

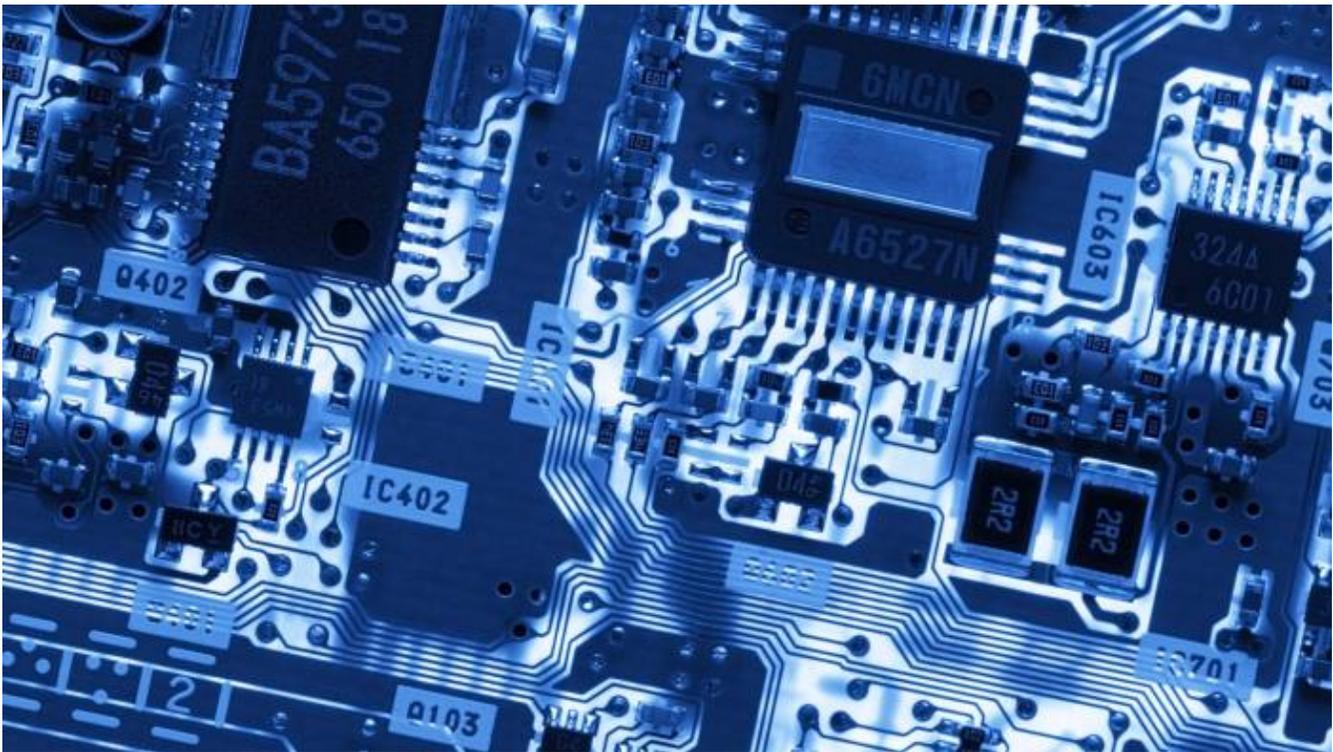
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High Frequency Trading

Race for speed among algo traders hits peak

High-frequency groups need new ways to get an edge as competition reshapes industry



MARCH 30, 2017 by: **Gregory Meyer** and **Nicole Bullock** in New York

Speed was once a ticket to riches in financial markets. Now it's the bare minimum.

Electronic trading groups that made fortunes by being first to pounce on favourable prices are finding it tougher to stay ahead in markets where transactions unfold in billionths of a second. Their costs have risen at the same time that volatility and [volumes \(https://www.world-exchanges.org/home/index.php/news/world-exchange-news/world-federation-of-exchanges-publishes-2016-market-highlights\)](https://www.world-exchanges.org/home/index.php/news/world-exchange-news/world-federation-of-exchanges-publishes-2016-market-highlights) — essential elements for profitable trading — have ebbed.

As a result, only the largest half dozen or so trading companies remain in the race for speed, industry executives say. And in a sign of relentless cost pressures they are finding ways to economise: top groups including DRW, IMC, Jump Trading and XR Trading have banded together to construct a speedy wireless-and-cable route between Chicago and Tokyo called Go West, according to a person briefed on the project.

“Firms want to compete on strategies. Firms do not want an arms race in technology costs,” says Matt Haraburda, president of Chicago-based XR.

