

# **High-Speed Trading Under Siege**

Joe Mont

April 15 2014

Speed has always been important—and controversial—on Wall Street.

In the 1980s, for example, traditionalists lamented the new faces and new footwear that began to appear on trading floors of stock exchanges. "They fired the old guys and got younger guys, who wore Nikes instead of wingtips," says Bernard Donefer, associate director of the Subotnick Financial Services Center at City College of New York. The idea was to get trades to specialist desks faster and faster. Some firms even tried outfitting traders with roller skates to secure an advantage.

The sophisticated trading technology categorized as high-frequency trading (HFT) is an evolution of the need-for-speed approach. Financial firms are increasingly seeking complex systems to execute orders faster and faster, shaving off milliseconds to create price advantages.

The question that now arises is where regulators should draw the line between legal proprietary advancements and practices that give some firms an unfair advantage akin to insider trading. While regulators never considered a ban on running shoes or roller skates, they are under increasing pressure to crackdown on HFT.

A new book, "Flash Boys" by Michael Lewis has supercharged the debate over the fairness of HFT in recent days, as has a public acknowledgement by the Federal Bureau of Investigation that it is investigating insider trading at several firms facilitated by high-tech, high-speed trades. During an appearance on CBS's 60 Minutes, Lewis went as far as to say the markets were "rigged."

The furor over HFT could lead to a push by Congress to legislate the practice, something regulators have been considering for several years. But what could they actually do? Should they do anything at all?

An immediate issue for the Securities and Exchange Commission, should it step in, is to actually define what HFT is.

A 2010 study by SEC staff, and a follow-up last month, acknowledges that the term, applied to multiple approaches, is "one of the most significant market structure developments in recent

years." It estimates that HFT now accounts for more than 50 percent of the total trading volume of U.S.-listed equities. "By any measure, it is a dominant component of the current market structure and likely to affect nearly all aspects of its performance," a 2010 concept release says.

That research noted that the term HFT, aside from a general catch-all of "professional traders acting in a proprietary capacity that generate a large number of trades on a daily basis," can embody five other characteristics:

- The use of extraordinarily high-speed and sophisticated programs for generating, routing, and executing orders.
- The use of co-location services and individual data feeds offered by exchanges and others to minimize network and other latencies.
- Very short time frames for establishing and liquidating positions.
- Submission of numerous orders that are cancelled shortly after submission.
- Ending the trading day in as close to a flat position as possible and not carrying significant, un-hedged positions overnight.

Algorithmic trading, which slices large institutional orders into smaller trades that are fed into the market over time, also fall under a common definition, although critics dispute that inclusion. Other types of computer-assisted trading tools are also common and "difficult to distinguish from HFT" the SEC says.

The problem, according to critics, is that HFT gives powerful trading firms such unfettered access to the markets, at such speeds, that they essentially grab advantages away from slower, mainstream traders, some still stuck with 15-minute stock price delays on their day-trading resource of choice.

## **Existing Regulation**

An argument against new regulations is that plenty are already on the books. "HFT firms are frustrated with the notion that they are not regulated—that it is a wild west," says Jim Fischer, a partner in Drinker Biddle's Corporate & Securities Practice Group, who works with several HFT firms. "But they have substantial regulation that is imposed upon them, not only in the United States but in other parts of the world."

Others agree that HFT is already governed by plenty of laws. "There is a lot of political noise," says Louise Bennetts, associate director of financial regulation studies for the Cato Institute, suggesting that regulators already have plenty of tools at their disposal. "This is a little bit like Sarbanes-Oxley," she says. "The laws to prosecute bad actors during the Enron scandal were already on the books. You didn't actually need any new ones; you just needed to enforce the existing ones."

"The problem is there is a market structure issue," says Donefer. "We now have a bifurcated market in that we have institutions that want to trade hundreds of thousands and millions of shares at a time in a market where you also have retail trades of under 200 shares. We really have two markets—wholesale and retail—but instead of being separate they are all thrown together. I

don't think we are in a crisis and I don't think the markets are rigged. But are there some things we could do better? Sure "

## **The Tax Deterrent**

One approach promoted by critics of high-frequency trading is to levy new taxes as a deterrent.

"I don't think we are in a crisis and I don't think the markets are rigged. But are there some things we could do better? Sure."

—Bernard Donefer, Associate Director, Subotnick Financial Services Center

Bart Chilton, a former member of the Commodity Futures Trading Commission, was a vocal, persistent proponent of a derivatives transaction tax. His suggestion for a fee of \$0.0006 per transaction, could raise as much as \$300 million a year for regulatory budgets while deterring high-speed traders by cutting into their profits. The approach is the equivalent of states adding onto the cost of a pack of cigarettes: a vice tax intended to curb a practice he views as harming average investors by tilting markets in favor of high speed traders.

