

# THE INVISIBLE POWER OF MACHINES: REVISITING THE PROPOSED FLASH ORDER BAN IN THE WAKE OF THE FLASH CRASH

AUSTIN J. SANDLER<sup>1</sup>

## ABSTRACT

*Technological innovation continues to make trading and markets more efficient, generally benefitting market participants and the investing public. But flash trading, a practice that evolved from high-frequency trading, benefits only a select few sophisticated traders and institutions with the resources necessary to view and respond to flashed orders. This practice undermines the basic principles of fairness and transparency in securities regulation, exacerbates information asymmetries and harms investor confidence. This iBrief revisits the Securities and Exchange Commission's proposed ban on the controversial practice of "flash trading" and urges the Securities and Exchange Commission and the Commodity Futures Trading Commission to implement the ban across the securities and futures markets. Banning flash trading will not impact high-frequency trading or other advantageous innovative trading practices, and will benefit all market participants by making prices and liquidity more transparent. In the wake of the May 6, 2010 "flash crash" and the passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act, now is an opportune time for the Securities and Exchange Commission and Commodity Futures Trading Commission to implement the ban.*

## INTRODUCTION

¶1 Over the last twenty years, technological innovations in computerized securities transactions transformed the ways investors understand markets and make trades. Transactions in securities, futures, and other derivatives are increasingly moving away from physical exchanges and onto electronic communications networks (ECNs).<sup>2</sup> In 1998, the

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<sup>1</sup> J.D. and LL.M. (International and Comparative Law) candidate, 2011, Duke University School of Law. B.A., 2007, McGill University.

<sup>2</sup> The Securities and Exchange Commission has defined an ECN as "any electronic system that widely disseminates to third parties orders entered into it by an exchange market maker or over-the-counter market maker, and permits the Securities and Exchange Commission's Definition of ECNs, 17 C.F.R. § 1.3(a)(1)(ii), SEC. electronic system that widely disseminates to third parties orders entered into it

Securities and Exchange Commission (SEC) recognized and embraced the potential of these ECNs and other alternative trading systems (ATSS) by adopting the Regulation of Exchanges and Alternative Trading Systems (Regulation ATS).<sup>3</sup> Then-SEC Chairman Arthur Levitt's delivered a speech seven months prior to the adoption of Regulation ATS, expressing his belief that new trading technologies would have a transformative impact on financial markets.<sup>4</sup> Chairman Levitt's prediction proved true, and aspects of the technology-driven transformation of securities trading introduced new regulatory challenges and risks to the stability of financial markets.

There are specific risks and regulatory concerns associated with automated high-frequency computerized trading methods. The e

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by an exchange market maker or over-the-counter market maker, and permits such orders to be executed in whole or in part." DIV. OF MKT. REGULATION, SEC. & EXCH. COMM'N, SPECIAL STUDY: ELECTRONIC COMMUNICATION NETWORKS AND AFTER-HOURS TRADING (2000), available at <http://www.sec.gov/news/studies/ecnafter.htm>; see Jerry W. Markham & Daniel J. Harty, *For Whom the Bell Tolls: The Demise of Exchange Trading Floors and the Growth of ECNs*, 33 J. CORP. L. 865, 866 (2008) (describing the "amazing growth of the ECNs and their displacement of the traditional exchanges," and observing the changes in competition between exchanges and the regulatory challenges associated with this growth).

<sup>3</sup> Regulation of Exchanges and Alternative Trading Systems, Exchange Act Release No. 34-40760, 63 Fed. Reg. 70,844 (Dec. 22, 1998) (to be codified at 17 C.F.R. pts. 202, 240, 242, 249). As a background matter, ATSS are defined broadly in the Regulation as "any organization, association, person, group of persons, or system" that performs "functions commonly performed by a stock exchange." *Id.* at 70,847; see generally Mark Klock, *The SEC's New Regulation ATS: Placing the Myth of Market Fragmentation Ahead of Economic Theory and Evidence*, 51 FLA. L. REV. 753, 764-68 (1999) (providing a brief overview of Regulation ATS).

<sup>4</sup> Chairman Levitt stated that the purpose of his speech was "to address the developments both of technology and change affecting . . . markets." He began his remarks with the following paragraph:

We are at a unique moment in our markets' history—a point of passage between what they have been and what they will become. In the next few years, they will undergo a transformation like we have never witnessed before. And, it is these changes that will define the marketplace for the 21st century. We have an opportunity today that we may not have again in our lifetime—to realize the vision for a true national market system—one that embraces our future as much as it honors our past.

Arthur Levitt, Chairman, Sec. & Exch. Comm'n, Remarks at Columbia Law School: Dynamic Markets, Timeless Principles (Sept. 23, 1999), available at <http://www.columbia.edu/cu/law/levitt/speech.pdf>.

¶2 crash of May 6, 2010<sup>5</sup> serves as an unsettling reminder of the “invisible power of the machines,”<sup>6</sup> and of the need for greater SEC and Commodity Future Trading Commission (CFTC) scrutiny and oversight of automated high-frequency trading methods.

¶3 This iBrief proceeds in three parts. Part I examines the mechanics and supposed benefits of flash trades. Part II describes how flash trading exacerbates information and market access asymmetries, undermining core objectives of securities regulation, namely transparency, investor confidence, and protection against systemic risk.<sup>7</sup> The story of the May 6, 2010 flash crash illustrates these issues and how high-frequency trading methods can destabilize financial markets. Finally, Part III concludes that the SEC and CFTC must go beyond creating “circuit breakers” to effectively mitigate risks and asymmetries associated with high-frequency computerized trading and flash orders. A ban on flash trading will be an

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<sup>5</sup> During the afternoon of May 6, 2010, financial markets suddenly and sharply declined before quickly recovering. Initially, the extreme volatility was a mystery to observers, but officials and the financial press determined that trading activity by high-frequency traders using automated trading software overwhelmed exchanges and ECNs. *See, e.g.*, Nelson D. Schwartz, *Kansas Identified as Trader in Market Plunge*, N.Y. TIMES, May 15, 2010, at B1, available at <http://www.nytimes.com/2010/05/15/business/15trader.html?fta=y> (explaining that a rush of May 6 trading orders exceeded the capacity of the New York Stock Exchange and then “flooded electronic exchanges,” and that high volumes of rapid computerized trades overwhelmed the ability of computers and systems processing those trades to keep up with orders). The sequence of events on May 6 and some of its implications are discussed in Part II *infra*.

