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A Look Back at the Flash Crash and Regulatory Initiatives

By Roberta S. Karmel
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Over five years ago, the market events of May 6, 2010, commonly referred to as the "Flash-Crash," were a case study in extreme stock market volatility. On that day at around 2:40 p.m., when U.S. stocks were already down 5 per cent, the market began to plummet.[1] Shares in Procter & Gamble fell 37 per cent; shares of Accenture slid from $40 a share to trade at one cent. At one point, the Dow Jones average was down 998.50 points—its biggest intraday point drop ever—but bounced back to close down 347.80 points, or 3.2 percent.[2]

Although it took the Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC) over four months to analyze the causes of the Flash Crash and to issue a report of their findings (SEC-CFTC Report),[3] the report made no mention of any actual or suspected manipulative activity as a possible cause of the Flash Crash. Financial regulators did, however, suggest that "stub quotes," or placeholder prices, which often deviate from an actual market price, could have been a problem during the flash crash because some trades were executed unintentionally.[4]

The SEC-CFTC Report blamed the plunge in stock market prices on a sell program of 75,000 E-Mini 500 S&P futures contracts (valued at approximately $4.1 billion) as a hedge to an existing equity position by a fundamental trader.[5] This explanation was not accepted by everyone, however, and failed to explain other serious incidents of market volatility occurring after the Flash Crash. One such example was the "Knightmare on Wall Street," which brought one of the biggest high-frequency traders (HFT) to the brink of bankruptcy in less than an hour when a trading glitch caused Knight Capital Group to execute millions of shares in over a hundred stocks.[6] Another such incident occurred when a glitch in the software of BATS Global Markets caused that firm to cancel its own IPO, and also caused a brief 10 percent plunge in the price of Apple stock.[7]

Now, five years after the Flash Crash, the U.S. government has unexpectedly indicted Navinder Singh Sarao, a man trading from his parents' home in England, for market manipulation through an automated trading program alleged by the government to have caused the Flash Crash by "spoofing," or placing orders with no intention of having them executed. The indictment claims that Sarao manipulated the market for E-mini S&P 500 futures contracts on the Chicago Mercantile Exchange (CME).[8] Sarao has been unable to make bail because his assets have been frozen by the U.S. authorities. Either Sarao has become a scapegoat who fell prey to overzealous prosecutors, or the U.S. financial system and its regulation are broken as a result of the market's vulnerability to the actions of lone traders. As one commenter has stated, "if a lone rogue trader was singlehandedly able to cause the market to crash by virtue of an algorithm then we can only ask the question why it took four years to take action against him."[9]

A World of Trading

Until the arrest of Sarao, three developments in the public trading markets had been publicly identified as possible causes of the Flash Crash. These developments included HFT, direct electronic access (DEA), and dark pools. HFT is a type of algorithmic trading that employs highly sophisticated equations designed to conduct trading in rapid and continuing bursts in order to take advantage of the narrowest market disparities. Most of these algorithms derive profit by buying and selling an exchange's standardized product as quickly as possible, though some derive profit from long-term market movements. Because micro- and nano-seconds in transmission time can make a difference in trading profitability, HFT operations seek to maximize trading speed through practices such as co-locating with exchange servers to cut down transmission times.[10]

Direct electronic access (DEA) is important because without it, neither HFT nor dark pools would be possible. DEA is a "process by which a person transmits orders on their own (i.e., without any handling or re-entry by another person) directly into the market's trade matching system for execution."[11] The NYSE first offered DEA in 2000 under a pilot program named NYSE Direct+, which it then significantly expanded.[12] DEA is crucial to the market volatility for two reasons. First, DEA provides HFT trading programs access to the securities markets, and second, DEA links the various exchanges on which securities are traded.

