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Playing Fast And Furious In The Stock Market

Surprising insights into the role of high frequency traders and short sellers revealed by SMU Professor of Finance Ekkehart Boehmer's research.

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AsianScientist (May 31, 2016) - By David Turner - Retail investors might sometimes feel like meerkats living amongst cheetahs and hyenas when they trade in the stock market. Between the speed and technological power of high frequency traders, and the predatory behaviour of short sellers, it is no wonder their presence makes the average market participant wary.

Yet, the analysis of terabits of trading data has provided evidence for the value of short sellers and high frequency traders to the market's ecosystem, says Professor Ekkehart Boehmer of the Singapore Management University (SMU) Lee Kong Chian School of Business.

Through the lens of financial econometrics, he has discovered that they contribute to more transparent and accurate share prices in the stock market, something that policy makers and investors may ultimately benefit from.

"People were wary of high frequency trading and short selling because they were new and unprecedented. However, profitable trading strategies such as short selling and high frequency trading can have positive effects that people do not understand," says Professor Boehmer.

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Selling short corrects over-pricing

Issuers are not fond of short sellers because they thrive on falling prices. By selling shares that they have either borrowed or do not own yet, short sellers can profit by eventually buying the shares, if and when their price has fallen.

This may sound predatory, but the theory in defence of short sellers is that they contribute to a market's ultimate goal—the trading of shares at a company's true value.

"While short sellers typically depress prices, they can be valuable in correcting over-pricing. The basic question is whether this is justified or whether short sellers drive prices too low," explains Professor Boehmer.

For the most part, his research suggests that short sellers do drive share prices towards their fundamental values. This research is expounded in three of his papers, "The good news in short interest", which was the winner of the Fama/DFA Prize for the best paper in the Journal of Financial Economics in 2010, "Short selling and the price discovery process", which was published in the Journal of Finance and runner up in the Review of Financial Studies Best Paper Award 2014, and "Which shorts are informed?", published in the Journal of Finance.

High frequency trades and market liquidity

The development of high frequency trading was similarly controversial because it was thought that the few who could use the technology had an unfair advantage over others. Yet this grumble has lessened as the technology behind it has becomes more widely available, Professor Boehmer says.

High frequency trading's own claim to usefulness is that it makes the market more liquid—which in theory drives prices closer to their true value. For example, high frequency trading allows more trades in response to more news, providing more information and so more accurate prices. On the other hand, fast trading also appears to make prices more volatile, which in turn makes arbitrage trading—which brings prices towards their true values—more costly and thus less effective.

That is the theory anyway, and it is not without risks of a high-speed crash when high frequency traders collectively hit speed bumps in the road, Professor Boehmer warns.

Using data from Canadian securities regulators covering five stock markets between 2010 and 2011, the research team tracked the behaviour of individual traders on an anonymous basis, to understand how each reacted to news entering the market. Somewhat surprisingly, the study observed a low correlation between the different high frequency traders' reactions to the same news, thus providing enough diversity in reaction to immunise the market from meltdowns caused by small news.

"High frequency traders compete with each other, rather than just copy each other, and in the process improve liquidity," says Professor Boehmer, who recently described his findings in the paper, "Correlated High-Frequency Trading".

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The deluge of financial data

Researching at the edge of the markets involves significant challenges, Professor Boehmer points out. Not least of which is applying statistical tools to huge volumes of information—creating limitations that researchers must learn to cope with.

"You cannot generate your findings quickly. While computer power is increasing, the volume and speed of market data is also increasing. So you have to be comfortable with the technology and treat your data very carefully, as processing large volumes of data is prone to errors. So we replicate each other's research to avoid mistakes."

Ultimately, he hopes that these findings will help regulators, policy makers and retail investors to build and participate in a fair and transparent market.

"The best policy makers can do is to create an environment and rules that promote competition, which in turn generates innovation and liquidity. Liquidity is not so important to investors who transact only occasionally, but transaction costs matter a great deal to large volume traders, such as some mutual funds and other asset managers. And a higher return for these traders leads to better returns for their investors, so it's a win-win to have them operating in the market."

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