A SHOT IN THE DARK: AN ANALYSIS OF THE SEC’S RESPONSE TO THE RISE OF DARK POOLS

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Introduction

The U.S. stock market has seen many dramatic changes since May 17, 1792, when twenty-four stockbrokers met outside of 68 Wall Street, New York under a buttonwood tree and started the New York Stock & Exchange Board.1 Once a place ruled by humans, new advances in technology have transformed the stock market into a virtual no man’s land where most traders are now aided by super computers and advanced trading software.2 Advances in technology and new Securities and Exchange Commission ("SEC") rules allowing for greater access to the exchanges have given rise to high frequency trading ("HFT").3 HFT is a trading strategy that utilizes super computers to trade securities at high speeds and uses computer programs to quickly scan the market to locate and exploit pricing discrepancies.4

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2 See Jerry Adler, Raging Bulls: How Wall Street Got Addicted to Light-Speed Trading, WIRED (Aug. 3, 2012), archived at www.perma.cc/0HAP6gkagTK (discussing how human beings are making fewer trades now); see also SCOTT PATTERSON, DARK POOLS: HIGH-SPEED TRADERS, A.I. BANDITS, AND THE THREAT TO THE GLOBAL FINANCIAL SYSTEM 36 (2012) (showing action in high frequency trading is so quick and frenetic that no humans are capable of doing it).

3 See Adam Sussman et al., US Equity High Frequency Trading: Strategies, Sizing and Market Structure, TABB GROUP (Sept. 2, 2009), archived at www.perma.cc/0Xa2275YDRx (discussing the emergence of high frequency traders due to SEC rules and advancing trading technology).

4 See High-Frequency Trading – HFT, INVESTOPEDIA (Oct. 10, 2013), archived at www.perma.cc/0KbblsuGFF (defining HFT as a trading platform using super-computers to quickly trade orders and analyze the market).

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A major issue with HFT is that trades in the open market are subject to being front-run by the HFT computer programs. The front running occurs when these computer programs notice a pattern indicating an investor trade and, using their high speed trading ability, high-frequency traders will execute their own trade before the investor can complete his trade, thus making the investor’s trade more expensive or less lucrative.\(^5\) Investors looking for an escape from the HFT “predators” have found a shelter in dark pools.\(^6\) Dark pools are segregated parts of the market offering anonymity, which traders use to avoid front running by high-frequency traders on public exchanges.\(^7\) One of the most attractive reasons for trading in dark pools is that trades are not made public until they have been completed.\(^8\) Currently, there are 50 dark pools in operation; the biggest one, Crossfinder, handles on average 132.5 million shares a day.\(^9\)

Despite the advantages to traders, dark pools have been criticized for their lack of transparency, for creating a two-tiered market favoring larger investors over smaller investors, and for siphoning liquidity from other exchanges.\(^10\) Despite these criticisms, dark pools


\(^6\) See PATTERSON, *supra* note 2, at 44 (discussing how dark pools were originally designed for institutional investors to use as a haven from high frequency traders’ computer programs).

\(^7\) See Michael J. McGowan, *The Rise of Computerized High Frequency Trading: Use and Controversy*, DUKE L. & TECH. REV. 16, 38 (2010) (defining dark pools and their use); see also Timothy Cleary et al., *SEC Proposes Regulation of Dark Pools*, MORRISON & FOERSTER LLP (Nov. 16, 2009), at 1-2, archived at www.perma.cc/03pYzuW91jD (defining dark pools as proprietary markets created to trade large blocks of securities with minimal market impact and information leakage, while maintaining a stable share price through trader anonymity).

\(^8\) See Allen Wastler, *Dark Pools: Letting Some Light in Now?*, CNBC (Jan. 28, 2013), archived at www.perma.cc/0FZLS2YfiMG (noting that dark pool trades are not posted until after the transaction has been processed).

\(^9\) See Nina Mehta, *Dark Pools Win Record Stock Volume as NYSE Trading Slows to 1990s Levels*, BLOOMBERG (Feb. 29, 2012), archived at www.perma.cc/06YSdsJN5y (stating fragmentation of U.S. equity markets is due to new rules allowing for rapid expansion of dark pools and describing the number of dark pools that currently exist in the market).

\(^10\) See Liz Moyer, *SEC Set to Clamp Down on Dark Pools*, FORBES (Oct. 20, 2009), archived at www.perma.cc/0aZCQytveH (reporting that opponents have complained that dark pools hurt transparency and create two-tiered markets); Justin
were not a high priority concern for the SEC prior to the market collapse in 2008. The market collapse and several events that cast doubts about the integrity of the market pushed HFT and dark pools to the top of the SEC’s priority list. Furthermore, new developments have shaken investor confidence in the markets and have made dark pools difficult to ignore, such as the ‘Flash Crash’ that occurred in 2010, the SEC fining the dark pool firm Pipeline Trading Systems $1 million to settle charges that brokers failed to disclose to customers that the majority of orders sent to the firm’s dark pool were filled by a wholly owned trading affiliate in 2011, and a $440 million Knight Capital Group Inc. trading loss triggered by a software malfunction that occurred in 2012. In response to the market’s outcry for actions against HFT and dark pools, the SEC released a set of

Grant, As Dark Pools Grow, ASX Fights to Keep Public Exchanges Relevant, WALL STREET & TECHNOLOGY (Sept. 6, 2012), archived at www.perma.cc/05Vf22Bn5aB (stating that although dark pools play a major role in helping institutional investors execute trades, dark pools threaten to drain liquidity from the public markets); see also Jesse Westbrook & Whitney Kisling, Dark Pool Trade Limit Said to Be Cut 95% in SEC Plan (Update 3), BLOOMBERG, (Oct. 20, 2009), archived at www.perma.cc/0NK74E2nxXH (discussing how dark pools limit transparency, disadvantage small investors, and siphon liquidity from the public market).  
12 See PATTERSON, supra note 2, at 274-75 (noting that by early 2010 SEC chairman Schapiro realized she needed to act, so she gathered corporate CEOs for a major exchange meeting in Washington D.C.); see also Mary L. Schapiro, Chairman, U.S. Sec. & Exch. Comm’n, Strengthening Our Equity Market Structure (Sept. 7, 2010), archived at www.perma.cc/09SdtWh2VcT (stating that HFT is an area that warrants close review).
13 See Larry Swedroe, Why Investors Can Ignore the Mini-Flash Crash, CBS NEWS (Aug. 8, 2012), archived at www.perma.cc/0FSG5Lk6mvz (summarizing what occurred on the day of the ‘Flash crash’ of 2010); Adler, supra note 2 (commenting about the speed of Knight Capital Group’s $440 million loss); Jed Horowitz & Joseph Menn, Knight Trading Loss Shows Cracks in Equity Markets, REUTERS (Aug. 3, 2012), archived at www.perma.cc/0b2nS86MgRd (discussing the software glitch that cost Knight Capital Group $440 million in less than an hour); Press Release, U.S. Sec. & Exch. Comm’n, Alternative Trading System Agrees To Settle Charges That It Failed To Disclose Trading By An Affiliate (Oct. 24, 2011), archived at www.perma.cc/0dtM2LWww3X (stating that the SEC charged Pipeline Trading Systems LLC with failing to disclose to the customers of its dark pool that most of their orders were filled by an affiliate).
proposals for regulating dark pools in November 2009. Currently, the SEC is in the process of creating a consolidated audit trail (“CAT”) and has approved rival “dark pools” to be run by the New York Stock Exchange (“NYSE”), the National Association of Securities Dealers Automated Quotations (“NASDAQ”), and the Better Alternative Trading System (“BATS”).

In this note I will analyze the SEC’s various responses to the issue of dark pools by discussing what they have done correctly, what they have done incorrectly, and I will present ideas for changes that the SEC has not proposed. I argue that the SEC should take a mostly hands-off approach to dealing with dark pools and regulate them lightly. Investors should have the option to use dark pools to avoid HFT. I argue that requiring a CAT to be implemented is one of the most important actions the SEC has taken because it allows for efficient monitoring of dark pools and the market as a whole as well as facilitating quick responses after a significant market event such as a crash. Furthermore, I believe the SEC made a good decision in allowing the NYSE, NASDAQ, and BATS to operate their own dark pools.

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14 See Regulation of Non-Public Trading Interest, 74 Fed. Reg. 61208-01, 61208 (proposed Nov. 23, 2009) (to be codified at 17 C.F.R. pt. 242) (noting how the SEC is proposing to amend regulatory requirements that apply to “dark pools” of liquidity); see also Nina Mehta & Jeff Kearns, SEC Dark Pool Rule May Not Come In ‘11, Hyndman Says, BLOOMBERG (Jan. 21, 2011), archived at www.perma.cc/0sXYZ1G3r3r (describing how the 2009 SEC proposed rules would provide transparency for dark pools).

15 See SEC CAT Approval, infra note 139 (stating that the SEC voted to require the national securities exchanges and FINRA to establish a CAT); see also Andrew Ackerman, Big Board’s New Dark-Pool Ammo: Sub-Penny Quotes, WALL ST. J. (last visited Oct. 13, 2013), archived at www.perma.cc/0tfjrMXfFB6 (discussing the SEC’s approval of a NYSE initiative to help it compete with dark pools); Steinert-Threlkeld, infra note 127 (commenting on NASDAQs attempt to start its own dark pool); Kim, infra note 212 (describing BATS’s attempt at operating its own dark pool).

16 See infra Part III (identifying the analysis section of the present paper and a discussion of the SEC and dark pools).

17 See infra Part III (suggesting a non-draconian approach should be taken).

18 See infra Part III.C (defending investor’s access to dark pools as a means to avoid predatory HFT).

19 See infra Part III.E (arguing that the implementation of CAT is of the utmost importance).
pools because it is providing another trading option for investors.\textsuperscript{20} To achieve some meaningful changes to the market, the SEC should focus on controlling the predatory behavior by the HFT firms.\textsuperscript{21}

Part I of this note will recount the history and discuss the purpose behind dark pools in the financial markets.\textsuperscript{22} Part II will address the current events that have put dark pools in the SEC’s cross hairs and highlight actions that the SEC has taken in response to the growth of dark pools.\textsuperscript{23} In Part III, I will examine whether the SEC’s proposals and actions are an effective way of dealing with the perceived growing threat of dark pools, and in Part IV I will present my conclusions.\textsuperscript{24}

\section*{I. History}

Before the widespread use of computers in the stock market, trades occurred in arms length transactions on the floor of stock exchanges.\textsuperscript{25} Buyers and sellers had to purchase seats and become market makers to trade on the exchanges, to which the investing public did not have access.\textsuperscript{26} Market makers became the middlemen between investors and the exchange.\textsuperscript{27} Market makers used their status as intermediaries to earn enormous profits from the difference between what they paid for a stock and the amount they charged invest-

\textsuperscript{20} See infra Part III.F (agreeing with the SEC’s decision to allow the individual operation of dark pools to exist).
\textsuperscript{21} See infra Part III.F (indicating that the SEC should begin controlling the behavior of HFT firms).
\textsuperscript{22} See infra Part I (discussing the history of dark pools within the financial marketplace).
\textsuperscript{23} See infra Part II (recounting actions that the SEC has taken in regards to dark pools and their implementations).
\textsuperscript{24} See infra Part III (considering the pros and cons of the SEC actions in regards to dark pool implementation).
\textsuperscript{25} See Alyse Gould, \textit{Regulating High-Frequency Trading: Man v. Machine}, 12 J. HIGH TECH. L. 273, 277-79 (2011) (describing how during the 19th century, trading was done in person and market makers were the only ones with access to trades directly from the trading floor).
\textsuperscript{26} See Jerry W. Markham & Daniel J. Harty, \textit{For Whom the Bell Tolls: The Demise of Exchange Trading Floors and the Growth of ECNs}, 33 IOWA J. CORP. L. 865, 869 (2008) (noting that after buying into the exchange, members of the NYSE were assigned chairs and were required to attend sessions to trade).
\textsuperscript{27} See Patterson, supra note 2, at 73 (discussing how at one point nearly all stock transactions in the United States went through human middlemen).
tors for processing their trades. This was the norm for many years, but the introduction of computers into the trading process caused massive changes to the system.

