Congress of the United States
Washington, DC 20515

January 18, 2013

The Honorable Elisse B. Walter
U.S. Securities and Exchange Commission
100 F St. NE
Washington, DC 20549

The Honorable Mary L. Schapiro
U.S. Securities and Exchange Commission
100 F St. NE
Washington, DC 20549

Dear Chairman Walter and Former Chairman Schapiro:

I write to you today regarding an issue that has been roiling the markets in recent years: high frequency trading. As you know, high frequency trading ("HFT") involves the use of algorithms in computers that automatically buy and sell securities at certain price levels at incredibly fast speeds. With a sufficiently sophisticated computer, HFT makes it possible for a trader to buy and then sell a stock within one millionth (1/1,000,000) of a second, thousands of times faster than a human can breathe or even think. HFT is increasingly dominating our markets. The Executive Director of Financial Stability at the Bank of England actually estimated in 2010 that HFT firms account for 70% of all trading volume in U.S. equities,[1] and there is reason to believe that HFT has only grown since then.

In the wake of the Flash Crash, the BATS IPO, and Knight Capital, commentators have increasingly suggested that high frequency trading is the reason our markets have been experiencing a level of volatility far in excess of historical norms. According to X. Frank Zhang, Associate Professor of Accounting at the Yale School of Management, high frequency trading actually exaggerated the volatility in the stock market in the wake of the summer 2011 debt ceiling dispute: "Events can move markets, but high-frequency trading increased the volatility in the overall market."[2]

HFT technology has very real and dangerous implications for the ordinary investor. Just last month, Joseph Mecane, Executive Vice President and Head of U.S. Equities, informed the Senate Banking Committee that "technology and the rules that govern the U.S. equity markets have resulted in the creation of a trading infrastructure primarily focused on speed and resulting complexity through which professional traders can identify and access liquidity – too often at the expense of retail investors and market integrity."[3] While some in the financial community appear to regard faster as inherently better,

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[1] Andrew G. Haldane, *Patience and Finance* (September 2, 2010) at
http://www.bankofengland.co.uk/publications/Documents/speeches/2010/speech445.pdf
[2] "High-Frequency Trading Increases Stock Volatility" (September 1, 2011) at
http://mba.yale.edu/news_events/CMS/Articles/7446.shtml
[3] Joseph Mecane, "Written Statement of Joseph Mecane," Hearing on "Computerized Trading Venues: What Should the Rules of the Road Be?" Senate Committee on Banking, Housing and Urban Affairs, Subcommittee on Securities, Insurance and Investment (December 18, 2012), at

the rise of HFT has established a bifurcation in the markets: extremely well-financed, sophisticated trading firms can trade make full use of light-speed HFT algorithms, while the ordinary investor day-trading his 401K remains at more terrestrial speeds. With trading volume down to half what it was before the financial crisis even with the rise of HFT,[4] there is a real risk that algorithmic trading is making investors hesitant to re-enter the equity markets because they fear that the entire game is rigged. This is a situation ripe for abuse, one that is liable to once again benefit the elites of Wall Street Finance at the expense of the ordinary American investor.

I believe high frequency trading is a clear and present danger to the stability and safety of our markets, and that its use should be curtailed immediately. As a result, I wanted to remind the Commission that the Congress has already given the Securities and Exchange Commission broad powers to limit or ban this practice.

While HFT in its current form is a relatively new phenomenon, earlier forms of computerized trading have been in use for over 25 years and have previously been shown to have the potential to contribute to excessive and artificial levels of volatility in our nation's equity securities markets. I held hearings on program trading back in July 1987 and warned the Commission prior to the October 19, 1987 stock market crash that such trading practices could "someday play an important role in a rapid, uncontrolled market decline."

Following the October 19, 1987 Crash, President Reagan established the Brady Commission to investigate the causes of the crash, an event now known as Black Monday. In its report, the Brady Commission concluded that automatic trading programs, or program trading, caused the crash by generating a large amount of sell orders without direct trader input. In my previous capacity as Chairman of the Subcommittee on Telecommunications and Finance of the House Committee on Energy and Commerce, I then authored the provisions of the Market Reform Act of 1990 which gave the Commission the authority to crack down on program trading in the wake of Black Monday.