<sup>6</sup> Eric Rosenbaum, *‘Flash Crash’ Was Machines Run Amok: Poll*, THESTREET.COM, (May 16, 2010, 8:00 AM), <http://www.thestreet.com/story/10757582/1/flash-crash-was-machines-run-amok-poll.html>.

<sup>7</sup> Systemic risk became a policymaking and regulatory concern following the financial crisis of 2008, and is a central focus of the Dodd-Frank Act. Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376 (2010), available at <http://www.gpo.gov/fdsys/pkg/PLAW-111publ203/pdf/PLAW-111publ203.pdf>. The purpose of the Act is in part to ensure financial stability, and it charges two new offices—the Financial Stability Oversight Council and Office of Financial Research—with identifying and mitigating threats to financial stability, and systemic risk specifically. *Id.* at 1376, 1392–1420. For an accessible definition of systemic risk, *see* Steven L. Schwarcz, *Systemic Risk*, 97 GEO. L.J. 193, 198–200 (2008) (defining systemic risk as the risk of an economically harmful trigger event, such as a default or drop in prices, triggering institutional or market failures resulting from linkages between large financial institutions).

important first step, but the debate over the benefits and risks associated with emerging trading technologies promises to continue.<sup>8</sup>

## I. THE MECHANICS AND SUPPOSED BENEFITS OF FLASH TRADING

### A. *The Technology: Expensive, Secretive, and Lucrative*

¶4 Although the flash crash directed the glare of the media's attention onto high-frequency traders, their world remains obscure and secretive, and their methods highly-lucrative.<sup>9</sup> The technology behind high-frequency trading and flash trading is expensive, but the potential for considerable profits leads large financial institutions to make significant investments in proprietary software development.<sup>10</sup> These trading methods are obscure, the technology behind them is highly-sought after, their details are kept secret, and their implications for the market are uncertain.<sup>11</sup>

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<sup>8</sup> Discourse within agencies and in the media is ongoing as agencies consider appropriate regulatory approaches under the Dodd-Frank Act, which vests them with "vast new authorities." Scott D. O'Malia, Comm'r, Commodity Futures Trading Comm'n, Opening Statement of the 2010 Technology Advisory Committee (Oct. 12, 2010), available at <http://www.cftc.gov/pressroom/speechestestimony/omaliastatement101210.html> (opening another round of debate regarding possible regulatory responses to high frequency and algorithmic trading under the Dodd-Frank Act, and noting media and market participants' attention to the subject following the May 6 flash crash).

<sup>9</sup> See Charles Duhigg, *Stock Traders Find Speed Pays, in Milliseconds*, N.Y. TIMES, July 24, 2009, at A1, available at <http://www.nytimes.com/2009/07/24/business/24trading.html> (explaining how computerized high-frequency trading systems that are "so fast they can outsmart or outrun other investors, humans and computers alike" enjoy an advantage over other traders and investors, and that high-frequency traders generated an estimated \$21 billion in profits in 2008 from these systems alone).

<sup>10</sup> See Alex Berenson, *Arrest Over Software Illuminates a Secret of Wall St.*, N.Y. TIMES, Aug. 24, 2009, at A1, available at <http://www.nytimes.com/2009/08/24/business/24trading.html?fta=y> (telling the story of the arrest of a former Goldman Sachs software developer accused of bringing his work to another firm, and noting that profits from "highly competitive . . . ultrafast trading" have "led to a gold rush, with hedge funds and investment banks dangling million-dollar salaries at software engineers").

<sup>11</sup> One recent news article captures the concern surrounding this fast-emerging trading market and its secretiveness:

Little understood outside the securities industry, the business has suddenly become one of the most competitive and controversial on Wall Street. At its heart are computer programs that take years to develop and are treated as closely guarded secrets. . . . Defenders of the programs say they make trading more efficient.

### B. The Mechanics of Flash Trading

¶5 As individuals and institutions buy and sell securities, exchanges and ATSS are legally required to execute orders at the best publicly-quoted prices for buyers and sellers.<sup>12</sup> They fulfill this requirement by searching for market participants willing to trade with other exchanges or markets,<sup>13</sup> and are obligated under Regulation National Market System (Regulation NMS) and Regulation ATS to display that information.<sup>14</sup> Flash orders, however, are exempted from these regulations.<sup>15</sup>

¶6 Flash trading evolved from high-frequency computerized trading software. It is the controversial practice of high-frequency traders viewing other traders' orders and trading activity—during the brief window before those orders go through—and then trading or not trading based on that information.<sup>16</sup>

¶7 All flash orders share several basic features.<sup>17</sup> When exchanges or ATSS cannot identify a willing seller for a security at the best publicly-quoted price, they flash the order to a select group of its market

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Critics say they are . . . a tax on long-term investors and can . . . worsen market swings.

Berenson, *supra* note 10.

<sup>12</sup> 17 C.F.R. § 242.602 (2010); 17 C.F.R. § 242.301(b) (2010).

<sup>13</sup> Fact Sheet, Sec & Exch. Comm'n, Banning Marketable Flash Orders: Open Meeting of the Securities and Exchange Commission (Sept. 17, 2009), <http://www.sec.gov/news/press/2009/2009-201-factsheet.htm> [hereinafter BANNING MARKETABLE FLASH ORDERS].