While HFT and DEA have changed how securities are traded, dark pools have added venues through which trades may be placed. A dark pool is any pool of liquidity that can be accessed electronically but provides no pre-trade transparency with respect to orders received by the pool. Many institutions favor dark pools because they allow large orders to be kept secret, reducing the likelihood that other market participants will detect their transactions and exploit them by bidding the price of the target security up or down. There is a question as to whether the SEC's order protection— requiring every exchange to ensure consistent price quotations for stocks—or trade-through rule of Regulation NMS has led to the proliferation of dark pools.[13]

HFT has been in the news and on the minds of regulators and legislators ever since the 2014 publication of Michael Lewis' book "Flash Boys: A Wall Street Revolt." The thesis of this book was that HFT and DEA afforded competitive advantages to certain traders that were not enjoyed by other market participants, and that equity markets were therefore "rigged."[14] Nevertheless, many financial economists, including two former SEC Chief Economists, believe that electronic trading has made the markets more efficient and more liquid.[15]

The SIFMA, the trade association for the securities industry, has been supportive of the current market structure for equities, claiming that the transition to an electronic securities market has "increased liquidity, narrowed spreads, lowered transaction costs, and provided firms ample opportunity for price improvement."[16] SEC Chair Mary Jo White also has defended HFT as lowering the cost of large orders and narrowing bid-ask spreads.[17]

Regulatory Changes

The SEC has embarked upon an extensive rule-making initiative since the Flash Crash to alleviate some of the perceived dysfunctional aspects of the structure of the equity markets. However, the SEC has not yet attempted to alter the architecture of the markets. Most of the regulatory changes have been implemented by FINRA or other self-regulatory organizations (SROs). They include single stock circuit breakers, limit-up, limit-down mechanisms, limited restrictions on DEA, creation of a consolidated audit trail, and regulations to enhance systems compliance and integrity (Regulation SCI).

On Sept. 10, 2010, even before the issuance of the SEC-CFTC Report, the SEC expanded the scope and application of the circuit breaker program put into place after the stock market crash of 1987[18] from declines in the Dow Jones averages to declines in single stocks. The purpose of a circuit breaker is to freeze market activity in order to provide traders an opportunity to find liquidity. The stock-by-stock circuit breakers put into place in 2010 imposed a uniform, market-wide pause in trading in individual stocks whose price moved 10 percent or more in a five-minute period. These single stock circuit breakers were then superseded by a limit-up, limit-down rule which set price bands around every security and mandated a five-minute trading pause if such bands were breached.[19]

Rule 15c3-5 under the Securities Exchange Act of 1934 (Exchange Act)[20] adopted by the SEC on Nov. 3, 2010, soon after the SEC-CFTC Report was issued, was designed to prevent broker-dealers from allowing DEA to customers without any pre-trade supervision. Under this rule, which discouraged the practice known as "naked access," broker-dealers must scrutinize customers' credit positions before they are allowed to trade, and are further required to stop reckless orders before they are executed.[21] Soon after the adoption of Rule 15c-3-5, on Nov. 8, 2010, the SEC also approved SRO rules to prohibit stub quotes in the U.S. equity markets.[22]

One reason the SEC and CFTC were so delayed in issuing a report concerning the causes and market activity of the May 6, 2010, Flash Crash was that both agencies lacked adequate information concerning the trading activity on that day. Furthermore, both agencies concluded they lacked the resources to develop an audit trail to track activity in national market system securities. Accordingly, in 2012, the SEC adopted Rule 613 under the Exchange Act to compel SROs to jointly submit a plan to create, implement and maintain a consolidated audit trail.[23] Although various plans and amendments to plans have been filed with the SEC, such an audit trail has not yet been approved by the SEC or come to fruition.[24] One reason may be the cost of such a system, which the SEC has estimated at $4 billion in one-time implementation expenses and ongoing annual costs of $2.1 billion. These enormous expenses for the SROs may even be understated.[25]

Regulation SCI is another complicated and costly SEC regulation passed in response to the Flash Crash and other matters such as cybersecurity concerns.[26] This set of rules designed to promote the maintenance of fair and orderly markets will apply to various security industry SROs, and will require them to ensure that their systems have requisite levels of capacity, integrity, resiliency, availability and security sufficient to maintain their operational capability. Under this regulation, these SROs are required to possess comprehensive policies and procedures for their technological systems, conduct business continuity testing, annually review their automated systems, and take appropriate corrective actions when system issues occur.

