MODULE 1 UNIT 3
Video 1 Transcript

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NIR VULKAN: Dr Ewan Kirk is the chief investment officer of GAM systematic team, and he's the co-founder of Cantab Capital Partners, which is a systematic hedge fund based in Cambridge, England. Prior to funding Cantab Capital, Ewan worked in Goldman Sachs strategies group. Ewan holds a PhD in mathematics and has extensive experience in quantitative technology.

In this video, Ewan discusses what patterns look like in the data and how we can recognise these.

EWAN KIRK: I'm Ewan Kirk. I run Cantab Capital Partners, which is now part of GAM. We've been going now for 11 years. Prior to that, I was a partner in Goldman Sachs, and prior to that, I was an astrophysicist doing general relativity and also running a software company on the side as well. So, I have that maths programming background, programming being critical, and sadly the use of tensor calculus in finance is not very much, but I'm still glad that I did it.

QUESTION: How do we identify patterns in data, and what do these patterns look like?

EWAN KIRK: Patterns in data are a very hard thing to find, partly because it's very hard to visualise a pattern. Many of the effects that one can profitably harvest in finance, are effects which are not univariate effects; they're only things that you see in the patterns of large data. So, I'll use trend-following again as an example. Trend-following applied to any particular individual asset, it doesn't really have a very strong return. It's not really a pattern that you can see, and often when you look at data, and you think: "Oh, look at that. That's a market that really trends", when you actually put a model on it, it doesn't really work very well, and the pattern that you're discovering is that if you do this in a rigorous and robust way, and disciplined way, across hundreds or thousands of securities, it's only then that the pattern actually appears.

Now, that's very much about longer-term trading, holding periods of 10 days, 20 days, 100 days, 200 days. Those effects are really about being able to do this across 100 futures, or 400 futures, or 5,000 stocks. The shorter-term effects, which is often where pattern recognition is, is used, are short-term algorithmic trading, where we really are talking about milliseconds or certainly sub-second time frames.

And again, it's easy to fool yourself. You're looking at one tiny little slice and, you say: "Oh look, when this happens, this happens". And, the problem with that pattern recognition thing is, one of the things that human beings are fantastically good at, is pattern recognition, and we make patterns out of everything.

Look up at the sky. Look at that cloud, it looks like a dog. Well, yes, it does look like a dog. We're programmed to find patterns, and often those patterns don't really hold up in real life. The – again, I'm being a little bit controversial – the classic example of that is Chartism, where people see patterns in what is random noise. And, the patterns that we are trying to harvest, are often much more subtle than that and quite difficult to get.

QUESTION: Could you talk a little about trend, carry, value, and risk premia?

EWAN KIRK: As you know, I've published papers on trends, and carry in particular, online, and all of these effects are actually quite easy to explain. They're not conceptually hard. There is, of course, a large gap from explaining the fundamental source of return, to actually implementing a model, but at the level of fundamentally explaining why the source of return is there, most of these effects are quite simple. Trend. All trend says is that things that have been going up for a while, tend to keep going up, and things have been going down for a while, tend to keep going down. That's not rocket science, even though I am a rocket scientist obviously, that's not rocket science.

Carry is whole things that yield more than cash, and if you hold things that yield more than cash, over time you're going to make more than cash. I mean again, it's not hard. Value is: buy cheap things, sell expensive things, again not hard. What is hard is building a model to harvest those in a way that is able to be traded. So, we might believe that there's some effect, trend we use that, or carry; we know that that's true, but part of what you're trying to do is to harvest that effect in the best risk-adjusted way. We all know that selling options just sell put options on the S&P, just keep doing that forever, that makes an enormous amount of money. Until suddenly, it doesn't. So, it's managing risk, often, more than managing the return processes or coming up with the underlying drivers of return.

We know what the underlying drivers of return, unless it's some super-secret proprietary sort of alpha, which clearly I'm not going to be talking about, but if it was one of those things, even then it's about harvesting that with the best possible risk-adjusted basis. So, it's a risk management. When we talk about risk premia, everyone focuses on the premia side, the kind of important bit is the risk side.

Get that bit right, and basically you should be doing something at least reasonably rational.

NIR VULKAN: 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.