<sup>14</sup> 17 C.F.R. § 242.602 (2010); 17 C.F.R. § 242.301(b) (2010).

<sup>15</sup> Regulation NMS exempts exchanges from displaying quotations for flash orders in paragraph (a)(1)(i)(A) of Rule 602. 17 C.F.R. § 242.602 (2010). The SEC has applied this exception to ATSS. *See* Elimination of Flash Order Exception from Rule 602 of Regulation NMS, 74 Fed. Reg. 48,632, 48,634 (proposed Sept. 18, 2009) (to be codified at 17 C.F.R. pt. 242), *available at* <http://www.sec.gov/rules/proposed/2009/34-60684fr.pdf> [hereinafter "Proposed Ban"] ("Consistent with the language in Rule 602 excepting exchanges from including flash orders in the consolidated quotation data, the Commission has not applied Rule 301 to include flash orders in the consolidated quotation data.").

<sup>16</sup> Scott Patterson, Kara Scannell, & Geoffrey Rogow, *Ban on Flash Orders Is Considered by SEC: Shapiro Sees Inequity While Exchanges Wrestle for Market Share in High-Speed Trading*, WALL ST. J., Aug. 5, 2009, at C1, *available at* <http://online.wsj.com/article/SB124940289965505053.html> ("In a flash order, a firm wishing to buy or sell a stock can elect to freeze the order on an exchange for as long as half a second. This move can have several effects, one of which concerns a system of rebates and fees on trading orders.").

<sup>17</sup> For a detailed description of the basic features of flash orders, *see* Proposed Ban, *supra* note 15, at 5–9.

participants—those equipped with the requisite high-speed technology—to seek out sellers who do *not* publicly display their sell price.<sup>18</sup> High-frequency traders can respond, “within a fraction of a second, . . . with their own order to execute against the flashed order.”<sup>19</sup> Market participants able to view these flashed orders can take advantage of possible price arbitrage opportunities or other financial benefits, including fees and rebates for using different exchanges or ATSS.<sup>20</sup>

¶8 Exchanges and ATSS make this trading and arbitraging method possible for the benefit of participants with the means to take advantage of these opportunities.<sup>21</sup> The practice may also provide broader benefits to financial markets.

### *C. The Supposed Benefits of Flash Trading*

¶9 Flash trading provides some benefits to markets, at least to those market participants able to engage in the practice. Flashed orders may create additional liquidity by attracting traders unwilling to display their trading interest.<sup>22</sup> Exchanges and ATSS can use flashing to increase the chances of executing a transaction that they will not be able to execute in the displayed quotations markets.<sup>23</sup> Flashing may enhance the ability of exchanges, albeit for a limited number of transactions, to facilitate trading “where they believe an order is less likely to receive a full execution if routed elsewhere.”<sup>24</sup> Proponents of flash orders also point to the fact that

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<sup>18</sup> BANNING MARKETABLE FLASH ORDERS, *supra* note 13. These market participants—ATSS that do not display quotations to the investing public—are known as “dark pools of liquidity,” and in 2009, the SEC estimated that roughly thirty dark pools exist, and that dark pool trading accounted for 7.2% of the total share volume in stocks trading in those pools. Fact Sheet, Sec. & Exch. Comm’n, Strengthening the Regulation of Dark Pools (Oct. 21, 2009), <http://www.sec.gov/news/press/2009/2009-223-fs.htm>.

<sup>19</sup> BANNING MARKETABLE FLASH ORDERS, *supra* note 13.

<sup>20</sup> *Id.*

<sup>21</sup> See, e.g., *Dark Pools, Flash Orders, High Frequency Trading, and Other Market Structure Issues: Hearing Before the Subcomm. on Secs., Ins., & Inv. of the S. Comm. on Banking, Hous. & Urban Affairs*, 111th Cong. 3 (2009) (statement of Frank Hathaway, Senior Vice President and Chief Economist, NASDAQ QMX), available at [http://banking.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore\\_id=7fea4a79-e829-44d6-831f-44c7e1640e4d](http://banking.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=7fea4a79-e829-44d6-831f-44c7e1640e4d) (describing NASDAQ’s former practice of offering flash orders).

<sup>22</sup> Proposed Ban, *supra* note 15, at 48,637.

<sup>23</sup> *Id.*

<sup>24</sup> *Id.*

competitive fees and rebates benefit traders, and incent them to submit flash orders in these scenarios.<sup>25</sup>

¶10 Flash orders may also benefit institutional investors. Intermediaries representing large financial institutions or institutional investors, often reluctant to reveal their trading interests and strategies, may nevertheless be “willing to step up on an order-by-order basis and provide liquidity to flash orders.”<sup>26</sup> The institutional investors benefit from their anonymity on the contra side of a flash order and from lower transaction costs, while the market benefits from the added liquidity.<sup>27</sup>

¶11 Flash trading offers benefits to some actors in the market. But flash trading’s lack of transparency, the information asymmetries it creates, and its impact on investor confidence outweigh these benefits.

## II. THE FLASH CRASH: AN UNSETTLING REMINDER THAT HIGH-FREQUENCY TRADING CAN DESTABILIZE MARKETS, UNDERMINE SECURITIES REGULATION PRINCIPLES, AND DAMAGE INVESTOR CONFIDENCE

### A. The Flash Crash

¶12 The May 6, 2010 “flash crash” is a recent and illustrative example of the potential risks to financial markets posed by high-frequency computerized trading.<sup>28</sup> The press termed the event the “flash crash” for its suddenness, but also because of the catchy name’s connection to high-frequency trading, including flash trades and other high-tech, ultrafast computerized trading methods.<sup>29</sup>

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<sup>25</sup> *Id.* (“[M]any markets that display quotations charge fees . . . . Flash orders may be executed through the flash process for lower fees . . . . Indeed, some markets have offered rebates on orders that are executed during a flash, so that the order, rather than paying a fee, will earn a rebate.”)

