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The dash to flash

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No matter how rapidly the human eye can blink, a computer trading system on Wall Street has already left it for dust - carrying out a transaction 1,000 times faster, at just 400 microseconds. It is a frenetic, technology-driven world of which few ordinary investors are even aware.

But this "high-frequency trading" is estimated to account for well over half of daily volume in US stocks, up from estimates of 30 per cent in 2005. It is based on extracting tiny slices of profit from trading small numbers of shares in companies, often between different trading platforms, with success relying on minimal variations in speed - or "latency", in the trading vernacular.

It amounts to a transformation in equity trading that has lowered dealing costs virtually all round and, many argue, has created a more efficient market for both retail and institutional investors.

But amid all this hectic activity, a certain type of stock order has raised anxiety among market participants, competing exchanges, members of Congress and now the Securities and Exchange Commission. Mary Schapiro, no-nonsense new chairwoman of an SEC that had been accused of being largely supine till the credit crunch began to batter markets two years ago, this week served notice that the days of so-called flash orders are likely to be numbered.

Flash orders occur when, as some exchanges allow, traders' computers get a glimpse of share order flows a fraction of a second before the broader market. The concern is that some of them then "flash" an order on another trading platform. By executing a trade, the firm even gains a rebate from an exchange hungry for its business.

These orders comprise only around 3 per cent of overall flows, according to Sang Lee, managing partner at Aite Group, a consultancy. He says a lot of high-frequency traders do not use them. But flash orders were thrust into the limelight after some investors and lawmakers, including New York Senator Charles Schumer, urged the SEC to ban the practice late last month. Ms Schapiro said on Tuesday that she had instructed her staff to find "an approach that can be quickly implemented to eliminate the inequity that results from flash orders".

The SEC has been looking into flash orders as part of a review of what are called "dark pools" - electronic trading venues that do not display public quotes for stocks. "Flash orders are a very small part of trading flow, but it has caught the attention of regulators that a certain class of investor may be getting a preferential look at order flow," says Larry Tabb, founder and chief executive of Tabb Group, a research and strategic advisory firm. "Flash orders can be looked at as providing a two-tier market," he adds. "All agree that everyone should have a fair shake at seeing all orders."

The use of flash orders is not confined to high-frequency traders. Retail brokers, institutional investors, proprietary trading firms and automated market-makers also deploy them. Nor are flash orders the only manifestation of the revolution in electronic trading that has taken place in less than five years - such as the ability for a trading firm to shave microseconds off the time it takes for a trade to be done by physically locating its trading systems in an exchange's data centre - known as "co-location".

The dilemma for regulators is what to do about this technological revolution - especially as many orders are cancelled almost as soon as they are posted. By flashing orders so quickly, some traders could be trying to ascertain where other investors want to buy and sell stocks. Cancelling the order before it is executed means the flasher could potentially squeeze a better price from the investor.

Regulators in the US are already smarting from having failed to spot glaring holes in the way the opaque over-the-counter derivatives market functioned. Few ordinary investors had such complex investments in their portfolios, yet ownership of shares in the US is widespread. So the SEC, whose prime congressional mandate is investor protection, is highly sensitive to the flash trades issue.

But as many market participants point out, there has never been equal access to information in the markets. In the old days of trading floors, dealers were able to achieve better prices than rivals often by overhearing information uttered by a rival standing a few feet away. In cynical recognition of this disparity, traders at banks and brokerages routinely describe orders originating from "mom and pop" retail investors as "uninformed order flow". It also has long been common practice for banks to conduct huge amounts of share dealing, between each other and on behalf of clients, in the over-the-counter or off-exchange markets.

T he SEC has acknowledged the dilemma. In a recent speech, James Brigagliano, a senior staffer in its trading and markets division, said securities markets had thrived as "competitive forces have led entrepreneurial industry participants to innovate with new technologies and new trading tools". He described the challenge for the industry and regulators as having to "monitor these changes and update a market's structure when needed".

How the SEC undertakes this challenge of technology is the compelling question. Richard Balarkas, chief executive of Instinet Europe, a broker owned by Nomura of Japan, says there is a risk that regulators could go too far. That could hobble many of the technology-enabled trading processes that have resulted in tighter bid-ask spreads and greater liquidity in markets.

"The dilemma for the regulators in the US seems to be this assumption that their job is to ensure there is absolute equality of information amongst all market participants and it all boils down to this efficient market hypothesis," he says. "In reality there are a couple of thousand tiers of information in the market and there always have been. If the regulators want to insist on this single-tier philosophy, where do they stop?"

In the US, Stuart Schweitzer, global market strategist at JPMorgan's private bank, says: "The issue in the market has long been, do you always get the best execution? I understand some may point a finger but I think it's being exaggerated."

BATS Trading and Direct Edge, two dealing platforms that have been competing with NYSE Euronext and Nasdaq OMX, argue that their existence has helped expand liquidity in the markets. William O'Brien, Direct Edge chief executive, says: "Our customers like flash orders and the way it provides them with access to liquidity in the market they would not normally reach."

Flash orders were pioneered by Direct Edge some three years ago. At that time there was little fuss, but Direct Edge's share of average daily equity volume in the US has since climbed to 12 per cent from 1 per cent. Competitors such as BATS and Nasdaq OMX have felt compelled to offer flash orders in order to compete for market share. Mr O'Brien argues that the debate over the use of flash orders "reflects competition among exchanges, rather than being a true burning regulatory issue".

