuscitate it.

How important is getting trading assumptions, like slippage for example, right?

STEVE MOBBS: Slippage is super important for short-term models. It's the difference between whether a model, you know, makes money or doesn't make money. So we, and I'm sure a lot of our competitors, have models of slippage, models of trading costs.

Now if I'm entirely honest with you, it is not terribly easy modelling transactions costs and we have transactions costs models, and we've spent a lot of time developing transactions cost models, but I'd be lying if I said I was totally comfortable and totally confident, you know, of the accuracy of their specification, particular for things like in a multi-day impact, where you trade the same stock for a number of days. You know, the statistical tests of, you know, of how confident you are of your measurements of that sort of impact are lower than they are for sort of very short-term things.

So, yes, we have transactions cost models. Yes, we test new models against those transactions costs. And as I say for, particularly for short-term models, it's pretty important,

but there's not really any substitute for actually going into the market and trying something, and that's the ultimate test of what the slippage really is.

What kind of training do you recommend for people who come from a mathematics or physics background and want to work in algo trading firms like yours?

STEVE MOBBS: The first thing, you know, which I would look for is somebody who shows some interest in markets, who's read, you know, who reads the newspaper, reads *The Economist*, reads, you know, reads about what's happening in markets. Maybe has read a a small textbook or two, or dipped into a textbook or two.

I think the other thing in terms of skills, which I would definitely recommend is, you know, is improving your coding skills – you can code up your ideas. It doesn't take very long to learn these things but, you know, we interview a lot of pure mathematicians who don't have any coding skills, and given how many people apply, it's quite easy to – it's an easy way to find to reject people because you know that will take them a number of months to get up to speed.

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