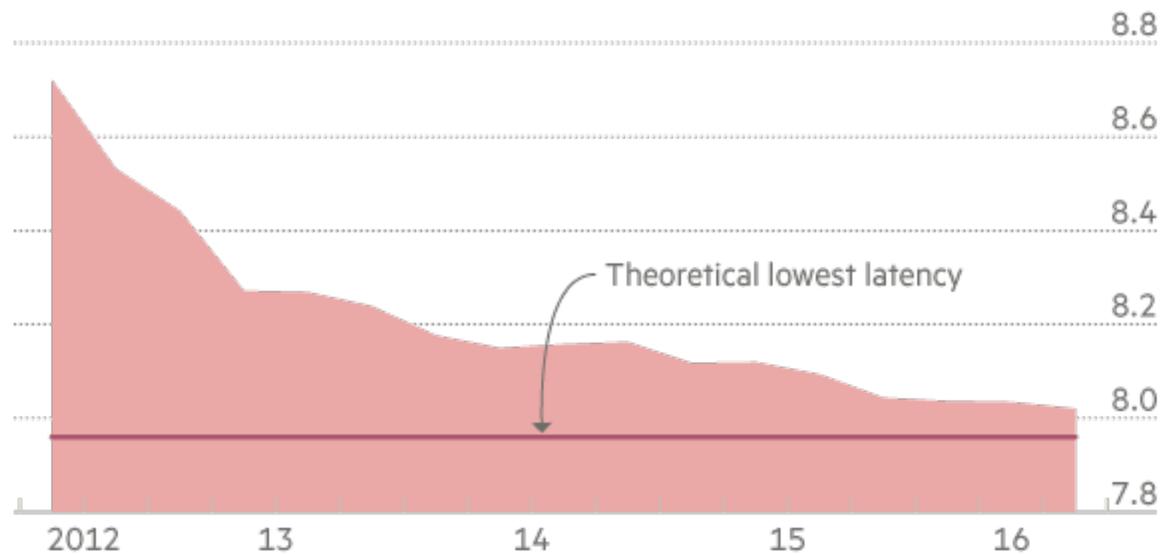
Proprietary trading firms bet their own capital and largely serve as market makers, facilitating the buying and selling of shares, currencies and other assets for investors. These high-speed traders earn pennies as they capture fleeting price differences millions of times over across major markets. They were pioneers in the use of high-frequency trading, a rapid-fire automated technique that now accounts for more than half of US equity volumes and about 45 per cent of futures trading, according to Tabb Group estimates.

Almost all such companies are privately owned, making it difficult to draw broad conclusions about their financial health. However, two transactions discussed or concluded in recent weeks shed light on an industry negotiating an age of commoditised speed.

Roundtrip latency (time lag) on McKay Brothers

microwave route

CME in Aurora, Illinois, to BATS/Direct Edge exchange in Secaucus, New Jersey
(milliseconds)



Source: McKay Brothers

FT

Quantlab Financial, a trading group in Houston, [bought](https://www.ft.com/content/a6ac732e-0e4b-11e7-a88c-50ba212dce4d) high-speed trading assets from Teza Technologies last week, an early leader in the speed race that fell on [hard times](https://www.ft.com/content/04d67750-a16a-11e6-891e-abe238dee8e2). In the past month KCG disclosed it had received an [unsolicited takeover](https://www.ft.com/content/9c33f708-09c0-11e7-97d1-5e720a26771b) bid from rival Virtu Financial.

Teza was known to have some of the fastest technology in use at the Chicago Mercantile Exchange, a futures bourse that recently revamped its gateway to handle orders on a first-come, first-served basis.

Quantlab president Cameron Smith says that while speed is a “tie breaker” at exchanges, the opportunities reside in predicting markets through [quantitative models](http://lexicon.ft.com/Term?term=quant-fund). “To only have the speed

without prediction is not as valuable,” he adds.

