MODULE 2 UNIT 3
Video 1 Transcript

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NIR VULKAN: In this unit, we look at the differences between different type of systematic trading firms, and particularly in terms of high-frequency and low-frequency. One difference is that small funds will typically trade their own capital. There may be a pool of seed investors, maybe it's their actual, same people money, or maybe it's we, one or two investors, that have believed in these guys and put the money in.

In contrast, the large funds will be hedge funds. There'd be a collection of investors where we would have large institutional investors, high-net individuals, and pension funds, and so on, investing in the fund.

Small funds can be high-frequency, but low capacity. In other words, they trade models, they take advantage of some kind of inefficiency in the way information is transmitted or in the way orders are executed in particular market. You can get very high Sharpe ratio performances in this kind of funds, but typically, with small amount of capital. For example, I have seen very strong models, which are pressures of four and five, holding on for a couple of years, but with capacity of, say, two or three hundred thousand dollars. It maybe seems like a lot of money if it's one person's money, but, of course, you couldn't really build a fund around something like that.

In contrast, large funds focus on having large capacity. So, they typically invest in many different markets – typically in futures or liquid futures. They try to avoid the more esoteric or illiquid markets, and, really, a big part of the consideration is how to ensure that they are able to deploy the capital that comes to them from their investors.

Very strongly related to that, is how many markets they trade. So, to one way of achieving capacity is trading many, many different markets. And so, another way of looking at a difference between low-frequency and high-frequency, or between small firms and big firm, is the number of markets that they trade. What the high-frequency firms are good at is processing a lot of information very quickly, so the execution is very important. For example, if you're looking at a trend or carry model that large funds trade, yes, if you look at that, and if you delay all the decisions trade by a day, which would be a bad thing – in other words, you enter position a day after you should have and you exit a day after – what you would find is the performance is still reasonable because most of the P&L is generated in the few weeks or months where you had the position.

Okay, so, that means that how quickly you get in and out is important, but not that important. In contrast, the small, the high-frequency fund – everything is about being able to process the information very quickly, reliably, and execute. Therefore, we see firms that physically locate themselves very close to the exchange, that invest huge amount of money in the infrastructure, IT infrastructure, of reliability of the signal knowing that the orders we get execution very, very quickly.

The small funds focus on execution, whereas the large funds focus on, if you like, the prediction, trying to predict the market, and making many bets in many markets and hoping that more than half the bets go your way.

And then, also through better risk management. So, this is a way where large firms can have an advantage by, for example, amalgamating a large number of models so they don't have to take contrasting position, they can almost trade against themselves at certain of these position, or they can break very large trades into smaller chunks and still get away with that. This is an advantage for a large firm which is on execution days.

Small firms, as we discuss, or high-frequency, it's all about the quickness of the execution, and what we see that a lot of this strategy actually happen in the brokerage firms, in the firms that already supply the liquidity, and they tend to be involved with these high frequencies because they have kind of advantage in, already, in this space.

To recap, in this video we have explored the definition and the differences between small and large firms, and in particular, we looked at high-frequency and low-frequency trading.

In the future, you will most likely find more instances of mathematical models from different disciplines being applied to stock market, or to future markets.

Experts have used everything from models of flowing dynamics to match the described airway fluctuation, to explain how market function. We will touch on this again in Module 3 next week.

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