Looking Ahead

Whether the SEC's new regulations will avoid a precipitous collapse of stock market prices in the future remains to be seen. Equity markets have not seen a sharp downturn since 2008. Such a downturn will likely be required to properly test the procedures the SEC has put in place since the Flash Crash. Lately, there has been renewed congressional and SEC interest in market structure. A year ago, SEC Chair White set forth an agenda for reviewing securities market structure. The issues she set forth were: market instability; high-frequency trading; fragmentation; broker conflicts; and the quality of markets for smaller companies.[27]

An advisory committee on market structure was formed in January 2015 and had its first meeting on May 13, 2015.[28] The primary item on the SEC's agenda for this meeting was the SEC's order protection, or trade-through, rule. Another possible matter that the SEC might consider in the near future is reform of the maker-taker system through which exchanges give access fee rebates to market-making traders and charge traders who take that liquidity.[29]

Since the 1975 Act's amendments to the Exchange Act, the SEC has been focused primarily on assuring economically efficient execution of securities transactions and fair competition among brokers, dealers and exchanges. While these policy objectives are embedded in the national market provisions of the Exchange Act,[30] perhaps the SEC should refocus on some of the basic objectives of securities market regulation, namely ensuring "the maintenance of fair and honest markets" by, among other things, preventing "excessive speculation, resulting in sudden and unreasonable fluctuations in the prices of securities which…cause alternately unreasonable expansion and unreasonable contraction of the volume of credit available for trade, transportation and industry…[and] hinder the proper appraisal of the value of securities…"[31]

The five-year anniversary of the Flash Crash was marked by an indictment of a solo trader, blamed for a dysfunctional market and its collapse, and an SEC Advisory Committee debating the order protection rule. Since 2010 numerous scandals have involved rogue traders at big banks engaging in a variety of serious market manipulation schemes. Unfortunately, there has been no real reform of the ethics of market makers or the rules under which securities trading markets are conducted. Rather, the plethora of SEC rulemaking has been designed to strengthen and prop up the existing system.

Endnotes:

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3. Report of the Staffs of the CFTC and SEC to the Joint Advisory Committee on Emerging Regulatory Issues, Findings

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5. SEC-CFTC Report, at 2.

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18. See Roberta S. Karmel, "What Is The Point of Circuit Breakers?" NYLJ, April 16, 1998.

19. See Approval of SRO Rule Proposals, Exchange Act Rel. No. 67090 (May 31, 2012).

20. 17 C.F.R. §240.15c3-5(b) (2010).

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22. SEC Approves New Rules Prohibiting Market Maker Stub Quotes, Release 2010-216 (Nov. 8, 2010, https://www.sec.gov/news/press/2010/2010-216.htm.

23. Consolidated Audit Trail, Exch. Act Adopting Rel. 67457 (July 18, 2012).

24. See Rule 613 (Consolidated Audit Trail), https://www.sec.gov/divisions/marketreg/rule613-info.htm.

25. Davis Polk Client Memorandum, SEC Proposes Consolidated Audit Trail, June 7, 2010, at 4.

26. Regulation Systems Compliance and Integrity, Exch. Act Rel. No. 73639, 79 Fed. Reg. 72252 (Dec. 5, 2014).

27. Chair White, supra note 17, at 2.

28. The House Subcommittee on Capital Markets held a hearing on "Equity Market Structure: A Review of SEC Regulation NMS" on Feb. 25, 2014. See also SEC Announces Agenda for May 13 Meeting of Equity Market Structure Advisory Committee, Press Rel. 2015-70.

29. See Rob Tricchinelli, "Lynch's Bill Would Restrict Maker-Taker in Six-Months Pilot, Have SEC Study Effects," 47 Sec. Reg. & L. Rept. (BNA) 491 (Mar. 9, 2015).

30. See §11A(1)(C), 15 U.S.C. §78kA(1)(C).

31. Section 2(2), 15 U.S.C. §78b(2).

Roberta S. Karmel is Centennial Professor of Law and co-director of the Dennis J. Block Center for the Study of International Business Law at Brooklyn Law School. She is a former commissioner of the Securities and Exchange Commission. Andrew Fine, a law student, assisted in the preparation of this column.