Although computers started being used for trading in the 1980s, market makers used the computers merely to increase the number of trades they could handle per day rather than to improve their clients’ trading experience. Electronic trading systems during this time had the capability to collect and distribute market data, allowing people that were using the same system to trade with one another and these systems had the capability to create a record of trading activity; however, these capabilities were rarely used outside of smaller exchanges. Change came during the 1990s when the price of computer systems became more affordable and computer-based trading became mainstream. Computer-based trading allowed investors to cut out the middlemen and match their own trades.

A. Rise of High-Frequency Trading

Investors matched their own trades through the use of electronic communications networks (“ECNs”). Entering the market in the 1990s, ECNs quickly matched buyers and sellers at their best price using advanced computer programs known as algorithms.

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28 See Patterson, supra note 2, at 73 (stating how the market makers made profits from processing investors’ trades).
29 See McGowan, supra note 7, at 1 (discussing how computers have drastically changed the way traders trade securities).
30 See Gould, supra note 25, at 279 (noting how during the 1980s, computers were available but they were only used to move large quantities of stock).
31 See Gould, supra note 25, at 280 (discussing how advanced features, provided by computer systems, were not the norm).
32 See Irene Aldridge, High-Frequency Trading: A Practical Guide to Algorithmic Strategies and Trading Systems 8 (2010) (stating that one of the reasons electronic trading had not caught on until the 1990s was because of the cost).
33 See Patterson, supra note 2, at 124 (describing how electronic trading led to the phasing out of human middlemen).
34 See Markham & Harty, supra note 26, at 866 (noting that exchange trading floors are fading away because ECNs match trades using computer programs).
The advantage of using ECNs was that it allowed for traders to remain anonymous, it facilitated quick trading, and it increased capacity for liquidity. The use of the ECNs caused an emergence of new trading styles that relied on exploiting market inefficiency rather than traditional trading based on fundamentals and company growth prospects. Eventually, traders and analysts started to get replaced with mathematicians and computer science experts who were more capable of running the complex algos than they were with making investment decisions. Thus, HFT was born.

High-frequency traders make money by either taking advantage of liquidity rebates offered by the exchanges or by profiting from individual trades. The exchanges offered liquidity rebates to offset the price of ignorance. The price of ignorance is the idea that although market makers have more information than the investing public, sophisticated traders, like hedge funds and fund managers, outmatch market makers, and therefore providing a market for these sophisticated investors is risky. Market makers usually respond to this risk by widening their price quotes, meaning that when they offer to buy they do so at lower prices and conversely offer to sell at higher

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36 See id. at 890-91 (discussing how using ECNs provided market users with several advantages). Liquidity is the ease with which an investor can purchase or sell a security without substantially affecting its price. See Robert Hatch, Reforming the Murky Depths of Wall Street: Putting the Spotlight on the Security and Exchange Commission’s Regulatory Proposal Concerning Dark Pools of Liquidity, 78 GEO. WASH. L. REV. 1032, 1034 (2010) (defining liquidity).
37 See Adler, supra note 2 (mentioning how investment decisions based on an assessment of the economy are retreating and making way for computers acting on computer-generated market data).
38 See PATTERSON, supra note 2, at 277 (noting how it appears that soon the only function humans will have on Wall Street is taking care of the machines that do the trading).
39 See Shai Ahmed, How High-Frequency Trading Works, CNBC (May 7, 2010), archived at www.perma.cc/0zY3LLhxLZC (describing the several ways that high frequency traders make money).
40 See PATTERSON, supra note 2, at 157-58 (noting how the price of ignorance must be accounted for to maintain liquidity).
41 See PATTERSON, supra note 2, at 158 (discussing how market makers take risks providing liquidity for pools inhabited by sophisticated investors and that these market makers expect to be recompensed for this risk).
prices, and risk causes the difference between the buying price and selling price to be greater.\textsuperscript{42} To promote market liquidity and stable prices, the exchanges offer traders maker-taker fees.\textsuperscript{43} Maker-taker is a pricing system in which exchanges pay rebate fees to traders making bid-ask quotes and charge a fee to the clients that take the offer.\textsuperscript{44} Although the amounts paid out by the maker-taker pricing system seem small, high-frequency traders are able to make a tidy profit by trading millions of shares a day.\textsuperscript{45} High-frequency traders also make a profit from individual trades by exploiting the differences in prices between different venues.\textsuperscript{46} High-frequency traders find trading opportunities by using their super computers to read incoming market order flow and by then front running investors’ trades in fractions of a second.\textsuperscript{47}

### B. Regulation National Market System and Alternative Trading System

Institutional investors originally dealt with the issue of high-frequency traders front running their trades by not revealing the full extent of their trade until the last possible moment.\textsuperscript{48} Investors would keep their trades secret by using block trading, in which investors would make arranged “secret” trades through a block trading desk and the trade details would appear only after the order was

\begin{itemize}
  \item \textsuperscript{42} See Patterson, supra note 3, at 158. (stating that market makers deal with sophisticated investors by providing lower bid or higher ask offers in their price quotes).
  \item \textsuperscript{43} See Patterson, supra note 2, at 158 (describing “maker-taker” as the idea of paying firms a small amount per share to provide liquidity).
  \item \textsuperscript{44} See Loch Adamson, High Frequency Trading in the Crosshairs, Institutional Investor (Oct. 4, 2012), archived at www.perma.cc/02on8b9ugRj (summarizing how the maker-taker system works).
  \item \textsuperscript{45} See Patterson, supra note 2, at 158 (describing how high frequency traders are able to make a profit on the tiny maker-taker fees).
  \item \textsuperscript{46} See Ahmed, supra note 39 (stating the main purpose of HFT, which is to arbitrage between different venues).
  \item \textsuperscript{47} See Ahmed, supra note 39 (noting how high frequency traders can read “flash trade” data and with the speed of their system, jump ahead of other investors’ trades).
  \item \textsuperscript{48} See Regulation of Non-Public Trading Interest, 74 Fed. Reg. 61208 (Nov. 23, 2009) (to be codified at 17 C.F.R. pt. 242) (discussing how market participants that need to trade in large size have sought ways to minimize their transaction costs by completing their trades without prematurely revealing the full extent of their trades to the broader market).
\end{itemize}
However, Regulation National Market System ("Reg. NMS"),\textsuperscript{50} instituted in 2007, made this trading strategy significantly more difficult because it required national exchanges to collect and publish the quotations for the securities posted in their venues.\textsuperscript{51} Reg. NMS forced all trading venues to monitor stock prices constantly on an electronic ticker tape called the Securities Information Processor, or SIP feed.\textsuperscript{52}

Furthermore, Reg. NMS mandated that any order to buy or sell had to go to the exchange with the best price.\textsuperscript{53} This meant that HFT firms could trade through human-controlled markets such as the NYSE instead of trading exclusively on electronic exchanges.\textsuperscript{54}

\textsuperscript{49} See Alice K. Ross, Nick Mathiason & Will Fitzgibbon, Robot Wars: How High Frequency Trading Changed Global Markets, THE BUREAU OF INVESTIGATIVE JOURNALISM (Sept. 16, 2012), archived at www.perma.cc/0DnhciX5ToL (describing how institutional investors were trading large orders over the phone through a block trading desk).


\textsuperscript{51} See Dissemination of Quotations in NMS Securities, 17 C.F.R. § 242.602 (2005) (describing some of the requirements surrounding the dissemination of quotations in NMS securities); see also Access to Quotations, 17 C.F.R. at § 242.610 (granting access to quotations through trading venues that quote NMS stocks through an SRO display-only facility does not create restrictions that prevent efficient access to such quotations); Hatch, supra note 36, at 1035 (noting that institutional investors’ ability to keep their trades secret was hindered by the passage of Reg. NMS).

\textsuperscript{52} See Disclosure of Order Execution Information, 17 C.F.R. § 242.605 (2005) (stating that every national securities exchange that traded NMS stocks shall act jointly to establish procedures for market centers to follow in making order execution information available); see also Patterson, supra note 2, at 49 (discussing how Reg. NMS made it so that all trading venues had to monitor the price of a stock on every trading venue).

\textsuperscript{53} See Order Protection Rule, 17 C.F.R. § 242.611 (2013) (referring to the order protection rule and stating that trades must be executed at the best available price); see also Patterson, supra note 2, at 239-40 (discussing how Reg. NMS mandated that orders go to the venue with the best price).

Another convention that made it difficult for institutional investors to hide their trades from high-frequency traders was decimalization.\(^5\) Decimalization was a change that forced NASDAQ and NYSE to start trading in penny increments instead of fractions, like one-sixteenth of a dollar, which had been the norm since the start of securities trading.\(^6\) Market makers feared decimalization because they would be forced to quote in smaller increments causing bid-ask spreads to narrow and profits to fall.\(^7\) In the year that decimalization was instituted, market spreads narrowed significantly.\(^8\) Decimalization lead to a growth in HFT because the narrowed spreads increased liquidity and decreased market makers’ ability to compete because they would have a more difficult time making a profit with narrower spreads.\(^9\) Reg. NMS and decimalization was a powerful combination that led institutional investors to decrease the size of their trading blocks, making hiding from high-frequency traders more difficult.\(^10\)

After Reg. NMS and decimalization decreased investors’ ability to hide their trades from high-frequency traders, investors found a loophole in Regulation Alternative Trading System (“Reg. ATS”).\(^11\) Enacted in 1998, Reg. ATS allowed trading with hidden quotes as long as the volume of trades on a stock did not exceed five percent of the national trading volume in that stock.\(^12\) Reg. ATS led to an in-

\(^5\) See Hatch, supra note 36, at 1035 (stating that Reg. NMS and decimalization combined to make it difficult for investors to keep their trades a secret).

\(^6\) See Patterson, supra note 2, at 174 (characterizing decimalization as a feared change that would force stocks to start trading in pennies rather than fractions).