In March 1989, I joined other House Members in introducing H.R. 1609, a package of reforms to increase the SEC's ability to police and protect the markets. When this legislation was ultimately passed as H.R. 3657, it included a section that gave the Commission authority "to prohibit or limit practices which result in extraordinary levels of volatility."[5]

> (i) Limitations on practices that affect market volatility. It shall be unlawful for any person, by the use of the mails or any means or instrumentality of interstate commerce or of any facility of any national securities exchange, to use or employ any act or practice in connection with the purchase or sale of any equity security in contravention of such rules or regulations as the Commission may adopt, consistent with the public interest, the protection of investors, and the maintenance of fair and orderly markets--
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> (1) to prescribe means reasonably designed to prevent manipulation of price levels of the equity securities market or a substantial segment thereof; and
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> (2) to prohibit or constrain, during periods of extraordinary market volatility, any trading practice in connection with the purchase or sale of equity securities that the Commission determines (A) has previously contributed significantly to extraordinary levels of volatility that have threatened the maintenance of fair and orderly markets; and (B) is reasonably certain to

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http://banking.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=f07e66cc-a248-41c6-9e4f-49ddaf887f18

[4] Nathaniel Popper, "Stock Trading Remains in a Slide After '08 Crisis," N.Y. Times. (May 6, 2012), at http://www.nytimes.com/2012/05/07/business/stock-trading-remains-in-a-slide-after-08-crisis.html?pagewanted=all&_r=0.

[5] Committee Report of the Energy & Commerce Committee for the 101st Congress at page 171

> engender such levels of volatility if not prohibited or constrained.
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> In adopting rules under paragraph (2), the Commission shall, consistent with the purposes of this subsection, minimize the impact on the normal operations of the market and a natural person's freedom to buy or sell any equity security.[6]

While that section was originally designed to give the Commission the ability to curtail program trading, it can also be used to restrict or ban HFT. If the Commission simply makes a finding that the markets are currently in a period of extraordinary market volatility and that HFT is reasonably certain to engender such levels of volatility, the Commission can immediately promulgate rules that restrict or eliminate the practice. Given that numerous commentators have already pointed out that the level of volatility in the markets is at historically high levels[7] and that HFT augments that volatility,[8] both of these findings could be made very easily.

While some persons claim that HFT may provide increased liquidity to financial markets, it also may be flushing investors out of the markets. Specifically, ordinary investors are increasingly citing HFT as evidence that markets are a "rigged" game where large firms with a high-speed super-computing terminal can always outperform ordinary investors with a laptop. I firmly believe that a technology that closes the markets off to ordinary investors is a technology that should be constrained. Just as we do not allow people to drive a Formula-One race car at 200 MPH on the Massachusetts Turnpike, we should not allow a few Wall Street firms to trade millions of times faster than the average 401K investor on the S&P 500.

I have tried to limit the ability of program traders to injure or destroy our equities markets for decades, and I am very concerned that this concept is now returning in an even more dangerous form. As I noted in a letter to the Commission in March 1989, "I am deeply concerned that aggressive forms of program trading, in combination with new trading strategies, may once again place significant strains on our financial markets' liquidity, raising the spectre of a possible replay of the events of October 19, 1987." I believe those words remain relevant today, and it would be prudent for the Commission to take steps to address the potential for HFT to contribute to excessive levels of volatility in our markets.

Given the evidence that HFT has already caused unnecessary volatility in our stock markets and could reasonably be expected to contribute to increased volatility in the future, I urge the Commission -- as it considers any future potential rulemaking on HFT -- to consider using its authority to adopt rules under Section 9i of the Exchange Act that limit the use HFT technology.

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[6] Securities Exchange Act of 1934, § 9(i), 15 U.S.C. § 78i(i)

[7] Whitney Kisling, "Volatility Surges in S&P 500 With Volume Lowest in Decade" (July 2, 2012) at http://www.bloomberg.com/news/2012-07-02/volatility-surging-in-s-p-500-with-volume-lowest-in-decade-1-.html ("Volatility in the Standard & Poor's 500 Index is returning to levels that drove valuations and stock volume down to rates not seen since at least 2003. . . . Investors whipsawed by volatility that reached twice the 50-year average in 2011 have pulled about $300 billion from mutual funds since the bull market began three years ago.")

[8] Frank Zhang, *High-Frequency Trading, Stock Volatility, and Price Discovery* (December 2010) at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1691679 ("I find that high-frequency trading is positively correlated with stock price volatility after controlling for firm fundamental volatility and other exogenous determinants of volatility. The positive correlation is stronger among the top 3,000 stocks in market capitalization and among stocks with high institutional holdings.")

I request that Chairman Walter respond to this letter by February 7, 2013.

Sincerely,

Edward J. Markey

Edward J. Markey
Member of Congress