Some countries have already adopted new taxes to deter high-speed trading. In September 2013, following the lead of France, Italy enacted a new tax on high-frequency and equity derivative trades. High-frequency trading is subjected to a 0.02 percent tax on trades occurring every 0.5 seconds or faster.

Holly Bell, a professor at the University of Alaska-Anchorage's College of Business and Public Policy who studies HFT, argues against such taxes, which she says can stunt liquidity. After France adopted an HFT tax, for example, equity turnover declined from 23 percent in 2011 to under 13 percent in 2013. Italy went from €101 billion in 2012 trading activity to €50 billion in 2013. "Their liquidity was cut in half," she says.

"It is not clear that this has been very successful in Europe, agrees Bennetts. "It is very hard to monitor, and it is really a tax on all investors."

## WHAT IS HFT?

If the Securities and Exchange Commission wants to better regulate high-frequency trading, it will first need to define what it is. A March report by its Division of Trading and Markets tackled the matter of what falls under the umbrella. A selection from that study follows:

The SEC's Concept Release on Equity Market Structure (2010) recognized that HFT is one of the most significant market structure developments in recent years. It noted, for example, that estimates of HFT typically exceeded 50 percent of total volume in U.S.-listed equities and

concluded that, "by any measure, HFT is a dominant component of the current market structure and likely to affect nearly all aspects of its performance."

The Concept Release also noted that the term "HFT" was not clearly defined. To deal with this problem, the Concept Release first generally defined "proprietary firm" as "professional traders acting in a proprietary capacity that generate a large number of trades on a daily basis." These traders could be organized in a variety of ways, including as a proprietary trading firm (which may or may not be a registered broker-dealer and a member of FINRA), as the proprietary trading desk of a multi-service broker-dealer, or as a hedge fund.

The Concept Release identified five other characteristics that often are attributed to HFT:

- 1. Use of extraordinarily high speed and sophisticated programs for generating, routing, and executing orders.
- 2. Use of co-location services and individual data feeds offered by exchanges and others to minimize network and other latencies.
- 3. Very short time-frames for establishing and liquidating positions.
- 4. Submission of numerous orders that are cancelled shortly after submission.
- 5. Ending the trading day in as close to a flat position as possible (that is, not carrying significant, un-hedged positions overnight).

The Concept Release did not, however, suggest that all of these characteristics must be present for a proprietary firm to be properly classified as HFT. Such an approach may inappropriately narrow the range of firms that are classified as HFT.

## Source: SEC.

Another idea, formulating among state regulators, is to require "speed bumps" to slow trades. Last week, Chad Johnson, chief of the Investor Protection Bureau for the New York Attorney General, revisited that concept and urged exchanges to develop systems to slow orders entering the trading platform, creating a level playing field.

## **Ensuring Market Stability**

A more imminent concern of the SEC is to address market stability problems that could occur from HFT. The SEC is looking at what happens when these rapid-fire trades go awry, causing problems to ripple through financial markets. It is currently reviewing comments on proposed rules, known as Regulation SCI, a slate of technology-related initiatives intended to ensure financial market stability.

Reg. SCI (systems, compliance, and integrity) would require exchanges and clearing houses to maintain and secure their technology. It would require that their trading systems have adequate

capacity and resiliency and that they promptly take appropriate corrective action when problems arise.

A growing list of market meltdowns and disruptions helped advance the proposed rules. During the "flash crash" on May 6, 2010, nearly \$1 trillion in market value evaporated in minutes when an automated trading glitch resulted in irrational price swings for more than 20,000 trades. In August 2012, Knight Capital Group suffered a \$440 million trading loss in less than an hour when automated trading similarly went haywire. Last year, Andarko Petroleum saw its stock price plummet from \$90 to \$0.01 per share in a manner of seconds as a result of a flash crash blamed on high-frequency trades.

Regulation SCI would build upon measures the SEC already has in place to minimize market disruptions, among them "circuit breakers" triggered by erratic trading and a new limit-up/limit-down mechanism to pause trading when markets move too far, too fast. It would also require firms to take timely corrective action in response to disruptions, systems compliance issues, and systems intrusions.

This effort, once it progresses to final rules, would be aided by some high-tech additions at the SEC, including its new Market Information Data Analytics System (MIDAS). It captures all orders posted on the national exchanges, all modification and cancellation of those orders, all trade execution of those orders, and all off-exchange executions. Billed as an unprecedented aggregation of trading information data, MIDAS was developed with the assistance of Tradeworx, a New Jersey-based HFT firm.

"With the MIDAS system, the SEC has the ability to go back and look at what has occurred," Bell says. "That is certainly an indication that they are able to determine when people are trying to manipulate the markets."