\(^7\) See Patterson, supra note 2, at 174 (discussing why the exchanges resisted quoting prices in penny increments).

\(^8\) See Patterson, supra note 2, at 176 (noting that decimalization forced spreads to narrow during the year in which it was instituted).

\(^9\) See McGowan, supra note 7, at 12 (describing how decimalization decreased market makers’ ability to compete and increased liquidity).

\(^10\) See Hatch, supra note 36, at 1035 (discussing how Reg. NMS and decimalization led to a decrease in the size of block trades); see also McGowan, supra note 7, at 12 (noting how institutional traders began to split up their orders according to their algorithms to obtain better pricing).

\(^11\) See 17 C.F.R. §§ 242.300-.303 (2009) (describing the requirements of Reg. ATS); see also Karmel, supra note 35, at 892 (stating that institutional investors seeking to hide their trades from high frequency traders found a solution with Reg. ATS).

\(^12\) See 17 C.F.R. § 242.301 (mandating that only orders which had an average daily trading volume of 5 percent or more are required to provide price quotes); see also Karmel, supra note 35, at 892-93 (discussing how Reg. ATS allowed traders to
crease in the number of institutional investors seeking dark pools to conceal their trades. Although the Consolidated Tap Association (“CTA”) required dark pools to report the parties involved in the executed trades, the CTA allowed this reporting to take place weeks after trade completion.

Despite the growth in popularity in dark pools, dark pool operators had difficulty finding counterparties for their customers. Dark pool operators resolved this issue by using indications of interest (“IOI”). IOIs worked by selectively revealing their holdings to certain investors. IOIs served as an indicator that the dark pool was seeking to conduct a trade of a specific security. Dark pools received more exposure due to a sharp increase in dark pool trading by large broker-dealers, who had access to securities by virtue of their relationship with their existing customers. Reg. NMS pushed nearly all of Wall Street's major investment banks to expand their ability to conduct trades without using public exchanges.

hide quotes on securities as long as the trading volume did not exceed five percent of the national trading volume in that stock).

63 See Karmel, supra note 35, at 893 (noting that Reg. ATS combined with advances in computer technology allowed dark pools to grow in polarity).

64 See Hatch, supra note 36, at 1036-37 (describing the reporting requirements the CTA requires from dark pools).

65 See Hatch, supra note 36, at 1037 (discussing how dark pool operators experienced difficulties finding counterparties for their customers’ orders).

66 See Karmel, supra note 35, at 893 (stating how dark pool operators resolved their difficulty of finding counter parties for their customers by using IOIs).

67 See Hatch, supra note 36, at 1037 (discussing how dark pool operators sought liquidity by indicating their holdings to certain investors).

68 See Hatch, supra note 36, at 1038 (noting that IOIs were a notice that a dark pool was looking for a counter party for specific security).

69 See Hatch, supra note 36, at 1038 (discussing how large broker dealers became extremely popular).

70 See John Carney, One Big Dark Pool to Rule Them All, DEALBREAKER (May 20, 2008), archived at www.perma.cc/0FDcZKd6G6r (stating that all major investment banks operate dark pools).
C. Concerns Over Dark Pools

In late 2007, analysts started voicing their concern over dark pools. Analysts argued that dark pools made it difficult for investors to ascertain whether they are receiving the best price for their trades. Analysts also worried that dark pools would siphon the liquidity out of conventional markets and make it difficult for investors to trade. Despite these concerns, the SEC only monitored dark pools at this time. However, the SEC would change its position after a series of events thrust HFT and dark pools into the national spotlight.

1. 2008 Financial Crisis

One of the first events that caused the SEC to reconsider its position on dark pools was the 2008 financial crisis. Many econo-

72 See id. (noting that investors are unaware of whether they are receiving best price for their trades); see also Keith Fitz-Gerald, Are “Dark Pools” Destined to Be the Capital Markets’ Next Black Hole?, MONEY MORNING (July 10, 2008), archived at www.perma.cc/0hhkXvTovtE (describing how dark pools make public pricing suspect).
73 See The Professor, A Dip in the Dark Pools, STREETWISE PROFESSOR (June 29, 2007), archived at www.perma.cc/R6A-ZD43 (mentioning the idea that dark pools siphon off traders from the public markets and therefore reduce liquidity).
74 See Sirri, supra note 11 (mentioning that the SEC would be studying how dark pools fit into their overall regulatory goals).
75 See Duncan L. Niederauer, It’s Time to Bring ‘Dark Pools’ into the Daylight, FIN. TIMES (July 4, 2012), archived at www.perma.cc/0QXsWSnY1P (discussing how in the wake of the 2008 financial crisis the consensus was that markets needed to be open and transparent yet by January of 2008 shares traded through “dark pools” and alternative trading venues had tripled); see also Christopher Westfall, Data Battle Creates Trader War Games, THE STREET (Sept. 24, 2010), archived at www.perma.cc/0q9gAISC1KZ (describing how regulators are preparing themselves for the battle between gamers and anti-gaming professionals that is spilling over from dark pools to the public markets); Alyssa Abkowitz & Scott Cendrowski, SEC Chief Names Four Targets For Scrutiny, CNN (June 19, 2009), archived at www.perma.cc/0PImxah9QcE (reporting that when Mary Schapiro unveiled areas where she would focus her scrutiny, one of the targets was dark pools).
76 See Niederauer, supra note 75 (noting that after the 2008 financial crisis the consensus was that markets lacked transparency and shares of equities traded through dark pools had been on the rise).
mists have described the 2008 financial crisis as the worst financial
crisis since the great depression.77 Though the actual cause is still
not clear, excessive use of leverage in vehicles such as collateralized
debt obligations and credit default swaps appear to be the primary
culprits.78 Despite the questions surrounding the crisis, the impact to
the U.S. economy was clear: A study found that the 2008 financial
crisis cost the U.S. economy $12.8 trillion.79 The crisis shifted regu-
lators’ focus to the shadow-banking sector and made many investors
question the integrity of the financial markets.80 That same year,
Bernard Madoff’s $50 billion Ponzi scheme came to light when
Madoff’s sons turned him into the FBI.81 The Madoff scheme was
devastating to the investors of his fund, some of which lost every-
thing, but it also affected investors as a whole because it was shock-

77 See John Hilsenrath, Serena Ng & Damian Paletta, Worst Crisis Since ‘30s, With
No End in Sight, WALL ST. J. (Sept. 18, 2008), archived at
www.perma.cc/0K1JpphSpAK (quoting an economist claiming that the 2008 fi-
nancial crisis has been the worst crisis since the depression).
78 See Karmel, supra note 35, at 854 (describing possible causes of the financial
crisis).
79 See Dennis Kelleher, Stephen Hall & Katelynn Bradley, A Report from Better
Markets: The Costs of the Wall Street-Caused Financial Collapse and Ongoing
Economic Crisis Is More Than $12.8 Trillion (Sept. 15, 2012), archived at
www.perma.cc/02P8yWDL7ar (noting the estimated cost of the financial crisis);
Mark Gongloff, Financial Crisis Cost U.S. $12.8 Trillion or More: Study,
HUFFINGTON POST (Sept. 12, 2012), archived at www.perma.cc/0vuygggCZUM
(stating that the 2008 financial crisis cost the U.S. economy $12.8 trillion); see also
Stacy Curtin, 2008 Financial Crisis Cost Americans $12.8 Trillion: Report,
YAHOO! FIN. (Sept. 17, 2012), archived at www.perma.cc/0gbS2m6BWvM (illus-
trating some of the effects of the 2008 financial crisis).
80 See Karmel, supra note 35, at 854 (noting that one of the key concerns for finan-
cial regulators after the financial crisis was the shadow banking sector); see also
Francesco Guerrera, Seeking a Wizard: Time to Embrace Market Risk, or to Run
From It, WALL ST. J. (June 11, 2012), archived at www.perma.cc/0DocSTsSrsh
(describing how a bipolar attitude towards risk has started to affect investors’ deci-
sions after the 2008 financial crisis).
81 See Overtime Staff, Sons Called in FBI to Arrest Bernie Madoff, CBS (Oct. 30,
2011), archived at www.perma.cc/0AGWK4CIiT1 (discussing Madoff’s sons’
decision to turn their father into the FBI after he revealed the true nature of his
hedge fund); Robert Lenzer, Bernie Madoff’s $50 Billion Ponzi Scheme, FORBES
(Dec. 12, 2008), archived at www.perma.cc/0317CuXsGs (suggesting that the Ber-
nard Madoff’s massive Ponzi scheme will intensify redemption from many other
hedge funds).
ing to see that Madoff’s scheme went undetected for so long. One of the most shocking aspects of Madoff’s scheme was that had Madoff not faced $7 billion in redemptions of his hedge fund, the scheme would have continued unimpeded. Madoff’s fraud placed scrutiny on the hedge fund industry and dark pools, which Madoff used heavily.

2. The SEC’s Change in Focus

In late 2008, reports began emerging that the anonymous nature of dark pools would allow for the proliferation of “gamers,” or traders that profit from predatory trading in dark pools. Gamers use computer programs to detect when investors are going to make a large trade and use that knowledge to earn a profit at the investor’s expense. Although market participants should not be able to see an order until after it is executed in a dark pool, gamers will often send a rapid succession of small orders and wait for investor orders to react to it. For example, a gamer that anticipates that an investor is attempting to buy a large order of securities will systematically replicate the investor’s order and will drive the price of the security up. Once the block has been assembled, the gamer will sell the block with the inflated price to the investor at a profit.

