The New York Times

On Wall Street, the Rising Cost of Faster Trades

By NATHANIEL POPPER

August 13, 2012

For several years, the Wall Street wizards who built a faster, more fragmented stock market justified their creation by pointing to the benefits it yielded for investors in the form of lower trading costs.

But as the speed and complexity of the markets have continued to change at a rapid pace — with trade times now measured in millionths of a second — a growing number of studies and market participants suggest that those benefits to investors have stalled or even started to reverse.

Research from the broker Abel/Noser indicates that the total cost for an investor to get into and out of a single share of stock fell by more than half between 2000 and 2010, to 3.5 cents. Since then, though, the cost has leveled off and then ticked up in the most recent quarter to 3.8 cents, confirming a trend that has also been visible in recent data from Credit Suisse Trading Strategy and from Celent, a consulting firm specializing in financial markets.

The advantages of the nation's increasingly high-speed stock market are under the microscope after a number of recent trading malfunctions underscored the risks and instability that have come with the rapid changes. This month, one of Wall Street's most important trading firms, Knight Capital, lost $440 million in 45 minutes after installing faulty software designed to keep up with an evolving market.

As the battle to introduce more sophisticated technology continues, raising the specter of more problems like Knight's, the diminishing returns flowing back to investors are making even longtime proponents of innovation question whether the competition to make the market faster and more efficient is now doing more harm than good.

"They've reached the point where the competition is measured in microseconds and there are essentially no benefits to the public at that level," said Lawrence E. Harris, the former chief

economist at the Securities and Exchange Commission, and now a professor at the University of Southern California.

High-speed trading firms have thrived in the computerized markets and now account for more than half of all stock trading, up from 26 percent in 2006, according to the Tabb Group, a financial markets research firm. But even many of them acknowledge that they are engaged in an arms race that is delivering diminishing returns.

Manoj Narang, the founder of Tradeworx, said that the competition had become “a tax” on computerized trading firms like his. Mr. Narang says he thinks that his competitors are dedicating fewer resources to the race as they see there is little more to be gained.

But Mr. Narang said that investors had already enjoyed enormous benefits from the market’s increasing sophistication and were likely to see more in the future in ways that might not be immediately obvious.

“The march of technology does not happen one step forward every year,” Mr. Narang said.

The concerns about an evolving market have been around since the invention of the telegraph allowed cross-continental trading. But they entered another level with a series of regulatory changes beginning in 1998 that opened the market to computerized trading and new exchanges.

When the so-called specialists on the floor of the New York Stock Exchange had to compete with computers, they had to lower their prices to stay in business, and the cost of trading for investors immediately went down. Technology also facilitated a sharp jump in the number of shares traded on a daily basis — a concept known in the industry as liquidity — making it easier for mutual funds to get in and out of stocks.

Even the harshest critics of the current system say that many of the developments over the last two decades came with advantages for wide parts of the investing community.

“No one is saying that we go back to the floor specialists,” said Clive Williams, the head of stock trading at T. Rowe Price Group.

But the pace of innovation has not slowed. The new software that Knight rolled out so disastrously was only the most obvious sign of the feverish competition that is continuing to reshape the markets.

Trading firms are constantly rewriting their software to keep up with the evolving rules of the nation’s stock exchanges. The exchanges, in turn, are making changes to the rules and systems to keep up with the dozens of unorthodox trading platforms that have sprung up as a result of the regulatory changes.

All the industry players are also racing to update their physical infrastructure. The exchanges are consolidating their servers in data warehouses run by companies like Equinix so that the cables between them can be as short as possible and the trade data can travel faster.

For trades that have to move between the financial centers of Chicago and New York, some firms have found that data moves too slowly through fiber optic cables. In response, several companies are currently developing networks to transmit data by microwave.

The length of time that it takes to execute a trade on the New York Stock Exchange's most popular platform has dropped from 3.2 seconds to 48 milliseconds, according to Celent.