<sup>26</sup> *Id.* at 48,638.

<sup>27</sup> *Id.*

<sup>28</sup> For an overview of the sudden and dramatic plunge of the stock market on May 6, 2010 and its rapid recovery, *see generally* COMMODITY FUTURES TRADING COMM’N & SEC. & EXCH. COMM’N, PRELIMINARY FINDINGS REGARDING THE MARKET EVENTS OF MAY 6, 2010 (2010), *available at* <http://www.sec.gov/sec-cftc-prelimreport.pdf> [hereinafter PRELIMINARY FINDINGS].

<sup>29</sup> *See* Rosenbaum, *supra* note 6 (summarizing different theories on the causes of the May 6 market irregularities). To be clear, not all high-frequency trading involves flash orders. Flash trading is a high-frequency trading method, and it makes up only “a small fraction of high-speed transactions,” although “they have drawn the most criticism from investors and traders.” Edgar Ortega & Jesse Westbrook, *SEC to Ban Flash Trades of U.S. Stocks, Schumer Says*,



¶13 Though not triggered by flash trading, the crash is a potent reminder of the importance of price transparency in markets, and of the fact that safeguarding investor confidence is as important as safeguarding the stability of financial markets. And although officials from the SEC and CFTC acknowledged that their agencies “had not been able to pinpoint the cause of the sharp market decline” on May 6,<sup>30</sup> the agencies blamed “heavy reliance by investors on automated orders to sell . . . once stock prices had declined a certain amount,” along with a wave of automated short selling.<sup>31</sup>

¶14 The secretive nature of high-frequency trading added to the mystery of the crash for the general public as for the agencies. The lack of trading transparency in the world of high-frequency trading obscured not only the causes of the market irregularities, but also hindered authorities’ investigation of the event. Problematically, traders and institutions linked to the flash crash by their high-volume transactions hid behind their “trading strategies,” with one mutual fund under investigation refusing to cooperate on the grounds that, by doing so, it was protecting its proprietary trading methods and its investors.<sup>32</sup> Months later, while government officials still struggled to explain the exact cause of the flash crash,<sup>33</sup> the practices of high-frequency traders—whose trading activity comprises “40 to 70 percent of all trading on every stock market in the country”—came under heightened government and media scrutiny.<sup>34</sup>

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BLOOMBERG.COM, Aug. 4, 2009,

[http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a\\_PAIU9jvWWA](http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a_PAIU9jvWWA).

<sup>30</sup> Edward Wyatt & Graham Bowley, *After Crash, Trial Plan for S.&P.*, N.Y. TIMES, May 19, 2010, at B1, available at

<http://www.nytimes.com/2010/05/19/business/19crash.html?hp>.

<sup>31</sup> *Id.*

<sup>32</sup> Eric Rosenbaum, *New ‘Flash Crash’ Theory: Report*, THESTREET.COM, (May 14, 2010, 3:27 PM), <http://www.thestreet.com/story/10757345/1/new-flash-crash-theory-report.html>.

<sup>33</sup> See, e.g., Graham Bowley, *Stock Swing Still Baffles, Ominously*, N.Y. TIMES, Aug. 23, 2010, at B1, available at

<http://www.nytimes.com/2010/08/23/business/23flash.html> (discussing speculation and theories as to the cause of the May 6 price swing, including the possibility of improper or manipulative activity; the conspiracy theory “that shadowy computer masterminds were trying to disrupt the nation’s stock trading;” that traders were “testing their high-speed computers, perhaps to see how rivals would react;” or “that the computers produced so much data so quickly that exchanges simply could not cope with the onslaught”).

<sup>34</sup> Julie Creswell, *Speedy New Titans of Trading Make Waves Far From Wall St.*, N.Y. TIMES, May 17, 2010, at A1, available at

<http://www.nytimes.com/2010/05/17/business/17trade.html?hp>.



¶15 On September 30, 2010, the SEC and CFTC published a joint report,<sup>35</sup> which concluded that an algorithmic trading program triggered a massive automated futures sell-off by a large institutional investor. The effect of the sell-off on the market was compounded by the computerized responses of high-frequency traders across futures and securities markets.<sup>36</sup> The findings in the report represent an opportunity for the SEC and CFTC to assess and mitigate the risks and asymmetries enabled by high-speed trading technologies across markets, and an opportunity to revisit the SEC's proposed ban on flash orders. Meetings, hearings, and media discourse on the subject continue.<sup>37</sup>

## *B. How Flash Trading Undermines Basic Principles of Securities Regulation*

### *1. Remembering Market Manipulation and Lack of Trading Transparency in the 1920s and 1930s*

¶16 Cutting-edge technologies and current trading practices benefitting the few powerful institutions able to afford them, at the expense of the

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<sup>35</sup> COMMODITY FUTURES TRADING COMM'N & SEC. & EXCH. COMM'N, FINDINGS REGARDING THE MARKET EVENTS OF MAY 6, 2010: REPORT OF THE STAFFS OF THE CFTC AND SEC ON THE JOINT ADVISORY COMMITTEE ON EMERGING REGULATORY ISSUES (2010), available at <http://www.sec.gov/news/studies/2010/marketevents-report.pdf> [hereinafter FINDINGS].

<sup>36</sup> *Id.* at 1–2, 13–16. In just twenty minutes, the fund's program sold 75,000 futures contracts, totaling \$1.4 billion in value, and even accelerated its selling in response to plunging prices resulting from the sell-off and from trading activity triggered by the sell-off. Graham Bowley, *Lone Sale of \$4.1 Billion in Contracts Led to 'Flash Crash' in May*, N.Y. TIMES, Oct. 2, 2010, at B1, available at <http://www.nytimes.com/2010/10/02/business/02flash.html>.