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82 See Lenzer, supra note 81 (discussing how the Madoff scheme devastated individuals who trusted Madoff with their money and made investors question the safety of the market).
83 See Lenzer, supra note 81 (describing how Madoff’s scheme was discovered only because he faced massive redemptions on the fund).
84 See Lenzer, supra note 81 (suggesting that the Madoff scandal will be a black eye for the hedge fund industry and for non-transparent investment vehicles); see also Patterson, supra note 2, at 169 (noting that Madoff’s oldest son sent an email to a dark pool operator praising it for its reliability).
85 See McGowan, supra note 7, at 39 (discussing how “gamers” harmed investors using predatory trading in dark pools).
86 See Rob Curran, Trading in a Dark Pool? Watch for Sharks, WALL ST. J. (Aug. 18, 2008), archived at www.perma.cc/05WVxhUCAua (stating that “gamers” can sniff out big orders and trade for profit using the “footprints” that investors make in the market).
87 See id. (noting that “gamers” will often ping a pool to see if investors will take the bait).
88 See id. (describing how a “gamer” will build a duplicate trading block when they detect that an investor is looking to buy a large block of securities).
89 See id. (discussing how “gamers” sell an accumulated block at a peak price to strip the investor of the profit from his transaction).
In January 27, 2009, Mary Schapiro became the chairman of the SEC and she shifted the SEC’s focus from monitoring dark pools to actively investigating them to prevent manipulation like gamer schemes.\footnote{See Melanie Waddel, \textit{Mary Schapiro Is SEC Chair}, THINKADVISOR (Jan. 27, 2009), archived at www.perma.cc/0P5jop6wLhv (reporting that Mary Schapiro became the chairwoman of the Securities and Exchange Commission on January 27, 2009); Mary L. Schapiro, Chairman, U.S. Sec. & Exch. Comm’n, Address Before the New York Financial Writers’ Association Annual Awards Dinner (June 18, 2009), archived at www.perma.cc/0tv21LHdxVW [hereinafter Schapiro Awards Dinner Address] (stating that the commission has to be vigilant in investigating emerging risks including dark pools).} Schapiro was concerned that dark pools’ lack of transparency made it difficult for the investing public to access, and that this could potentially undermine the public’s confidence in the market.\footnote{See Schapiro Awards Dinner Address, supra note 90 (discussing how the lack of dark pool transparency has the potential to undermine investor confidence in the market).} The chairman also expressed concern that IOIs, which dark pool participants used to communicate with others in the dark pool, would exclude the investing public.\footnote{See Schapiro Awards Dinner Address, supra note 90 (identifying the exclusion of public investors from the IOI messaging system as an issue).} Finally, Schapiro expressed concern that dark pools could impair market pricing if enough trades get diverted from the public market to the dark market.\footnote{See Schapiro Awards Dinner Address, supra note 90 (stating that dark pools could impair the public price discovery function that the market relies on).}

3. Senators Kaufman and Schumer

In addition to Shapiro, in January 2009, Ted Kaufman filled Joe Biden’s senate seat and became a very vocal critic of dark pools.\footnote{See Patterson, supra note 2, at 254 (discussing how Ted Kaufman became a senator and a very vocal critic of high frequency trading).} While introducing a bill to bring back the uptick rule,\footnote{See Uptick Rule, INVESTOPEDIA (Oct. 8, 2012), archived at www.perma.cc/0o7quddXaR (stating the definition of the uptick rule). The uptick rule was a discontinued rule that required every short sale transaction to be entered at a price higher than the previous trade, thus preventing short sellers from adding downward momentum to the price of an asset in the state of sharp decline. \textit{See id.}} Kaufman became increasingly alarmed by what he had found after speaking with market experts.\footnote{See Patterson, supra note 2, at 254-55 (discussing how Kaufman became alarmed by what he found when he dug further into the market’s structure).}

90 See Melanie Waddel, Mary Schapiro Is SEC Chair, THINKADVISOR (Jan. 27, 2009), archived at www.perma.cc/0P5jop6wLhv (reporting that Mary Schapiro became the chairwoman of the Securities and Exchange Commission on January 27, 2009); Mary L. Schapiro, Chairman, U.S. Sec. & Exch. Comm’n, Address Before the New York Financial Writers’ Association Annual Awards Dinner (June 18, 2009), archived at www.perma.cc/0tv21LHdxVW [hereinafter Schapiro Awards Dinner Address] (stating that the commission has to be vigilant in investigating emerging risks including dark pools).

91 See Schapiro Awards Dinner Address, supra note 90 (discussing how the lack of dark pool transparency has the potential to undermine investor confidence in the market).

92 See Schapiro Awards Dinner Address, supra note 90 (identifying the exclusion of public investors from the IOI messaging system as an issue).

93 See Schapiro Awards Dinner Address, supra note 90 (stating that dark pools could impair the public price discovery function that the market relies on).

94 See Patterson, supra note 2, at 254 (discussing how Ted Kaufman became a senator and a very vocal critic of high frequency trading).

95 See Uptick Rule, INVESTOPEDIA (Oct. 8, 2012), archived at www.perma.cc/0o7quddXaR (stating the definition of the uptick rule). The uptick rule was a discontinued rule that required every short sale transaction to be entered at a price higher than the previous trade, thus preventing short sellers from adding downward momentum to the price of an asset in the state of sharp decline. See id.

96 See Patterson, supra note 2, at 254-55 (discussing how Kaufman became alarmed by what he found when he dug further into the market’s structure).
destabilizing event caused by HFT.\footnote{97 See \textit{PATTERSON}, supra note 2, at 255 (stating that Senator Kaufman worried about a destabilizing-event caused by a rogue HFT computer program).} Kaufman urged the SEC to take steps to address HFT arguing that it promotes a two-tiered market and may trigger “systemic risk” for markets.\footnote{98 See \textit{Whitney Kisling, Senator Urges 'Immediate' SEC Action on High-Frequency Trading, BLOOMBERG} (Nov. 20, 2009), archived at www.perma.cc/0rghECgCMGU (discussing how Senator Kaufman urged the SEC to take immediate steps to address HFT and to prevent manipulation of the market).}

On July 3, 2009, Sergey Aleynikov, an ex-Goldman Sachs computer programmer, was arrested for stealing Goldman Sach’s proprietary trading code.\footnote{99 See \textit{David Glovin & Christine Harper, Goldman Trading-Code Investment Put at Risk by Theft (Update3), BLOOMBERG} (July 6, 2009), archived at www.perma.cc/0BpWwXx7gTt (describing Sergey Aleykinov’s arrest for stealing Goldman Sach’s trading code).} The Justice Department charged Aleynikov with industrial espionage, and the arrest report alleged, because of the way this software interfaces with various markets and exchanges, “the bank has raised the possibility that there is a danger that somebody who knew how to use this program could use it to manipulate markets in unfair ways.”\footnote{100 \textit{Stephen Grocer, Afternoon Reading: Goldman, Sergey Aleynikov and Market Manipulation, WALL ST. J. BLOG} (July 9, 2009), archived at www.perma.cc/0VTBVfhnPDa (discussing how Aleynikov’s arrest has been raising questions about Goldman Sach’s HFT trading program and possible market manipulation); see also \textit{PATTERSON}, supra note 2, at 250-51 (discussing Aleynikov’s arrest and the allegations in the FBI report).} This scandal cast a light on HFT and dark pools and finally revealed their existence to the average investor.\footnote{101 See \textit{Tyler Durden, Goldman's $4 Billion High Frequency Trading Wildcard, ZERO HEDGE} (July 17, 2009), archived at www.perma.cc/0X1kaaa7QQ8 (suggesting that Aleynikov’s arrest is an indication that HFT perpetuates a Ponzi market on a large scale); see also \textit{PATTERSON}, supra note 2, at 251-52 (stating that blogs were breaking all the rules calling Wall Street a Ponzi scheme on the verge of collapsing and bringing down the economy with it).} Around this time financial blogs started calling Wall Street a Ponzi scheme similar to Madoff’s scheme but on a much larger scale.\footnote{102 See \textit{David D. Gruberg, Decent Exposure: The SEC's Lack of Authority and Restraint in Proposing to Eliminate Flash Trading, 65 U. MIAMI L. REV. 263, 264 (2010) (noting that Aleynikov’s arrest put the average investor on notice as to the existence of HFT).}
Senator Charles Schumer was another politician that called for the SEC to reform and increase regulation over dark pools.\textsuperscript{103} Schumer argued that dark pools had become difficult for regulators to monitor, undermined market transparency, and harmed price discovery.\textsuperscript{104} The Senator said that he would like to keep dark pools in existence to foster competition but Schumer argued that there should be a level playing field between dark pools and the traditional exchanges with which they compete.\textsuperscript{105} Senator Schumer proposed legislation that called for the real-time reporting of trades and a return to fairness principles over the desire to create liquidity.\textsuperscript{106} Shortly thereafter on November 23, 2009, the SEC released rule proposals with the potential to dramatically change the way dark pools operated and competed against traditional exchanges.\textsuperscript{107}

4. Flash Crash of 2010

On May 6, 2010, the destabilizing event that Senator Kaufman feared arrived in the form of a market crash commonly referred to as the Flash Crash of 2010.\textsuperscript{108} An automated large sell order caused the Flash Crash when it was programmed to take volume into consideration but not time or price and thus the trade was executed quicker than usual.\textsuperscript{109} Typically, a broker would execute a trade of the magnitude that started the Flash Crash over a matter of hours but

\textsuperscript{103} See Aubrey Gallo, XI. Dark Pool Liquidity, 29 REV. BANKING & FIN. L. 88, 93 (2009) (noting how Senators Kaufman and Schumer were leading the charge for SEC reform of dark pool liquidity).

\textsuperscript{104} See Alexandra Zendrian, Schumer And NYSE Want To Tax Dark Pools, FORBES (Oct. 20, 2009), archived at www.perma.cc/0rnBcs1Cj8x (expressing Senator Schumer’s concern with unregulated dark pools).

\textsuperscript{105} See id. (noting Senator Schumer wants to keep dark pools in existence but that he believes they should compete fairly against traditional exchanges).

\textsuperscript{106} See Gallo, supra note 103, at 93 (describing Senator Schumer’s proposed legislation focused on instituting real-time monitoring of trades and a return to fairness principles).

\textsuperscript{107} See Regulation of Non-Public Trading Interest, 74 Fed. Reg. 61208, 61211-13 (stating the SEC’s proposal for regulation of dark pools); see also Hatch, supra note 36, at 1033 (describing the potential effects of the SEC’s November 13, 2009 proposal).

\textsuperscript{108} See Patterson, supra note 2, at 260 (discussing the market crash on May 6, 2010, that was caused by an HFT computer systems glitch).

\textsuperscript{109} See What Caused the Flash Crash? One Big, Bad Trade, ECONOMIST (Oct. 1, 2010), archived at www.perma.cc/0hfGmPRh7 [hereinafter One Bad Trade] (describing what caused the Flash Crash of 2010).
instead a computer program executed it in 20 minutes. HFT firms initially helped to soften the selling pressure by buying some of the securities but their algorithms switched tactics and began selling. The algorithm that originally started the massive sell-off of the securities reacted by increasing the rate in which it sold the securities and created a negative feedback loop.

The Flash Crash was made worse by the fact that one trillion dollars in assets vanished from the markets. Although high-speed market makers were required to stay in the market, they found a loophole that allowed them to stay in the market without actually trading. As a result of the crash the SEC implemented market wide circuit breakers, which would trigger a brief stop in trading if a market maker made a major move in a brief period of time. Despite the implementation of the circuit breakers, the market crash caused investors to lose faith in the markets.