There have been obvious beneficiaries of these developments. There are the high-speed trading firms, which use fast data connections to detect tiny differences between stocks on different exchanges and can act much faster than long-term investors on market-moving news.

The companies producing the cables and computers have also made profits, and the traditional exchanges have made more money by selling their own trading technology.

But the risks of making such frequent changes have become increasingly evident. Before Knight's problem, the third-largest exchange, BATS Global Markets, gave investors a jolt in March when new software for bringing companies public failed on the day BATS took its own stock public. When problems do occur they can spread more quickly, as they did during the so-called flash crash of 2010.

These perils have been one factor scaring investors away from American stocks. They have also been put off by a market that has delivered almost no returns over the last decade because of asset bubbles and instability in the global economy.

When attention has turned to the risks of the computerized market, the new trading sites and high-speed trading firms have managed to fend off critics by pointing to benefits that long-term investors have derived from the sophisticated markets.

One of the most popular ways to gauge how investors are doing is the difference between the price at which a stock can be bought and sold at a given moment — the so-called bid-ask spread. When this goes down, day traders, mutual funds and other institutional investors pay less to move in and out of stocks.

Credit Suisse Trading Strategy has tracked a long decline in the spreads paid on American stocks, except in periods of volatile trading, when spreads tend to temporarily rise.

Several reasons have been given for the declining spreads, but much of the credit has been given to the competition between exchanges for customers, and the competition between high-speed trading firms to offer the best price.

In recent months, however, Credit Suisse has found that spreads have been rising even under calm trading conditions.

Studies of transaction costs, like the one conducted by Abel/Noser, incorporate both the bid-ask spread and the commission charged by brokers. Over time, these have generally moved down in

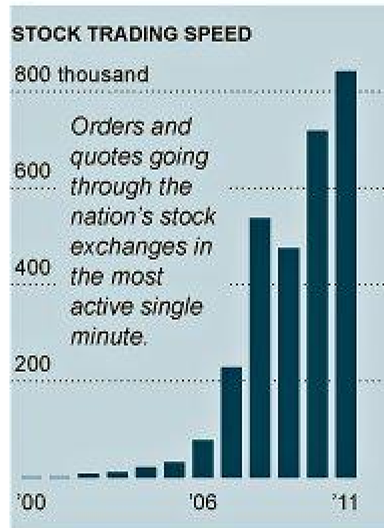
tandem but they have leveled off recently. Analysts have only just begun to consider why these costs to investors have stopped going down, and do not have clear answers.

Terrence Hendershott, a professor at the University of California, Berkeley, said he had been an advocate for technological innovation in the past, but had begun to wonder if the continuing battle for technological superiority had become too much.

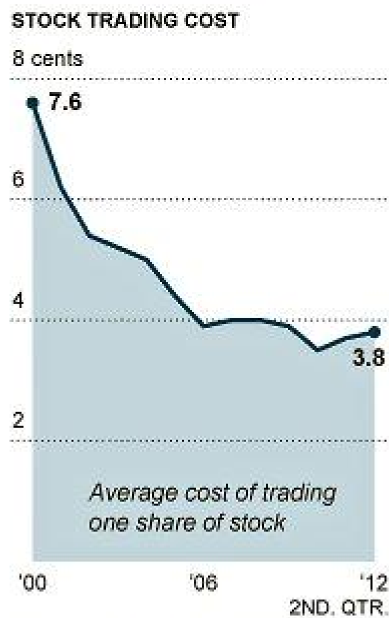
“You’ve got arguably too many people, in too small a space, and they just keep spending enormous amounts of money,” Professor Hendershott said. “Can I convince myself that we are really seeing a lot of benefits? No.”

Faster, Cheaper Trading

Advances in stock trading technology have created a superfast market …



… but one benefit to investors appears to have leveled off.



Sources: Financial Information Forum; Abel/Noser

http://www.nytimes.com/2012/08/14/business/on-wall-street-the-rising-cost-of-high-speed-trading.html?pagewanted=all