<sup>37</sup> For example, on October 12, 2010, the CFTC held a Technology Advisory Committee meeting to address, in part, the “new challenges” posed by “uses of technology, such as algorithmic and high-frequency trading, co-location, and electronic trading facilities.” Gary Gensler, Chairman, Commodity Futures Trading Comm'n, Opening Statement Before the Technology Advisory Committee (Oct. 12, 2010), available at <http://www.cftc.gov/pressroom/speechestestimony/genslerstatement101210.html>. Popular news and television shows also address high-frequency trading and flash trading. See, e.g., *60 Minutes: The Speed Traders* (CBS television broadcast, Oct. 10, 2010), available at <http://www.cbsnews.com/video/watch/?id=6945451n>; *The Daily Show with Jon Stewart: Cash Cow – High-Frequency Trading* (Sept. 30, 2009), available at <http://www.thedailyshow.com/watch/wed-september-30-2009/cash-cow---high-frequency-trading> (taking a humorous, albeit simplified, view of high-frequency trading and the perceived information asymmetries created by the practice).

investing public and the stability of financial markets, recall securities trading practices of the 1920s and 30s. Some of these then-unregulated practices included “pooling” agreements,<sup>38</sup> the use of shell companies to move and hide assets to limit shareholder rights and influence,<sup>39</sup> the use of affiliated companies to short a parent company’s stock,<sup>40</sup> and the practice of issuing stock at different prices to different investors, some receiving securities at favorably low prices compared to the higher-priced securities available to the general investing public.<sup>41</sup> These practices were obscure for years and conducted behind closed doors, but government investigations, public outrage, and intensified scrutiny by the press helped to pave the way for the Securities Exchange Act of 1934, which sought to extinguish such abuses in secondary markets.<sup>42</sup> This iBrief suggests there is a similar

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<sup>38</sup> “Pooling” operations consisted of large individual and institutional investors collaborating to buy large amounts of a given security, promote the security through advertisements to the investing public (thereby artificially inflating the price), only to then simultaneously sell soon after, reaping large profits while collapsing the market price of the stock. CHARLES R. GEISST, *WALL STREET: A HISTORY FROM ITS BEGINNINGS TO THE FALL OF ENRON 182–83* (2004).

<sup>39</sup> See JOEL SELIGMAN, *THE TRANSFORMATION OF WALL STREET: A HISTORY OF THE SECURITIES AND EXCHANGE COMMISSION AND MODERN CORPORATE FINANCE* 25–26 (3d ed. 2003) (explaining First National Bank’s issuance of nonvoting shares of affiliated corporations with sale restrictions printed on the back of the certificates); see also Frank Partnoy, Essay, *Historical Perspectives on the Financial Crisis: Ivan Krueger, The Credit-Rating Agencies, and Two Theories about the Function, and Dysfunction, of Markets*, 26 *YALE J. ON REG.* 431, 433–34 (telling the story of the infamous Ivan Krueger and his use of off-shore subsidiaries, balance sheet manipulations, and asset transfers to conceal his liabilities from the investing public and auditors, and then comparing Krueger’s use of innovative structures to the complex transactions in modern financial markets that use similar subsidiary entities and off-balance sheet transactions to disguise or conceal risks or financial liabilities).

<sup>40</sup> See SELIGMAN, *supra* note 39, at 78 (describing the “stunning revelation[]” that Chase National Bank had formed and orchestrated the activities of six separate, private corporations, including one corporation that earned Chase National Bank millions of dollars in profit by short-selling Chase National Bank’s stock—from the inside of the Bank’s building—during the 1929 stock market crash).

<sup>41</sup> See GEISST, *supra* note 38, at 224–25 (explaining banks’ practices in the 1920s and 1930s of maintaining “preferred lists” and charging lower fees to special customers and public officials).

<sup>42</sup> G. Wright Hoffman, writing in 1935, described how hearings revealing these trading practices showed the investing public that powerful institutions were able to trade based on insider knowledge. The environment of information asymmetry necessitated the passage of legislative reforms. “As the story unfolded it became increasingly evident that . . . ‘insiders’ were thriving upon a body of facts quite different from those offered for public consumption. At the

confluence of practices in flash trading today, and urges the SEC and CFTC to use today's regulatory momentum to reaffirm the original principles behind the 1934 landmark legislation.

¶17 The Exchange Act created the SEC to carry out and enforce the Act's disclosure principles, protecting investors by bringing transparency to financial markets and by limiting information asymmetries.<sup>43</sup> The flash crash revealed not only how new trading methods can destabilize markets and damage investor confidence, but also how they erode the securities regulation principles of fairness and transparency. The regulatory answers to challenges presented by flash trading must reinforce these principles.

## *2. Flash Trading Threatens Basic Regulatory Principles*

¶18 Flash trading undermines basic principles of fairness and transparency in markets by creating a "two-tiered" information market that conceals prices and price disparities from the public. The SEC's flash trading ban proposal articulates the agency's concerns about the manipulation of these market indicators:

The Commission . . . is concerned that flash orders may create a two-tiered market in which the public does not have access . . . to information about the best available prices for listed securities. A flash order generally is displayed at a marketable price that will be better than the best displayed price for the security in the consolidated quotation data. . . . Yet the public does not receive this flashed order information in the consolidated quotation data. Instead, only those market participants that receive a market's individual data feed have access to the improved price information.<sup>44</sup>

¶19 One consequence of allowing flash trading to remain excepted from the display requirements of Regulation NMS is that the practice will continue to exacerbate information asymmetries and price disparities between one select group, namely high-frequency traders taking advantage of flash orders, and the rest of the investing community lacking the technology to view those orders.

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height of this exposure a new administration came into power committed to reform. The Securities Exchange Act is one of several designed to accomplish this purpose." Wright Hoffman, *Securities Exchange Act of 1934*, in WALL STREET AND THE SECURITY MARKETS 700, 701 (Vincent P. Carosso & Robert Sobel eds., Arno Press reprint ed. 1975) (1935).