An SEC report that was released shortly after the crash revealed that anything could have caused the crash, including terrorism. Since the crash, investors have withdrawn more than $270

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110 See id. (noting the trade that caused the Flash Crash would have normally been executed over a longer period of time).
111 See id. (describing how HFT firms reacted to the rapid selling of the large order that caused the Flash Crash).
112 See id. (stating that the algorithm used by the mutual fund that started the Flash Crash created a negative feedback loop that increased the rate that it fed orders into the market).
113 See PATTERSON, supra note 2, at 267 (noting that the May 6, 2010 market crash was made worse by the fact that liquidity disappeared and as a result traders could not trade their way out of the crash).
114 See PATTERSON, supra note 2, at 267 (stating that one of the reasons that liquidity disappeared was because high frequency traders used a loophole to stay in the market without trading).
115 See PATTERSON, supra note 2, at 275 (discussing some of the safety precautions the SEC took in response to the May 6, 2010 market crash).
116 See PATTERSON, supra note 2, at 276 (stating that despite the safety measures implemented to prevent another market crash, investors did not feel safe investing in the market and some even pulled their money out of their investment accounts).
117 See PATTERSON, supra note 2, at 278 (discussing how an SEC report revealed that the Flash Crash of 2010 could have been caused by anything).
billion of their funds from the market.118 Despite the volatility and the uncertainty, high-frequency traders turned the Flash Crash into a very profitable day.119 One of the most shocking revelations of the report was the fact that the SEC admitted that there is no foolproof way to prevent another crash.120 Despite this gloomy outlook, Schapiro hoped to make significant headway into instituting two rules to help the SEC better track the equity markets: the CAT and large trader reporting.121

D. The SEC’s Response

In 2011 the SEC had its first major action against a dark pool.122 Pipeline Trading Systems LLC agreed to pay $1.2 million in fines to settle charges that Pipeline used its own traders to make the platform more attractive but did not disclose to its clients that it had this arrangement.123 Furthermore, the SEC alleged that Pipeline’s traders attempted to predict what shares Pipeline’s customers were going to buy or sell and attempted to front-run their trades.124 Although Pipeline is a relatively small dark pool in the U.S. this incident raises questions about how ATSs are handling institutional investors’

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118 See R.T. Leuchtkafer, Comment: Action still needed two years after ‘flash crash,’ FINANCIAL TIMES (May 7, 2012) (describing how investors have reacted to the Flash Crash by withdrawing funds from the market).
119 See id. (providing Chairman Schapiro’s remark that the high frequency traders managed to make the Flash Crash of 2010 a highly profitable day).
120 See Sarah N. Lynch, SEC’s Schapiro-Can’t Prevent “Flash Crash” Repeat, REUTERS (May 4, 2011), archived at www.perma.cc/0BGGxImLna5 (discussing former SEC chairman Schapiro’s statement that although measures could be implemented to help keep the market stable, there is no fool-proof way to prevent another crash).
121 See id., (quoting chairman Shapiro saying that she hopes to “have enough breathing room” to finalize the SEC’s work on rules designed to help track trading in the market).
123 See id. (noting that Pipeline kept the fact that it was using its own traders in the dark pool a secret from its clients).
124 See id. (discussing how Pipeline traders tried to guess what trades the customers were going to make and tried to trade ahead of them).
business and has undoubtedly added more fuel to the fire against dark pools.\textsuperscript{125}

In the summer of 2012 the SEC approved a plan for the NYSE to operate its own dark pool.\textsuperscript{126} Shortly thereafter NASDAQ and BATS followed suit with their own plans to operate their own dark pools.\textsuperscript{127} Another event that put the HFT and dark pools in the spotlight occurred on August 1, 2012, when Knight Capital Group had a $440 trading loss due to a trading malfunction.\textsuperscript{128} Although Knight Capital shut down their algorithm quickly, it was not quick enough to prevent high-frequency traders from doing damage and Knight Capital lost hundreds of millions of dollars in an instant and with those millions went some investors’ faith in the market.\textsuperscript{129}

II. Facts

Although there are no specific regulations that have been instituted in response to the issues associated with dark pools, the SEC has taken several actions to position it to be able to effectively introduce regulations should it become apparent that dark pools can no longer effectively regulate themselves.\textsuperscript{130} On November 23, 2009, the SEC published in the Federal Register a set of proposed rules for

\textsuperscript{125} See id. (stating that fines against Pipeline will likely cause businesses to rethink the use of alternative trading systems).

\textsuperscript{126} See Nathaniel Popper, Regulators Approve NYSE Plan for Its Own ‘Dark Pool’, N.Y. TIMES (July 6, 2012), archived at www.perma.cc/0SV6XxA7R2 (describing a program that the NYSE would run where it would take trades from retail investors and this trading would not be visible to the public.)

\textsuperscript{127} See Tom Steinert-Threlkeld, Nasdaq Files Retail Price Improvement Plan, TRADERS MAGAZINE (Dec. 5, 2012), archived at www.perma.cc/0puCAg6XJB (detailing NASDAQ’s steps to operate its own dark pool); Kim, infra note 212 (describing BATS’s steps to operate its own dark pool).

\textsuperscript{128} See Stephen Gandel, Why Knight Lost $440 Million in 45 Minutes, CNN MONEY (Aug. 2, 2012), archived at www.perma.cc/0mY2Daf6b (discussing the cause of Knight Capital Group’s $440 million loss).

\textsuperscript{129} See id. (describing how Knight Capital lost hundreds of millions of dollars and caused investors to question their faith in the market).

\textsuperscript{130} See Richard Henderson, Buy-Side Head Calls For Regulatory Action on Dark Pools, THE TRADE USA (Jan. 15, 2013), archived at www.perma.cc/0qw42L7XLS (stating that although new dark pool regulation is not expected anytime soon, the SEC has introduced proposals for regulation of dark pools and has allowed new venues to create greater access to dark pools).
regulating dark pools. The SEC proposed these rules because of its concern about the existence of a two-tiered market due to the fact that dark pool participants receive information from the market but do not contribute their own and due to the average investor having issues matching their trades. The main goal of the SEC’s proposals are to require ATSs to make disclosures in real-time.

A. The SEC’s Proposals

The SEC’s proposals introduce three main changes to ATS rules: the definition of “bid” and “offer” would be amended to include actionable IOIs thus subjecting them to disclosure requirements, the ATS trading volume threshold for displaying best price would be lowered from 5% to .25%, and the proposal would require post-trade transparency similar to the traditional exchanges because it would require the ATSs to provide real-time identification of executed trades. It is important to note that the SEC created an exemption for investors who rely on ATSs as their only method of marking large trades. This is evidenced by the fact that the SEC proposals do not apply to IOI’s dealing with orders valued at $200,000 and above.

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131 See Regulation of Non-Public Trading Interest, supra note 107, at 61,210 (discussing the SEC’s proposed rules for regulation of dark pools).
132 See Cleary, supra note 7, at 2 (noting the SEC’s concerns about dark pools).
133 See Cleary, supra note 7, at 1 (stating that the proposed rules would require alternative trading systems to make real-time disclosures).
134 See Regulation of Non-Public Trading Interest, supra note 107, at 61,211 (discussing how the SEC is proposing to amend the Exchange Act quoting requirements to apply expressly to actionable IOIs and in particular proposing to amend the definition of “bid” or “offer in Rule 600(b)(8) of Regulation NMS).
135 See Regulation of Non-Public Trading Interest, supra note 107, at 61,213 (noting that the SEC proposes to lower the 5% volume threshold to .25% for ATSS).
136 See Regulation of Non-Public Trading Interest, supra note 107, at 61,210 (stating that the SEC proposes to improve post-trade transparency of dark pools and other ATSSs by requiring the real-time disclosure of the identity of ATSSs on the executed trades report).
137 See Regulation of Non-Public Trading Interest, supra note 107, at 61,228 (discussing that the SEC recognizes the need for an exception to allow investors to execute large trades more efficiently).
138 See Regulation of Non-Public Trading Interest, supra note 107, at 61,228 (stating that the SEC is proposing an exception to its dark pool proposals for orders having a market value of $200,000 or greater).
B. CAT

On July 11, 2012 the SEC moved to establish a market-wide CAT to enhance regulators’ ability to monitor and analyze trading activity. The proposed Rule 613 requires national securities exchanges and the Financial Regulatory Authority (“FINRA”) to act jointly in developing a national market system and to implement a CAT to collect and identify every order, cancellation, modification, and trade execution for all exchange-listed equities and equity options in the U.S. market. The SEC argues that a CAT would increase the data available to them to investigate illegal activities, will significantly improve their ability to reconstruct market events quickly and efficiently, and will significantly increase the ability of the SEC to monitor the broad market structure and assess how new regulations affect the market. According to former SEC Chairman Schapiro the purpose is: “a consolidated audit trail that accurately tracks orders throughout their lifecycle and identifies the broker-dealers handling them [to] provide us with an unprecedented ability to effectively oversee the markets we regulate.” The SEC hopes that the CAT can capture patterns in real-time and identify market manipulation. FINRA submitted a blueprint for a CAT based on one of FINRA’s existing systems and they estimated that it would have an 18-month development schedule and its cost would be between $100 and $125 million.

140 See id. (describing what the CAT rules would require).
141 See id. (discussing the advantages of having a CAT).
142 Id. (quoting the former SEC Chairman regarding the benefits of the Consolidated Audit Trail).
143 See PATTERSON, supra note 2, at 291 (describing how the SEC hoped that the CAT would capture manipulative patterns in real-time).
144 See Letter from Joan C. Conley, Senior Vice President, The NASDAQ OMX Grp., to Elizabeth M. Murphy, Secretary, U.S. Sec. & Exch. Comm’n (Nov. 18, 2011), available at www.perma.cc/0816JaRuSti [hereinafter Letter from Joan Conley to Elizabeth Murphy] (discussing how FINRA has presented a CAT proposal with an 18-month development schedule and a cost between $100 million and $125 million).
C. Approval of Other Dark Pools

On July 5, 2012 the SEC approved an initiative called the Retail Liquidity Program (“RLP”) aimed at luring retail investors with more attractive prices. Retail investors using RLP would be offered price quotes in fractions of a cent. The RLP works along the same lines as dark pools because market makers using this new trading platform will not be required to make their prices public. The NYSE argues that the RLP provides more transparency than dark pools because each transaction will be signaled publicly and will indicate which stock was traded and whether it was a purchase or sale order. NASDAQ and BATS have also taken steps to get approval for their own dark pool programs, which are similar to NYSE’s RLP with some minor differences.

III. Analysis

The SEC hopes that if its proposals for the regulation of dark pools are implemented, all quotes would be treated equally and be subject to the same disclosure rules. The proposals would help foster a national market and reduce market fragmentation by increasing the amount of trading platforms that are required to display best prices to the market, and the implementation of the proposals would

145 See Exchange Act Release No. 34-67347 (July 3, 2012), available at www.perma.cc/0J7QK6vsh2Z (introducing the proposed rule change establishing the Retail Liquidity Program); Ackerman, supra note 15 (discussing the SEC’s approval of a dark pool operated by the NYSE); Matthew Philips, NYSE Dims the Lights to Attract Trading, BLOOMBERG, July 11, 2012, archived at www.perma.cc/0g3PfA7C2vn (describing the SEC’s approval of the NYSE’s pilot program called the Retail Liquidity Program).

146 See Philips, supra note 145 (stating that traders using RLP would be allowed to trade with share prices in fractions of a cent).

147 See Philips, supra note 145 (noting that market makers using RLP would not be required to make their prices public).

148 See Ackerman, supra note 15 (describing how the RLP is more transparent than a dark pool).

149 See Steinert-Threlkeld, supra note 127 (noting the steps NASDAQ took to obtain permission from the SEC to start its own dark pool); Kim, infra note 212 (describing BATS’s plan for operating its own dark pool).