NYSE Euronext, operator of what was long known as Wall Street's "big board", does not allow flash orders and has been a vocal critic of the practice. The SEC's move on Tuesday sparked a rally in the exchange's own share price.

Aite's Mr Lee says: "Flash orders are a legitimate issue as it creates a private network for trading. We will have to wait and see if it's a complete ban or whether certain aspects of flash orders are stopped."

Exchanges and main participants appear at least to some extent open to a curb. Joe Ratterman, chief executive of BATS, has called for a collective ban on flash orders, although he plays down concerns that have been raised about their use.

Themis, an institutional brokerage, says other trading practices need reform as well. "It's a good first step that the SEC has taken, but this just scratches the surface," says **Joe Saluzzi**, its co-head of equity trading. Inducements from exchanges to traders such as paying a rebate to posters of orders should be abolished, he adds.

The rebate model, which the London Stock Exchange has decided to abandon from next month, underlines how competitive the equity trading business has become in the US over the past decade. Computer systems or algorithms that can break down a large order into tiny slices and execute them all across different trading venues at somewhere near the speed of light has become the new way of doing business. The size of the average trade has fallen to 250 shares, down from more than 1,000 units a decade ago, according to Aite.

It is business that the exchanges and platforms such as BATS are keen to attract - hence the rebates. Here, the dilemma for regulators is not high-frequency traders per se. Indeed, firms such as Getco, a market-maker that uses some high-frequency trading strategies and is a shareholder in BATS, are often just as much "takers" of orders from platforms as they are posters of orders, meaning they do not solely harvest rebates and often add liquidity to a market.

But some high-frequency traders are also starting to use "dark pools" and the SEC is concerned about the practice of sending electronic messages on to the trading platform to "test" the likelihood of an incoming order finding a match in it - so-called "indications of interest". Yet dark pools are supposed to be used to trade large blocks of shares, with prices posted publicly only after trades are done. Indications of interest merely increase their opacity.

Another area of concern for the market is "sponsored access", whereby a trading firm that has a relationship with a broker can use it to access trading flow directly at an exchange or trading platform.

Technologies such as these seem unstoppable. But what seems certain is that the practices they are leading to face intense scrutiny.

"I would not be surprised to see the SEC take a look at a number of strategies and trading practices," says Mr Tabb. How far regulators follow up that scrutiny with action will decide the shape of markets for years to come.

American traders cross the Atlantic in search of arbitrage opportunities

Six months ago, Olof Neiglick and a team of trading experts in the Nordic region were busy setting up Burgundy, the latest alternative share-trading platform to emerge in Europe, *writes Jeremy Grant* . He recalls telephoning the high- frequency trading companies that have recently migrated to Europe from the US, as well as some of the region's own companies. None returned his calls.

But since Burgundy started trading in 600 Swedish, Finnish, Norwegian and Danish stocks in June, his phone has started ringing. "It's amazing. They are asking me about latency . . . how much capacity you have, that sort of thing. I must be doing something right," he says.

As debate continues in the US over the influence of high-frequency traders, Europe is just starting to experience the phenomenon. The focus is Amsterdam, where there has been options trading since at least the late 1970s. Companies that sprang from that culture include Optiver, All Options and Van der Moolen.

US high-frequency companies have been setting up in Europe, mostly in London and Dublin. Getco, based in Chicago, has a branch overlooking the Thames;Susquehanna and Madison Tyler of the US are based in Dublin. They are drawn there because forces unleashed by the European Commission's 2007 markets in financial instruments directive are bringing about changes to market structures that mirror what happened in the US more than five years ago: competition and adoption of new technologies. High- frequency companies are attracted by arbitrage opportunities offered by the battle between exchanges and "multilateral trading facilities" such as Chi-XTurquoise and BATS Europe. Technology such as "smart order routing", helping direct orders to places they are most likely to be matched, and technology allowing faster connections to exchanges have helped. This week Deutsche Börsebegan installing infrastructuregiving UK-based traders access to its markets in less than five milliseconds.

Some of the companies have taken stakes in MTFs, giving them a say in fee policies. Some also account for a significant share of trading on a single MTF, giving them huge influence. Phil Allison of UBS says the high-frequency companies are useful in providing liquidity to the markets but adds it is important "to be at least aware of how they shape the overall market structure".

"My real concern is that these high-frequency traders have an enormous ability to influence our market micro-structure. If you remove one of the highest-volume traders off Chi-X, for example, you will materially change their overall market share which means their power as a client of the MTFs is incredibly high."

The quiet calculators

If there is one thing that infuriates many high-frequency firms, it is the accusation that they are secretive, *writes Jeremy Grant* . Some are also at pains to demonstrate that they do not all use the same trading strategy and so should not be lumped together under one heading.

Yet many do not help themselves by revealing very little in public - on their websites, for example.

Jump Trading , which like many is a product of Chicago's futures and options trading realm, says it is a privately funded company "on the cutting edge of high-frequency trading, expanding the limits of what algorithmic trading means today".

Jump also says it re-invests "a good portion" of its profits into research and development and recruits at various university campuses. But it provides no address or telephone number.

Getco recently revamped its site and is now one of the few to offer a range of information, including contact details, company history, a section headlined "What's best for the market?" and a letter on the "flash orders" issue submitted to the Securities and Exchange Commission.

Indeed, the main slogan on its website hints that the industry might just be starting to open up: "Open minds. Better markets".