"Robot trading on stock exchanges needs to be regulated"

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Lightning-fast share trading by stock trading robots is increasing strongly on the world's stock exchanges. Now it is time to consider the socio-economic costs of a millisecond.

Because it is all about the milliseconds. High frequency trading, popularly called stock trading robots, is the stock exchange equivalent of Formula 1. Here, it is all about speed and the best technology money can buy.

"Stock trading robots in themselves are nothing new. They have been used for years to carry our routine tasks that machines can do more efficiently than people can. What's new is the speed involved, which has increased hugely in the last few years," says Terje Lensberg, Professor of Finance at the Norwegian School of Economics.

He is conducting research on the evolution of behaviour in financial markets and has himself engaged in algorithmic trading, another term for robot trading, for the Government Pension Fund of Norway and Storebrand.

Manipulation or a smokescreen?

This spring, the financial press has written a lot about high frequency trading, both about how stock trading robots are 'playing havoc' with Oslo Børs - the Oslo stock exchange - and how they manipulate the market.

"Obscuring what you are doing is not the same as manipulating the market," Lensberg comments.

Criticism has been raised of the way in which the new type of stock trading robots place buy or sell orders, then retract them so quickly that market players fail to latch on to what is happening.

On an ordinary day's trading, as many as 50% of all orders can be retracted in less than a second, without a single trade having taken place.

"Manipulation can be one motive, but it could just as easily be a strategy to protect oneself against market players who want to exploit attempts at high volume trades. By quickly retracting an order, such players do not have time to exploit the position," the finance professor explains.

He believes that we should accept that investors wish to safeguard themselves against being tricked by the market.

The value of a millisecond

Lensberg believes that the debate is dominated by those who feel that their business model is being

threatened by stock trading robots. He calls for a more nuanced debate, and believes that high frequency trading has both advantages and disadvantages.

Less incorrect pricing in the stock market, because the stock trading robots will quickly take advantage of it, and greater liquidity are two possible advantages of this type of share trading.

"However, much more research is needed before we can fully understand the consequences," Lensberg emphasises.

Lightning fast stock trading robots are good business for those who use them, but the effect on the market as a whole is more uncertain.

"The question is how socio-economically profitable it is to spend so much money just to make it possible to trade a fraction of a second faster. Are the advantages great enough to weigh up for the costs this enormous use of resources involves?" Lensberg asks, and adds:

"Intuitively, I think the answer is no. I believe the focus on speed has gone too far."

A direct line to the market

Important questions about regulation have followed in the wake of the increase in high frequency trading.

Because stock trading robots fighting over milliseconds do not have the time to go via the stockbrokers, they have direct lines to the market. This worries the regulators, both in the EU and in Norway. In 2014, the EU will issue new regulations relating to share trading in Europe, which may put a stop to robot trading.

"An important control mechanism is lost because this form of trading does not go via stockbrokers. It makes it difficult to know whether those placing orders have enough equity to actually trade," Lensberg explains.

According to the professor, another problem is that the speed can simply become too high, also for those who control and operate the robots.

"An algorithm cannot change its mind, and if those who look after the robots do not pay close enough attention, both the buyer and the seller can suffer great losses. There is a potential for great instability here," the NHH professor believes.

One possible measure to avoid such problems is to test the stock trading robots before they are let loose on the market. But testing takes time, and a stock trading robot that is good this week might not be as good next week.

New expertise

After the brokerage houses started to use powerful computers and more technology in share trading, new expertise has also found its way into the world of finance.

IT engineers, mathematicians and physicists are now teaming up with economists to develop quicker and smarter algorithms. Combined with deregulation of the financial markets, which has made it possible for the same security to be traded on several stock exchanges, this has created good conditions for high frequency trading.

"Most computer programmes and algorithms have 'bugs'. Giving them direct access to markets without any form of regulation can therefore be very unfortunate," the finance professor explains.

There is talk of granting licences to individual players who will be permitted to engage in algorithmic trading, but Terje Lensberg is uncertain whether this would be an efficient solution.

"It would still mean that we have to trust those with licences to follow their own control procedures," says Lensberg.

Regulation desirable, despite different incentives

Thomas Garnes and Ole André Knutli are in the process of completing their master's degrees in Financial Economics at NHH. In a joint master's thesis, they look at various market players' attitudes to the new share trading trend

"'We note that there are big differences in how regulators, investors and the stock exchange view the effects of high frequency trading. There is certainly no unison agreement within the industry that stock trading robots are a negative development, as the media would often have you believe, the students tell us," say Garnes and Knutli.

Professor Lensberg is supervisor for their qualitative study, and they have conducted interviews with Oslo Børs, Nordnet, the Financial Supervisory Authority of Norway, Folketrygdfondet and with some of Norway's top academic experts.

"We have identified many different incentives. Small investors, for instance people who invest in shares through Nordnet, are easily confused by the stock trading robots, while Oslo Børs makes money on all the transactions and therefore has fewer objections to this trend," they explain.

Although it is debated whether this lightning-fast share trading is desirable, there is certain consensus that regulation is needed.

"Several different ways of regulating the robots are being considered. There is talk of stipulating a minimum time for placing and retracting orders and of introducing fines for retracting large orders," say the MA students.

"The people we have spoken to have little faith in such methods. If anything, granting licences to serious players is what the industry believes most in."

They, on the other hand, believe that the proposal for a supranational body that can monitor activity on different stock exchanges would be a good start to the regulation efforts.

"As things stand, no one has a full overview of the situation. The only thing we know for certain is that stock trading robots and high frequency trading are here to stay."

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"Stock trading robots in themselves are nothing new. They have been used for years to carry our routine tasks that machines can do more efficiently than people can. What's new is the speed involved, which has increased hugely in the last few years," says Terje Lensberg. (Photo: Helge Skodvin) [9]
After the brokerage houses started to use powerful computers and more technology in share trading, new expertise has also found its way into the world of finance. (Photo: Colourbox) [10]

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