<sup>43</sup> Securities Exchange Act of 1934 ch. 404, 48 Stat. 881 (codified as amended at 15 U.S.C. §§ 78a–78lll) targeted exchanges for the purposes of preventing "inequitable and unfair practices on . . . exchanges and markets."

<sup>44</sup> Proposed Ban, *supra* note 15, at 48,636.

¶20 In addition, market participants with the most advanced technology can take advantage of flashed orders before those orders can be viewed and filled elsewhere, using that information not to fulfill the order, but rather to execute trades elsewhere based on such information.<sup>45</sup> This exclusive “sneak peek at market activity”<sup>46</sup> is another clear example of an “inequitable and unfair”<sup>47</sup> practice permitted under the Regulation NMS exception for flash orders.

¶21 Finally, the practice of flash trading threatens to undermine investor confidence, a “hallmark of the federal securities laws for the last 75 years.”<sup>48</sup> As the SEC noted in its ban proposal, flash trading “may give professional short-term traders undue advantages without creating sufficient corollary benefits to long-term investors.”<sup>49</sup> This disparity threatens to “damage . . . public confidence in . . . markets.”<sup>50</sup>

¶22 Flash trading undermines fairness, transparency, and investor confidence in financial markets. The negative aspects outweigh any supposed benefits it provides.<sup>51</sup>

### III. CIRCUIT BREAKERS ARE NOT ENOUGH: FAIRNESS, TRANSPARENCY, AND INVESTOR CONFIDENCE DEMAND A BAN OF FLASH ORDERS

¶23 The SEC and CFTC are currently testing “circuit breaker” regulatory responses as a way to prevent recurrences of the price volatility and automated mass sell-offs that occurred on May 6.<sup>52</sup> The SEC asserts

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<sup>45</sup> *See id.* at 48,637 (“[M]arket participants with the fastest systems are able to react to information in a shorter time frame than the length of the flash order exposures. As a result, such a participant would be capable of receiving a flashed order and reacting to it before the flashed order . . . could be executed elsewhere.”).

<sup>46</sup> Patterson, Scannell, & Rogow, *supra* note 16. *See also* Jacob Bunge, *US Regulators Seen Moving To Ban Dark Flash Orders Soon*, MARKETWATCH.COM (July 28, 2009), <http://www.marketwatch.com/story/us-regulators-seen-moving-to-ban-dark-flash-orders-soon-2009-07-28> (Noting that flash orders enable the fastest high-frequency traders to “see how the market reacts to a flashed order and then place equities bets accordingly.”).

<sup>47</sup> Securities Exchange Act of 1934 ch. 404.

<sup>48</sup> Proposed Ban, *supra* note 15, at 48,638.

<sup>49</sup> *Id.*

<sup>50</sup> *Id.*

<sup>51</sup> *See id.* (“[T]he Commission preliminarily believes that the benefits of flash orders for some market participants do not justify their costs to other market participants, the national market system, and the public interest.”).

<sup>52</sup> *See generally* Press Release, Sec. & Exch. Comm’n, SEC to Publish for Public Comment Stock-by-Stock Circuit Breaker Rule Proposals (May 18, 2010), available at <http://www.sec.gov/news/press/2010/2010-80.htm>. *See also*

that circuit breakers will “promote investor confidence” by assuring investors that “an individual stock . . . under stress” will not plunge below a certain price in a given day.<sup>53</sup> Reducing systemic risk by preventing wild price fluctuations is a critical starting point, but mechanisms that merely stop trading at signs of volatility or irregular trading patterns do not address the transparency, fairness, and investor confidence issues created by high-frequency trading activities in general, and by flash orders in particular.

### *A. Circuit Breakers: Their Functions and Limitations*

#### *1. The Mechanics of Circuit Breakers*

¶24 The SEC adopted an accelerated pilot program for circuit breakers in the wake of the flash crash.<sup>54</sup> The circuit breakers allowed exchanges and markets to initiate five-minute trading pauses for individual securities “if the transaction price of the security move[d] ten percent or more from a price in the preceding five-minute period.”<sup>55</sup> The listing exchange or market that initiated the pause then immediately notified other exchanges and market participants of the pause.<sup>56</sup> After receiving notice, the other exchanges and participants would likewise pause trading of that security in their markets.<sup>57</sup> Following the five-minute pause, the market that originated the pause may either resume trading in the security, or prolong the pause for an additional five minutes.<sup>58</sup>

¶25 After launching the accelerated pilot program to apply only to a select group of securities,<sup>59</sup> the SEC, based on comments from and in collaboration with exchanges and market participants, then expanded the

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Edward Wyatt & Graham Bowley, *New Rules Proposed for S.&P. 500 Stocks*, N.Y. TIMES, May 19, 2010, at B1, available at <http://www.nytimes.com/2010/05/19/business/19crash.html?hp> (describing how proposed circuit breaker rules will pause trading in stocks for predetermined amounts of time if stock prices rise or fall by 10 percent or more in a five-minute period).

<sup>53</sup> PRELIMINARY FINDINGS, *supra* note 28, at 77.

<sup>54</sup> Order Granting Accelerated Approval to Proposed Rule Changes Relating to Trading Pauses Due to Extraordinary Market Volatility, 75 Fed. Reg. 34,186 (proposed June 10, 2010), available at <http://www.gpo.gov/fdsys/pkg/FR-2010-06-16/pdf/2010-14435.pdf> [hereinafter Order Granting Accelerated Approval]. See also Press Release, Sec. & Exch. Comm’n, SEC Approves New Stock-by-Stock Circuit Breaker Rules (June 10, 2010), available at <http://www.sec.gov/news/press/2010/2010-98.htm>.

<sup>55</sup> Order Granting Accelerated Approval, *supra* note 54, at 34,187.