150 See Basil V. Godellas & Keelin Griffin, SEC Proposes Regulation of Dark Pools, MONEY MANAGERS COMPLIANCE GUIDE, Jan. 2010, Vol.16, No. 7, 1-2 (discussing that the SEC seeks to treat all quotes equally and subject them to the same type of disclosure).
help ensure that the market takes into consideration all of the information available for the determination of prices.\(^{151}\) However, the SEC will not be able to realize these goals through the implementation of its proposals in their current state because they appear to be too draconian, unfocused, or will lead to unintended negative consequences.\(^{152}\) Dark pools should not be regulated too heavily because dark pools serve an important market function, because heavy regulation may cause more problems than it resolves, and because the SEC should focus most of its attention on HFT.\(^{153}\)

A. SEC Proposal I

The SEC proposes that the definitions of “bid” and “offer” should be amended to include actionable IOIs and therefore should be subject to disclosure requirements.\(^{154}\) There is some merit to this proposal because an ATS that holds itself out to be dark but displays actionable trading interests to multiple parties should not be considered truly dark.\(^{155}\) These ATSs should not be considered truly dark

\(^{151}\) See Regulation of Non-Public Trading Interest, supra note 107, at 61,229 (describing how chief objectives of the national market system are coordination of markets, reduction of fragmentation, and elimination of tiered markets); Godellas & Griffin, supra note 150, at 2-3 (stating what the SEC hopes to achieve if its proposals are implemented).

\(^{152}\) See Letter from Leslie Seff, President, Matthew B. Mgmt., Inc., to U.S. Sec. & Exch. Comm'n 1 (Feb. 22, 2010), available at www.perma.cc/0zQy5Vm9LuU [hereinafter Matthew B. Mgmt.] (suggesting that some of the SEC’s proposals are so heavy handed that they will likely force liquidity away from the market); letter from Joseph M. Velli, Chairman & CEO, BNY ConvergEx Grp., LLC, to Elizabeth M. Murphy, Secretary of U.S. Sec. & Exch. Comm'n 17 (Feb. 22, 2010), archived at www.perma.cc/0iM2UyJN3a5 [hereinafter Letter from Velli to Murphy] (noting that the Commission’s proposals could actually result in decreased, not increased transparency).

\(^{153}\) See Letter from Karrie McMillan, Gen. Counsel, Inv. Co. Inst., to Elizabeth M. Murphy, Secretary, U.S. Sec. & Exch. Comm'n 3 (Feb. 22, 2010), archived at www.perma.cc/5TY9-FUS2 [hereinafter Letter from McMillan to Murphy] (recognizing the need for regulators to focus on abusive trading practices).

\(^{154}\) See Regulation of Non-Public Trading Interest, supra note 107, at 61,211-12 (introducing the Commission’s plan to amend the definition of “bid” or “offer” to apply expressly to actionable IOIs).

\(^{155}\) See Letter from P. Mats Goebels, Managing Dir. & Gen. Counsel, Inv. Tech. Grp., Inc., to Elizabeth M. Murphy, Secretary, U.S. Sec. & Exch. Comm'n 3 (Feb. 22, 2010), archived at www.perma.cc/0tgPA5MYS [hereinafter Letter from Goebels to Murphy] (stating that an ATS that displays actionable trading interests is not actually dark).
because they are basically providing an internal quote to subscribers and thus they should be subject to quotation regulations.\footnote{156 See id. (suggesting that an ATS that presents itself as dark but displays actionable trading interests is not dark).} Despite its merit, the proposal is not ready to be implemented as-is because the SEC did not explicitly define what constitutes an “actionable IOI.”\footnote{157 See Regulation of Non-Public Trading Interest, supra note 107, at 61,210-13 (discussing the proposals and the reasons for it but never explicitly defining an actionable IOI).} Should the SEC decide to implement this proposal, it is critical that the SEC explicitly define what an actionable IOI is.\footnote{158 See Letter from Goebels to Murphy, supra note 155, at 4 (describing how failing to define what an actionable IOI is unfair to the industry because it could lead to ATSS trying to structure their IOIs in good faith to avoid disclosure only to later discover that they are in fact considered actionable).} Some dark pool firms may have some interest in toeing the line between actionable and non-actionable IOIs in order to avoid disclosure.\footnote{159 See Letter from Goebels to Murphy, supra note 155, at 4 (suggesting that failure to properly define actionable IOIs could lead to ATSSs improperly structuring their IOIs).} Failure to properly define an actionable IOI could lead to firms spending valuable money and resources in making sure that they are not using what they understand to be actionable IOIs only to later find out their definition was incorrect according to the SEC.\footnote{160 See Matthew B. Mgmt., supra note 152, at 17 (discussing how some ATSSs will start including their best orders in the public stream but others will choose or will be forced to go completely dark).} Failure to institute a reasonable definition for actionable IOIs may lead to trades going completely dark and will work against the SEC’s goal of achieving greater transparency.\footnote{161 See Matthew B. Mgmt., supra note 152, at 6-13 (describing how disclosure requirements for actionable IOIs would not lead to a proper regulatory balance between light and dark liquidity and could lead institutional investors further in the dark).} Some opponents argue that if ATSSs are required to report their quotes publicly, institutional investors will move their orders further away from public markets, a result that the SEC seeks to avoid.\footnote{162 See Letter from Goebels to Murphy, supra note 155, at 4 (describing how failing to define what an actionable IOI is unfair to the industry).} Despite these arguments, the SEC must also make sure that its regulation is fair to all market pa-
participants.\textsuperscript{163} ATSs should have the option to follow the requirements to keep from having to post public quotes.\textsuperscript{164} However, to allow firms to stay dark and use actionable IOIs would be unfair because these firms could stay anonymous yet they could still post quotes in the market.\textsuperscript{165}

\section*{B. SEC Proposal II}

The SEC’s second proposal is to lower the trading threshold at which a dark pool must publically display its best price from 5\% to .25\% of the average daily outstanding stock volume.\textsuperscript{166} In its current form, this proposal appears to be too draconian to have the positive effects that the SEC intends.\textsuperscript{167} The SEC may be better served if it reduces the threshold to 2\% or 1\% and then monitors the effects on the market instead of reducing the threshold to such a low amount all at once.\textsuperscript{168} One possible unintended effect of lowering the trading

\textsuperscript{163} See Regulation of Non-Public Trading Interest, \textit{supra} note 107, at 61,211 (stating that the proposals are intended to promote transparency, fairness, and efficiency).

\textsuperscript{164} See Letter from Goebels to Murphy, \textit{supra} note 155, at 3 (discussing how they agree with the SEC in that they believe that a truly dark ATS that does not display an actionable IOI to more than one person should be exempt from transparency requirements); see also Letter from John A. McCarthy, Gen. Counsel, GETCO, LLC, to Elizabeth Murphy, Secretary, U.S. Sec. & Exch. Comm’n 3-4 (Feb. 22, 2010), \textit{archived} at \url{www.perma.cc/0T4JAG7mxkf} [hereinafter Letter from McCarthy to Murphy] (supporting the SEC’s proposal to eliminate uncertainty by requiring quotes from actionable IOIs).

\textsuperscript{165} See Letter from Goebels to Murphy, \textit{supra} note 155, at 3 (agreeing with the SEC in that they believe that a truly dark ATS that does not display an actionable IOI to more than one person should be exempt from transparency requirements); Letter from McCarthy to Murphy, \textit{supra} note 164, at 3 (defining a “truly dark” ATS as one that does not display orders to any users of the trading system).

\textsuperscript{166} See Regulation of Non-Public Trading Interest, \textit{supra} note 107, at 61,210 (presenting the Commission’s proposition to lower the 5\% volume threshold to .25\%).

\textsuperscript{167} See Matthew B. Mgmt., \textit{supra} note 152, at 1 (suggesting that some of the SEC’s proposals are so strict that they will likely force liquidity away from the market).

\textsuperscript{168} See Letter from Ann Vlcek, Managing Dir. & Assoc. Gen. Counsel, Sec. Indus. & Fin. Mkt. Ass’n, to Elizabeth Murphy, secretary of the U.S. Sec. & Exch. Comm’n 5 (Feb. 18, 2010), \textit{archived} at \url{www.perma.cc/0zLbGzT8Up7} [hereinafter Letter from Vlcek to Murphy] (discussing how lowering the threshold from 5\% to 1\% would promote the Commission’s goal of improving the quality of public quotation data); see also Letter from Kimberly Unger, Exec. Dir., Sec. Traders Ass’n of N.Y., Inc., to Elizabeth M. Murphy, U.S. Sec. & Exch. Comm’n 4 (Feb. 17,
threshold to .25% is that it could create a tiered playing field between ATSSs and over the counter (“OTC”) market makers.\textsuperscript{169} It would create a tiered playing field because OTC market makers are required to include their best orders for NMS stocks in the public quote stream if they have 1% or more of the average daily trading volume of an NMS stock in the most recent quarter while ATSSs would be required to report if their average trading volume is just .25%.\textsuperscript{170}

Reducing the threshold by less extreme proportions would also likely help avoid the unintended effect that institutional investors may start diverting significantly sized trades to block trading desks away from the ATSSs.\textsuperscript{171} In addition to trading away from ATSSs, institutional investors may respond by dividing their large-sized orders and distributing them around the market to disguise their trades, which would increase market fragmentation and move the SEC further from its goals.\textsuperscript{172} Some commentators argue that reducing the volume threshold to .25% is reasonable because the commission has noted that few dark pools have exceeded the current 5% threshold.\textsuperscript{173} However, the fact that few dark pools have breached the current 5% threshold could be attributed to the fact that the dark pool operators are actively trying to stay under the threshold.\textsuperscript{174} A reasonable op-

\textsuperscript{169} See Letter from Velli to Murphy, supra note 152, at 18 (discussing how the Commission’s proposed amendment would create a tiered playing field between ATSSs and OTC market makers).

\textsuperscript{170} See Letter from Velli to Murphy, supra note 152, at 18 (noting that lowering the trading threshold to .25% would create a tiered playing field between ATSSs and OTC market makers because OTC market makers have to report best price at 1% while the proposal would make ATSSs report at .25%).

\textsuperscript{171} See Letter from Velli to Murphy, supra note 152, at 19 (discussing how institutional investors may begin to trade on block trading desks instead of ATSSs if the trading threshold is reduced too drastically).

\textsuperscript{172} See Letter from Velli to Murphy, supra note 152, at 19 (describing how if the trading threshold is reduced too low that investors may resort to chopping up their larger-sized orders into smaller pieces and dispersing them in the market).

\textsuperscript{173} See Letter from McCarthy to Murphy, supra note 164, at 4 (noting that few dark pool ATSSs have exceeded the current 5% trading threshold).

