

In Defense of High Frequency Trading

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by John McDonald

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Washington recently put Wall Street back into its crosshairs when Representative Peter DeFazio (D-Ore.) introduced a bill to levy a 0.03 percent tax on transactions involving stocks, bonds and derivatives. His goal is to reduce “speculative financial trading” and to “curb near-instantaneous high-volume trades that create instability in the stock market and in our national economy.”¹ Democratic presidential candidate Hillary Clinton advocates taxing high-volume or High Frequency Trading (HFT). This market activity has been under scrutiny since the Great Recession, and especially since the “Flash Crash” of 2010; but, is high frequency trading really to blame for market crashes?



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What Is High Frequency Trading? High frequency trading uses high-speed market data and analytics to find small, short-term price differences signaling supply and demand opportunities. These price fluctuations are often the product of predictable behavioral or mechanical characteristics of financial markets. To receive market data as quickly as possible, stock brokers that specialize in electronic trading use advanced algorithms, on high-speed computer systems, in offices close to an exchange — such as the New York Stock Exchange.²

The algorithms allow computers to execute buy and sell orders electronically when a security’s price fluctuates. Usually these transactions are executed in microseconds, and the profit is just a cent or a fraction of a cent, per transaction. For example, a firm might buy a stock that is selling for \$20.00 on the NYSE, and simultaneously sell it on an exchange in Chicago where the price is \$20.01. The firms execute enough of these transactions to make hundreds of thousands of dollars per day. However, this type of trading is not an exotic activity; 90 percent of personal investors have access to high frequency trading, either directly or indirectly, through their broker.³

High frequency trading is not subject to changes in the market’s mood caused by political or economic events, such as Greece’s current fiscal situation or Brexit, because it works within the market using only microeconomic data — the behavior of individuals and firms. This fact is frequently forgotten when opponents of HFT claim it unfairly profits firms at the expense of personal or retail investors. Retail investors usually hold money for decades in diversified mutual funds that increase or decrease in step with the health of the economy. Retail investment strategies are long-term and based on aggregate economic conditions (macroeconomics), while HFT strategies are short-term and based on microeconomics.

Does High Frequency Trading Hurt the Market? Many blame the “Flash Crash” of 2010 — when the Dow Jones dropped 9 percent within minutes — on high frequency trading, claiming it created instability.⁴ The real cause of the abrupt downturn was the sale electronically of 75,000 shares of small futures contracts — called e-mini S&P futures contracts.

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(These are contracts to buy or sell the value of a stock index, such as Standard and Poor's 500, at a future date.) The price kept dropping as more sell orders were submitted. This, combined with market turmoil that day caused by political and economic uncertainty, led to the crash. Within 36 minutes, the market regained most of its lost ground, ending the day with a 3 percent loss. High frequency traders absorbed some of the initial sell pressure, but as the price continued to fall proceeded to sell the futures contracts, just like any human trader would do to reduce their losses. However, sudden downturns in the stock market are not exclusive to high frequency trading; in 1962, stocks plunged 9 percent in 12 minutes.⁵

Though high frequency traders focus on short-term gains, the benefits of their activity are long-term and widely felt because of their role as “market makers,” intermediaries between buyers and sellers who assume the risk of holding an asset until they find another buyer or seller. HFT has reduced trading costs from 7.6 cents per transaction in 2000 to 3.8 cents in 2012 by reducing bid-ask spreads — the difference between a seller's ask price and a buyer's bid price.⁶ This cost-reduction has improved market liquidity — the speed at which an asset or security can be bought or sold without affecting its price.

Because market makers are continually changing their ask and bid prices in response to supply and demand, buy and sell orders that are submitted are often cancelled and resubmitted at different prices. In fact, Hillary Clinton's proposed tax would target “excessive levels of order cancellations.”

The Effects of Fees on High Frequency Trading in Canada. In 2012, Canadian regulators imposed a fee on order submissions and cancellations to limit the impact of high frequency trading.⁷ As a result:

- High frequency traders reduced their order submissions by 30 percent, which increased bid-ask spreads 9 percent.
- This negatively affected retail and institutional investors alike because HFT accounted for a little over 70 percent of the “better-than” and “at-best” order submissions for highly liquid securities.
- After the fee, HF traders accounted for only around 4 percent of better-than and at-best order submissions.
- Finally, there was an 8 percent decrease in competitors for highly liquid securities.⁸

As with any other industry, high frequency traders compete with each other to fill orders. As a result of this competition, industry HFT profits have actually fallen from \$7.2 billion in 2009 to \$1.3 billion in 2014.⁹

Conclusion. High frequency trading has become a target for politicians, but there is no reason why it should be. It is best to leave it to the free market, not politicians playing on emotions, to determine the extent of high frequency trading activity and how much is “too much.”

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Notes

1. Representative Peter DeFazio, “Rep. Peter DeFazio Introduces Legislation to Curb Speculative Wall Street Trading and Bolster Main Street,” Press Release, July 13, 2016.
2. An algorithm is a set of steps followed by a computer in problem-solving applications.
3. Hal Scott, “Why U.S. Investors are better off today,” *Washington Times*, January 21, 2016.
4. U.S. Commodity Futures Trading Commission and the U.S. Securities and Exchange Commission, “Findings Regarding the Market Events of May 6, 2010,” Report of the Staffs of the CFTC and SEC to the Joint Advisory Committee on Emerging Regulatory Issues, September 30, 2010.
5. Charles M. Jones, “What do we know about high-frequency trading?” Columbia Business School Research Paper No. 13-11, March 20, 2013.
6. Holly A. Bell, “High-Frequency Trading: Do Regulators Need to Control this Tool of Informationally Efficient Markets?” *Cato Institute*, Policy Analysis No. 731, July 22, 2013.
7. Katya Malinova et al., “Taxing high frequency market making: Who pays the bill?” *Modern Markets Initiative*, June 14, 2016.
8. Liquid securities can be quickly converted into cash. “Better than” orders are those filled at prices higher (for sellers) or lower (for buyers) than the original order. “At-best” orders are those quickly filled at the current market price, but the buyer may pay more or the seller may receive less than the original order.
9. Larry Tabb, “No, Michael Lewis, the US Equities Market Is Not Rigged,” *Tabb Forum*, March 31, 2014.