<sup>56</sup> *Id.*

<sup>57</sup> *Id.*

<sup>58</sup> *Id.*

<sup>59</sup> *Id.*

circuit breaker program in September 2010.<sup>60</sup> The proposal and pilot program enjoyed broad support from exchanges, markets, and institutional investors.<sup>61</sup> Sudden fluctuations in prices of specific stocks have already triggered the circuit breakers, demonstrating their effectiveness as a response to extreme price irregularities.<sup>62</sup> The program will soon apply across all U.S. securities and futures exchanges and markets.<sup>63</sup>

## 2. *Circuit Breakers Mitigate Systemic Risk, But Fail to Address Transparency and Fairness*

¶26 The expansion of the circuit breaker pilot program reflects the SEC's and market participants' confidence in its effectiveness. But the circuit breakers respond only to extreme price volatility, providing markets with the opportunity to assess irregular prices before sell-offs and other responses can recreate events like the flash crash.<sup>64</sup> The SEC recently suggested that circuit breakers will also improve investor confidence in markets,<sup>65</sup> but only insofar as they bring stability to stock prices. They do not address the fairness and transparency challenges posed by high-frequency trading, and by flash trading in particular. Therefore, the SEC, together with the CFTC, should act with the same decisiveness with respect to flash orders as it did in its implementation of circuit breakers.

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<sup>60</sup> SEC. & EXCH. COMM'N, INVESTOR BULLETIN: NEW STOCK-BY-STOCK CIRCUIT BREAKERS (2010), available at <http://www.sec.gov/investor/alerts/circuitbreakers.htm>.

<sup>61</sup> See Order Granting Accelerated Approval, *supra* note 54, at 34,187–88 (describing comment letters received from market participants as “generally supportive,” with some expressing concerns); Graham Bowley, *Circuit Breaker Kicks In, Stopping Trades of Citigroup*, N.Y. TIMES, June 30, 2010, at B1, available at [http://www.nytimes.com/2010/06/30/business/30circuit.html?\\_r=1&ref=high\\_frequency\\_algorithmic\\_trading](http://www.nytimes.com/2010/06/30/business/30circuit.html?_r=1&ref=high_frequency_algorithmic_trading).

<sup>62</sup> See, e.g., Bowley, *supra* note 61 (“Wall Street analysts said that the halting of Citigroup's shares on Tuesday highlighted the effectiveness of the mechanisms being tested to prevent disruptive movements in share prices.”).

<sup>63</sup> *Id.*

<sup>64</sup> See Order Granting Accelerated Approval, *supra* note 54, at 34,187 (focusing on “price volatility” and quoting institutional investors' comments reinforcing the stabilizing effect of trading pauses).

<sup>65</sup> Press Release, Sec. & Exch. Comm'n, SEC Approves Rules Expanding Stock-by-Stock Circuit Breakers and Clarifying Process for Breaking Erroneous Trades (Sept. 10, 2010), available at <http://www.sec.gov/news/press/2010/2010-167.htm> (quoting Mary L. Schapiro, Chairman, Sec. & Exch. Comm'n, who noted that “[t]hese circuit breakers . . . will help our markets retain the confidence of investors and companies . . .”).

*B. The Next Step: Banning Flash Trading and Continuing the Debate*

¶27 In its proposed ban of flash orders, the SEC’s “preliminary” conclusion was that “the benefits of flash orders for some market participants do not justify their costs to other market participants, the national market system, and the public interest.”<sup>66</sup> The SEC should adopt the proposed ban on flash trading decisively and urgently, as it did when implementing the circuit breaker pilot program.<sup>67</sup>

¶28 In addition to the modest first step of developing and implementing circuit breaker protections, the SEC should establish an unambiguous ban on computerized flash trading of securities and futures contracts,<sup>68</sup> a measure contemplated in 2009<sup>69</sup> and revisited in the wake of the May 6 flash crash.<sup>70</sup> A ban across all exchanges and trading platforms should prohibit high-frequency traders from viewing other traders’ orders, and should improve price transparency by removing the flash order exception in Regulation NMS. Continued collaboration between the SEC and CFTC is needed as history has revealed that market irregularities could arise first in the futures market and spread to the securities market, and vice versa.<sup>71</sup>

¶29 Although select institutions benefit from flash trading, the practice provides minimal benefits to the general investing public. Institutions with the resources to execute flash trades benefit from an obvious informational advantage, but the practice does not promote or even involve efficient markets, self-disciplining markets, or other benefits such as price discovery or market-wide liquidity.<sup>72</sup> Although “most major U.S. stock platforms” currently use dark orders to remain competitive internationally, many have stated that “they would welcome the end of the ‘flash era.’”<sup>73</sup> Indeed,

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<sup>66</sup> Proposed Ban, *supra* note 15, at 48,638.

<sup>67</sup> See Order Granting Accelerated Approval, *supra* note 54, at 34,187 (approving the circuit breaker pilot “on an accelerated basis,” and recognizing “the importance of moving quickly to implement appropriate steps that could help limit potential harm from extreme price volatility.”).

<sup>68</sup> A debate is ongoing as to whether a ban on flash orders for options would be desirable. This controversy is outside the scope of this iBrief, which argues that a ban should apply at least across futures and securities markets.

<sup>69</sup> Patterson, Scannell, & Rogow, *supra* note 16, at C1.

<sup>70</sup> See PRELIMINARY FINDINGS, *supra* note 28, at 77 (mentioning proposals to “prohibit flash orders and . . . increase the transparency of ‘dark’ pools of liquidity”).

<sup>71</sup> *Id.* at 74.

<sup>72</sup> In fact, the opposite may be true. The SEC and CFTC determined that “the interaction between automated execution programs and algorithmic trading strategies can quickly erode liquidity and result in disorderly markets,” thereby “lead[ing] to the breakdown of a fair and orderly price-discovery process.” See FINDINGS, *supra* note 35, at 6.

<sup>73</sup> Bunge, *supra* note 46.