\textsuperscript{174} See Letter from Unger to Murphy, supra note 168, at 4 (stating that the 5% trading threshold has been extremely successful at allowing innovative firms to enter the market and compete successfully but reducing the threshold to .25% would drive many participants out).
tion for the SEC would be to reduce the threshold to 2% or 1% and monitor how the dark pools react and if the results are positive, the SEC may deem it proper to finally reduce the threshold to .25%.175

C. SEC Proposal III

The SEC’s third proposal would require ATSs to report real-time post-trade data.176 Instead of requiring real-time disclosure of trades as they occur, the SEC should require real-time disclosure of trades at the end of the day and in certain circumstances several days later depending on the nature of the securities in question.177 The problem with real-time post-trade data reporting is that it creates a risk of information leakage, which can be used by some market participants at the expense of other investors.178 Market participants may be able to determine the identity of the buyers and sellers if a trade report is attributed to a certain ATS in real-time on the consolidated tape.179 These market participants can then use this information to trade against institutional investors or enter into transactions that will affect the price of the security in the ATS.180 This issue is exacerbated by the fact that high-frequency traders, equipped

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175 See Letter from Vlcek to Murphy, supra note 168, at 5 (commenting that reducing the threshold to 1% would be more appropriate than .25% because it would promote the Commission’s goal of improving the quality of public quotation data without too many added costs).

176 See Regulation of Non-Public Trading Interest, supra note 107, at 61,210 (presenting the Commission’s proposal to improve post-trade transparency of dark pools and other ATSs by requiring real-time disclosure of the identity of ATSs on the reports of their executed trades).

177 See Letter from Unger to Murphy, supra note 168, at 5 (noting how some firms have expressed concern that even end of day reporting would not meet their needs when they are executing block orders that require execution over the course of several days).

178 See Letter from Velli to Murphy, supra note 152, at 20 (discussing how the Commission’s proposal for real-time trade reporting could signal institutional investor trading strategies and negatively impact market positions).

179 See Letter from Velli to Murphy, supra note 152, at 20 (describing how attributing trades to specific ATSs in real-time can lead to the exposing of the buyers and sellers involved)

180 See Letter from Scott C. Goebel, Senior Vice President & Gen. Counsel, FMR Co., Fidelity Inv., to Elizabeth M. Murphy, Secretary, U.S. Sec. & Exch. Comm’n 4 (Feb. 23, 2010), archived at www.perma.cc/0FKpQPki23u (discussing how they believe that there is a substantial risk that market participants will use real-time disclosures to identify trading patterns of large institutions).
with the fastest trading technology, are able to process this information and can quickly post their own trades to exploit the exposed investor.\footnote{See Letter from Velli to Murphy, \textit{supra} note 152, at 21 (noting that high frequency traders are able to digest trade location data quickly and place trades in other markets to affect the prices in the ATS).}

The interests of market participants can be more appropriately balanced by requiring post-trade reporting at the end of the day for most securities and post-trade reporting requirements over the course of several days for thinly traded securities rather than requiring real-time post-trade reporting.\footnote{See Letter from McCarthy to Murphy, \textit{supra} note 164, at 5 (discussing how end-of-day identification of ATS trades would accomplish the Commission’s goal of allowing the public to identify trade volume while still protecting the nature of dark pools); \textit{see also} Letter from Unger to Murphy, \textit{supra} note 168, at 5 (describing how end of day disclosure would balance the need for anonymity and the public’s desire for information but noting that in some instances reporting over several days would be more prudent).} By scheduling post-trade reporting at the end of the day, the SEC would allow investors to avoid predatory HFT activity and the market would still receive useful information about the trades that occurred during the day.\footnote{See Letter from John Ingrilli, Managing Dir. & COO, UBS Equities-Americas, to Elizabeth M. Murphy, Secretary, U.S. Sec. & Exch. Comm’n 8 (Feb. 22, 2010), \textit{archived at} www.perma.cc/0JLJ25YoG3d (discussing how an end of day reporting of ATS liquidity would address transparency concerns and will enable investors to protect themselves from disadvantageous information leakage).} If the SEC is convinced that real-time post-trade data is necessary to achieve its goals, requiring real-time trade reporting to go directly to the SEC for regulatory purposes and requiring post-trade disclosure at the end of the day for the rest of the market could be a reasonable option.\footnote{See Letter from Vlcek to Murphy, \textit{supra} note 168, at 2 (suggesting that if the SEC wants real-time reporting they would support their decision if the SEC seeks such reporting for regulatory purposes only).} This alternative is reasonable because it would allow the SEC to receive information from trades as soon as possible so they can take action on regulatory matters but it would also ease fears that opportunistic traders could use real-time trade reporting data to disadvantage others.\footnote{See Letter from Vlcek to Murphy, \textit{supra} note 168, at 4 (suggesting that real-time disclosure going only to regulators would allow the SEC to achieve its goal of greater transparency while guarding against the dangers of real-time reporting going to competitors).}
D. Exception to the SEC’s Proposals

To impose the proposals on investors’ larger trades would be burdensome, would defeat the purpose of using dark pools, and could cause investors to go completely dark or trade in ways that contribute to the fragmentation of the market. The SEC believes that an exception needs to be made for investors who use ATSs for large trades. Accordingly, the SEC’s proposals do not apply to IOIs dealing with orders valued at $200,000 and above. The reporting exception for large trades is a good feature of the SEC’s proposals because one of the main reasons for why institutional investors conduct trades in dark pools is to minimize the impact their large trades cause on the market and especially to escape front-running from high-frequency traders.

Although having a large order exception to the SEC’s proposals is an effective measure, the $200,000 criterion for large orders is too rigid. The exemption should be modified to include not only the dollar value of a trade but a number of different factors such as shares and overall trade volume. Specifically, some commentators have suggested that the SEC should adopt an exception not only for trades with values of $200,000 or greater but also for orders of 10,000 shares or more or for orders that represent 1% of that particular security’s average daily trading volume. Having an exception

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186 See Regulation of Non-Public Trading Interest, supra note 107, at 61,210 (noting that the Commission recognizes the need for targeted size discovery mechanisms to allow investors to trade in large size more efficiently).
187 See Regulation of Non-Public Trading Interest, supra note 107, at 61,234 (recognizing a need for investors trading in large sizes to trade more efficiently).
188 See Letter from Richard L. West, Gen. Counsel, Pipeline Trading Sys. LLC, to Elizabeth M. Murphy, Secretary, U.S. Sec. & Exch. Comm’n (Feb. 22, 2010), archived at www.perma.cc/0EsdgZzFfAM (describing how trading large orders is critical for institutional investors to minimize information leakage).
189 See id. (discussing how the limits of the exception undermine the goal of protecting institutional investors that trade in blocks).
190 See Letter from McMillan to Murphy, supra note 153, at 7 (stating that the exception for large orders should include not only the $200,000 trade value criteria but also criteria such as number of shares in a trade or percentage of the average daily trading volume of the security).
191 See Letter from Unger to Murphy, supra note 168, at 3 (suggesting that the SEC should make the block exemption orders with the value of $200,000, orders of
that includes other considerations in addition to the value of the trade would be a more reasonable option because depending on how actively the stock is traded $200,000 may or may not be a reasonable definition of a large block order because there are many small cap securities where $200,000 represents more than 50% of the average daily trading volume.\(^{192}\) Therefore, having a large order exemption should generate positive results but the definition of what constitutes a large order should reflect the fact that different securities will have more liquidity than others.\(^{193}\)

**E. CAT**

Another important action the SEC is taking in response to regulating HFT and dark pools is the implementation of a CAT.\(^{194}\) Implementing the CAT would address the former SEC Chairman’s desire to construct a system capable of accurately tracking orders, identifying the broker-dealers involved, and empowering the SEC to effectively oversee the market.\(^{195}\) Realizing its goal of creating a CAT is a very important step for the SEC in dealing with HFT and the uncertainty of dark pools because currently the tools at the SEC’s disposal are woefully inadequate to effectively regulate the market.\(^{196}\) Given the current fragmented nature of the market, creating a CAT is necessary to maintain fair markets and permit efficient regulatory reviews.\(^{197}\)

10,000 shares or more, or orders that represent 1% of the stock’s average daily trading volume).

\(^{192}\) See Letter from Unger to Murphy, *supra* note 168, at 4 (discussing how $200,000 may not be the best threshold when dealing with thinly traded securities).

\(^{193}\) See Letter from Goebels to Murphy, *supra* note 155, at 5 (stating that a $200,000 exceptions is a one-size-fits-all model that doesn’t take into consideration the liquidity of securities).

\(^{194}\) See SEC CAT Approval, *supra* note 139 (discussing the implementation of a CAT and how it fits into the SEC’s goals for regulation).

\(^{195}\) See SEC CAT Approval, *supra* note 139 (quoting what Mary Schapiro believes the CAT will help the SEC achieve).

\(^{196}\) See Consolidated Audit Trail, Exchange Act Release, No. 67457, 104 SEC Docket 748, 2 (July 18, 2012) (discussing how the regulatory infrastructure that the SEC currently relies on is outdated and inadequate to effectively regulate a complex national market system).

\(^{197}\) See Letter from Daniel J. Connell, CEO, Correlix, Inc., to Elizabeth M. Murphy, Secretary, U.S. Sec. & Exch. Comm’n (Feb. 4, 2011), archived at www.perma.cc/0ziu2PBgLZM [hereinafter Letter from Connell to Murphy] (de-
Furthermore, the CAT will dramatically improve regulators’ response time. The SEC currently monitors the market by using data obtained from firms.\(^{198}\) This current process is not effective because it takes months to gather trading data after a significant market event because the information is in different formats or is not easily accessible to regulators.\(^ {199}\) The SEC’s CAT would significantly increase the speed with which regulators are able to collect data and begin analyzing it because it would require the data to be uniform and the data would be collected in one place instead of several.\(^ {200}\) In constructing the CAT it is extremely important that the system is built with technology and an infrastructure capable of handling growing trade volumes because trade volume will most likely continue to increase well into the future.\(^ {201}\) In addition, the CAT must be flexible enough to handle new products.\(^ {202}\) Initially, the CAT will only cover SEC-regulated equities and options, which will create gaps in regulation, therefore the SEC should focus on creating a CAT capable of accepting new security types to avoid these gaps.\(^ {203}\)

Some opponents of the CAT argue that its costs are excessive and that the CAT will take too long to implement.\(^{204}\) The SEC has

\(^{198}\) See Jesse Hamilton & Nina Mehta, SEC Backs Away From Real-Time Data in Market Tracking System, BUS. WK. (Feb. 9, 2012), archived at www.perma.cc/0CBgTMVEEL1 (stating how the SEC currently keeps track of the market using data from outside firms).

\(^{199}\) See id. (noting that it took three months to gather trading data from the May 2010 crash).

\(^{200}\) See Anthony Becker, Consolidated Audit Trail: More Than One Way to Skin This CAT, ADVANCED TRADING, (Sept. 14 2012), archived at www.perma.cc/0tifnwMJER1 (discussing how the CAT would provide a centralized data location that would capture all relevant information).

\(^{201}\) See Letter from Connell to Murphy, supra note 197, at 2 (insisting that the CAT should be built with technology and infrastructure that allows it to handle growing trading volumes).

\(^{202}\) See Letter from Connell to Murphy, supra note 197, at 2 (discussing how the CAT must be flexible enough to allow for new products and market models).