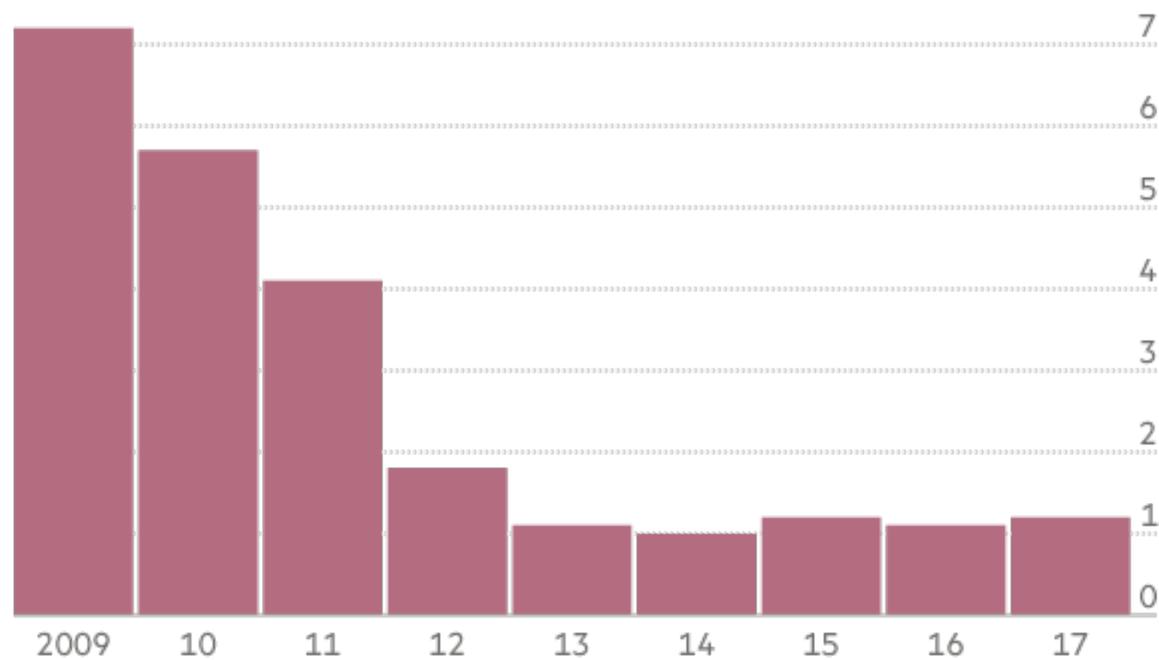
In the second case, KCG still has a strong position handling customer orders, which tends to be a business less focused on being the fastest. Richard Repetto, analyst at Sandler O’Neill, suspects “getting the infrastructure to access retail flow” was among Virtu’s motives in pursuing the company. KCG and Virtu declined to comment.

For all but the largest firms, “the industry is de-emphasising speed as their primary competitive advantage”, says Vikas Shah, an investment banker at Rosenblatt Securities in New York. Instead, they are seeking an edge by deploying “slightly longer-gestation” strategies that predict the market over the course of hours rather than just the next instant.

Eric Pritchett, chief executive of Potamus Trading, a high frequency market maker based in Boston, says the trend was to do “richer analysis to support trading decisions” and not just focus on speed between exchanges.

US HFT equity market maker revenues

\$bn



Source: Tabb Group

FT

In some markets the rules are also changing. Since regulators last year approved IEX, the institutional investor-backed stock exchange with a “[speed bump](https://www.ft.com/content/bc6bd4e4-e30c-11e6-9645-c9357a75844a)” (<https://www.ft.com/content/bc6bd4e4-e30c-11e6-9645-c9357a75844a>), others have followed. The New York Stock Exchange, Nasdaq and the Chicago Stock Exchange have been experimenting with ways to slow down trading to appeal to certain client types.

While speed still matters, more traders are sharing infrastructure instead of risking a massive investment on equipment that could soon become obsolete. For example, between CME in Illinois and stock exchange data centres in New Jersey they can rent bandwidth on a microwave route operated by McKay Brothers, which advertises time lags of 8 milliseconds per round trip.

On the Atlantic Ocean floor, ships operated by Seaborn Networks, a telecom company, are burying cable to offer the first direct fibre connection between New

Jersey and São Paulo, home of Brazil's [BM & F Bovespa \(https://www.ft.com/content/8dfd6016-fd64-11e5-b5f5-070dca6doaad\)](https://www.ft.com/content/8dfd6016-fd64-11e5-b5f5-070dca6doaad) exchange.

For traders, “erring on the side of making sure you’re always on the fastest route is out of an abundance of caution and a necessity in their business”, says Larry Schwartz, Seaborn chief executive.

Still, outsourcing does not come cheap. Using the fastest transatlantic cable costs about \$4m a year, while the best commercial microwave connection between Illinois and New Jersey is \$2m a year, says an industry executive.

Meanwhile, exchanges have also been [raising fees \(https://www.ft.com/content/785092ec-33d8-11e6-ad39-3fee5ffe5b5b\)](https://www.ft.com/content/785092ec-33d8-11e6-ad39-3fee5ffe5b5b) for market data and access, pressuring the bottom line for trading firms, who are also facing the challenge of low market volatility.

As Mr Haraburda says: “If all you’re using is HFT techniques in different venues, you are vulnerable.”

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