“[e]ven some of the firms and companies that use flash orders as part of their operations have expressed serious concerns about the practice.”<sup>74</sup>

¶30 Institutional investors with the resources and the software necessary to complete flash orders do not trade more intelligently than smaller institutions or individuals when they engage in flash trading. They do not trade on superior analysis. They simply trade faster, and do so by reacting to trades placed but not yet executed by other investors. Thus, they respond to information to which only a select group has access. This is fundamentally inconsistent with the founding securities regulation principles of fairness and transparency in markets. It also reinforces the public perception that a select group of institutions benefits from more precise information than the general public, a perception that undermines investor confidence.

¶31 Banning flash trading and conducting additional research for more effective oversight of high-frequency trading practices will, in conjunction with the implementation of effective circuit breaker mechanisms, provide the benefits of fairness, transparency, price stability, and greater investor confidence.<sup>75</sup> Even proponents and users of flash orders acknowledge that banning the practice will not remove the benefits provided to the market by dark pools or high-frequency trading in general, and that a ban will not be detrimental to their profits or operations.<sup>76</sup>

¶32 Systemic risk was a focus of the financial regulatory reform debate in 2008 and 2009, but it took the May 6 flash crash to spur policymakers to focus on the connection between rapid, automated trading technologies and systemic risk.<sup>77</sup> Circuit breakers are a sensible response to that specific risk, but fail to address the other core regulatory challenges posed by flash trading. With a proposed ban ready for implementation, industry and political support,<sup>78</sup> and ongoing collaborative efforts with the CFTC, the

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<sup>74</sup> *Id.*

<sup>75</sup> This conclusion is consistent with the stated purpose of the proposed ban. *See id.* at 48,641 (“The proposal is intended to prevent a two-tiered market in which the public does not have access . . . to information about the best available prices for listed securities, . . . and to help promote public confidence in the fairness of the listed securities markets.”).

<sup>76</sup> *See* Bunge, *supra* note 46 (noting that officials from BATS Exchange and Direct Edge, two leading exchanges offering flash orders, expressed confidence that a ban would not impact their overall businesses).

<sup>77</sup> *See e.g.*, Graham Bowley & Edward Wyatt, *Wall St. Plunge Suggests Flaws in Fast Trading*, N.Y. TIMES, May 9, 2010, at A1 (quoting Senator Christopher Dodd’s observation that unregulated flash trading raises systemic risk issues and his call for market-wide circuit breakers).

<sup>78</sup> Well before the flash crash, policymakers called for bans to flash orders. *See, e.g.*, Whitney Kisling, *Senator Urges ‘Immediate’ SEC Action on High-Frequency Trading*, BLOOMBERG.COM, Nov. 20, 2009,

SEC should aggressively move forward with its proposed ban by eliminating the exception in Regulation NMS for flash orders.

### CONCLUSION

¶33 Computers responding to public information faster than an individual responds is neither new nor inherently wrong. The market incentivizes and rewards innovation, including privately-developed and -owned proprietary technology and the resourcefulness of market participants. Greater transactional efficiency and faster responses to market information generally support the SEC's statutory objectives of efficiency and capital formation.<sup>79</sup> Non-institutional investors, far from being harmed or disadvantaged, ordinarily benefit from competitive short-term trading.<sup>80</sup> But the asymmetries and lack of transparency of flash trading is an example of powerful machines invisibly eroding fair and transparent competition in financial markets.

¶34 Tensions between financial innovation and the stability of financial markets dominated the financial regulatory reform debate, which ultimately led to the most significant reforms by lawmakers since the New Deal.<sup>81</sup> High-frequency trading generally, and flash trading in particular, provide a

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<http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aO8DoToalTO8> (describing letters from U.S. Senators Ted Kaufman and Charles Schumer to the SEC urging the Commission to take immediate action to ban flash orders).

<sup>79</sup> “The mission of the U.S. Securities and Exchange Commission is to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation.” SEC. & EXCH. COMM’N, *THE INVESTOR’S ADVOCATE: HOW THE SEC PROTECTS INVESTORS, MAINTAINS MARKET INTEGRITY, AND FACILITATES CAPITAL FORMATION*, available at <http://www.sec.gov/about/whatwedo.shtml> (last visited Oct. 5, 2010). See 15 U.S.C. § 78c(f) (2006) (requiring the agency to “consider, in addition to the protection of investors, whether the action will promote efficiency, competition, and capital formation.”). Congress requires the agency to “consider, in addition to the protection of investors, . . . efficiency, competition, and capital formation.” 15 U.S.C. § 78c (2006).

<sup>80</sup> [M]any professional short-term traders devote substantial resources to develop the systems and expertise to trade successfully. . . . This competition among professional short-term traders can greatly benefit long-term investors if it leads to better execution quality (such as narrower spreads and greater liquidity) when investors enter the market to establish or liquidate their positions in a security.

Proposed Ban, *supra* note 15, at 48,638.

<sup>81</sup> See Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. 111-203, 124 Stat. 1376 (2010), available at <http://www.gpo.gov/fdsys/pkg/PLAW-111publ203/pdf/PLAW-111publ203.pdf>. Transparency in the financial system is one of the principal objectives of the legislation. *Id.* at 1376.

clear example of this tension, but until the May 6 flash crash, policymakers, regulators, and the financial press did not publicly identify these trading methods and technologies as a focus of the regulatory reform conversation.

¶35 The surprise and confusion surrounding the irregularity of financial markets after the flash crash grabbed the attention of market participants, public officials, and the press. The successful circuit breaker pilot program was an important first step in preventing recurrences of the flash crash, but it must be complemented by a ban on flash orders. Such a ban will not impede innovation or the vast majority of high-frequency trading, but will ensure that high-tech trading does not undermine fairness, transparency, or investor confidence. Perhaps the flash crash triggered just the kind of urgent regulatory intervention, bipartisan political will, and media attention necessary for policymakers and regulators to carefully examine and meaningfully regulate the new and powerful trading technologies that promise to shape the future of trading in financial markets.