\(^{203}\) See Anish Puaar, “Disappointingly Weak” CAT Could Go Further, THE TRADE NEWS (July 17, 2012), archived at www.perma.cc/02WrfHxYppz (highlighting that the CAT covers SEC-regulated equities and options, which could lead to abusive market behavior).

\(^{204}\) See Tom Steinert-Threlkeld, SEC Mandates Creation of Consolidated Audit Trail, SEC. TECH. MONITOR (July 11, 2012), archived at
eliminated some of the cost by abandoning the efforts to have the CAT operate in real-time, yet the price remains high.205 This problem of high cost and slow implementation can be dealt with by using existing infrastructure and building over it to match the parameters that the SEC is looking for.206 FINRA’s blueprint for a CAT based on one of its existing systems at a fraction of the cost and development time as other quoted systems could be a viable option.207 Although FINRA’s system would only cover equities instead of equities and options, like the SEC is intending, this is a clear sign that leveraging existing systems and infrastructure could help reduce the overall cost and implementation time of the CAT.208

Critics are also concerned that the CAT will allow for market participants to have access to non-public information about other competitors.209 However, this fear can be resolved if the SEC assigns an impartial party that does not operate in the market to conduct surveillance on the CAT for regulatory purposes only.210 Finally, a CAT would help calm investors’ fears about dark pools by providing confidence that even if they are not certain what goes on inside dark pools, at least the SEC has the proper tools in place to keep the market safe from fraudulent trading activity.

www.perma.cc/0jcPwNHc1UV (describing how the SEC estimated that the CAT would cost $4 billion upfront to build and $2 billion a year to operate); see also John D’Antona Jr., CAT’S Long And Winding Road, TRADERS MAGAZINE (Mar. 2012), archived at www.perma.cc/0BV24dRfZPq (discussing how the CAT may not be functional until late 2013 or 2014).

205 See Lisa Allen, SEC Imposes Audit Trail Requirements, THE DEAL PIPELINE (July 12, 2012), archived at www.perma.cc/0p9YN1VZRK1 (quoting a SIFMA executive who called the SEC’s move away from real-time reporting a more manageable and cost-effective approach to the CAT).

206 See Letter from Connell to Murphy, supra note 197, at 2 (discussing how cost and time savings can be achieved by using existing infrastructure).

207 See Letter from Joan Conley to Elizabeth Murphy, supra note 144, at 2 (describing FINRA’s blueprint for a proposed CAT system).

208 See Letter from Joan Conley to Elizabeth Murphy, supra note 144, at 2 (stating that FINRA’s system would only cover equities).

209 See Letter from Eric Swanson, Gen. Counsel, BATS Exch., Inc., to Elizabeth M. Murphy, Secretary, U.S. Sec. & Exch. Comm’n (Aug. 9, 2010), archived at www.perma.cc/047K9BeUUp1 (discussing the concerns that implementing the CAT could lead to competitors receiving non-public information).

210 See id. at 3 (suggesting that concerns of non-public information leakage can be addressed by mandating that a single regulator not operating in the market should be tasked with conducting market surveillance using the CAT).
F. Approval of Other Dark Pools

The SEC is attempting to even the playing field between dark pools and traditional exchanges by allowing several exchanges to open dark pools with some slight differences. NYSE, NASDAQ, and BATS have all taken steps to get approval from the SEC to start their own dark pools. The new programs will allow the exchanges to quote share prices in fractions of a cent and will straddle the line between a dark pool and a fully lit exchange because the lower sub-penny prices will not be displayed but investors will be informed if better prices are available. BATS’s program is largely the same except that it will allow retail orders to be executed at more than one price point thus lending itself to order flexibility. Although most investors will likely not take advantage of the dark pools launched by the exchanges, it is a step in the right direction because it increases accessibility to the dark pools that are mostly out of reach of the average investor.

In addition to the protection against the market impact caused by large trades, dark pools have also been effective for avoiding detection from HFT algorithms, which have become increasingly sophisticated and are able to affect even smaller investors. Smaller retail investors have been largely shut out of participating in dark pools but the exchanges are changing this trend by releasing dark

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211 See Nina Mehta, NYSE Retail Order Pilot Draws Competing Plans From Bats, Nasdaq, BLOOMBERG (July 18, 2012), archived at www.perma.cc/0Fk8uQnZn5J (discussing how the traditional exchanges’ programs will attempt to attract flow from dark pools by using a different incentive system than maker-taker).

212 See Ackerman, supra note 15 (describing the SEC’s approval of a dark pool operated by the NYSE); see also Steinert-Threlkeld supra note 127 (discussing NASDAQ’s plan to follow the NYSE’s lead and start its own dark pool); see also Jim Kim, BATS To Launch Retail Dark Pool, FIERCE FINANCE IT (Aug. 22, 2012), archived at www.perma.cc/0C1HooYLkGB (noting that BATS has followed the NYSE’s lead and has started its own dark pool with some differences).

213 See Philips, supra note 145 (discussing the features of the NYSE’s RLP).

214 See Kim, supra note 212 (describing the features of BATS’s retail dark pool).

215 See John Grugirich, Dark Pools 101, THE MOTLEY FOOL (Nov. 21, 2012), archived at www.perma.cc/0FXcengVzdtc (noting that although dark pools are usually out of the reach of average investors, the Retail Liquidity Program would focus on retail equity orders).

216 See PATTERSON, supra note 2, at 282 (discussing how over time HFT has a monstrous impact on ordinary investor’s 401(k)).
pool programs that focus on obtaining business from these investors.217 Besides anonymity, which most retail investors will not need because of their low trading volume, these new dark pools will allow retail investors to receive better prices because the SEC is authorizing the exchanges to quote in fractions of a cent.218 Some opponents argue that allowing the exchanges to run their own dark pools will create a two-tiered system where some investors trade in $.001 increments while others trade in $.01 increments but the advantages to retail investors outweigh the negatives.219 Drawing more retail business into the market will likely increase the number of electronic firms, who are in search of unsophisticated investors to trade with, thus increasing total liquidity in the market.220 Electronic firms will be drawn by the increase in the retail business because they would rather trade with average investors than hedge funds or portfolio managers, who usually have better information on the securities they trade.221 Furthermore, the increased competition will force market makers to improve execution and lower their prices.222

A final argument against granting the exchanges the right to run their own dark pools is that it will further contribute to the decrease in the amount of trading that occurs on displayed markets and

217 See John Grgurich, ‘Dark Pools’: Are Hidden Trades Undermining the Stock Market?, DAILYFINANCE (July 9, 2012), archived at www.perma.cc/RDJ4-B7QU (describing how dark pools are private exchanges used by institutional investors and operate out of sight of the average investor).
218 See Nina Mehta, BATS Retail Stock Program Starts Dec. 17 In NYSE Challenge, BUS. Wk. (Nov. 29, 2012), archived at www.perma.cc/J7T2-BR9H (discussing how orders could be submitted at a fraction of a cent).
219 See Letter from James J. Angel, Assoc. Professor of Fin., Georgetown University, to U.S. Sec. & Exch. Comm’n 2 (July 22, 2013), archived at www.perma.cc/02JKzt2ZhYK [hereinafter Georgetown University] (suggesting that the new rule would create a two-tiered market between those who pay $.001 and those who pay $.01).
220 See PATTERSON, supra note 2, at 179 (discussing how electronic firms prefer to trade with retail investors instead of sophisticated investors).
221 See Philips, supra note 145 (noting that market makers have an incentive to trade using the dark pools run by the exchanges because all orders will come from individual investors and market makers would rather trade with an armchair investor than a professional).
222 See Rob Daly, SEC Opens Pandora’s Box, THE TRADE NEWS (Aug. 28, 2012), archived at www.perma.cc/0dFYJi5mE9E (discussing how alternative execution venues are forcing market makers to improve their execution quality and lower prices).
will harm the accuracy of security pricing. Specifically, investors will be less likely to submit their orders publically and this will cause a widening of bid-ask spreads. These arguments may not have much merit because despite sharing some of the same characteristics as dark pools, the exchange-run dark pools would ensure greater transparency and liquidity because investors would be informed when there is a better price available even if the quote is not public. Finally, failure to give retail investors the ability to trade in dark pools would perpetuate the belief that there is a two-tiered market favoring institutional investors and other insiders.

IV. Conclusion

The SEC appears to be taking positive measures in dark pool regulation. Despite a desire to restore the faith in the market and encourage investors to trade in the public exchanges, the SEC should regulate dark pools minimally. Dark pools serve a valuable purpose by allowing investors to protect themselves from predatory trading behavior, thus they should not be eliminated or regulated too heavily. Although the SEC proposals are a step in the right direction, they need modification because implementation in their current form would likely cause too many unintended effects in the market. The SEC proposal calling for the definitions of “bid” and “offer” to be amended to include actionable IOIs and subject them to disclosure requirements should generate positive results. However, the SEC must explicitly define actionable IOI so that ATSs that desire to comply to avoid disclosure receive the guidance they need to do so. The SEC’s second proposal to lower the trading threshold at which a dark pool must publically display its best price from 5% to .25% of

223 See Grgurich, supra note 217 (describing how dark-pool trading hurts price discovery).
224 See Georgetown University, supra note 219, at 2 (noting that allowing the exchanges to run their own dark pools will make investors less likely to submit orders into the public order books and could lead to wider bid-ask spreads).
225 See Philips, supra note 145 (stating that despite the fact that the lower sub-penny prices from the exchange run dark pools will not be displayed, the public data feed will indicate when there are better prices available).
226 See Jack J. Gravelle, Dark Pools and the Two-Tiered Market, FED. SEC. LAW BLOG (Nov. 10, 2009), archived at www.perma.cc/04zfyxVN3c4 (discussing how dark pools give rise to a belief that the public does not have fair access to the best prices because of the existence of a two-tiered market).
the average daily outstanding stock volume should be modified to a less drastic decrease in the threshold. The modest decrease in the threshold should then be monitored to see if a further decrease would be reasonable. The SEC’s third proposal that requires ATSs to report real-time post-trade data should be modified to require post-trade reporting at the end of the day and in some cases several days later to safeguard against predatory behavior from opportunistic traders. The SEC’s exceptions to these proposals for orders valued at $200,000 and above is an effective measure because it protects large institutional investors who need anonymity for their large trades, but the exceptions should be modified to include other criteria for large orders such as orders of 10,000 shares or greater because $200,000 may not be the appropriate criteria for all securities.

The CAT is very important to the SEC’s goal of bringing confidence back to investors and goal of effectively regulating the markets, including dark pools. However, the SEC must find ways to cut the costs of the CAT and speed up its implementation. The CAT will likely be the best line of defense against flash crashes that are becoming increasingly common, will give the SEC an opportunity to gain some ground against better equipped investment firms, and will provide the SEC with a more effective way to monitor dark pools. Allowing NYSE, NASDAQ, and BATS the opportunity to run their own dark pools will generate favorable results by improving investor confidence in the markets because it will give regular investors access to dark pools and it will improve the efficiency of the market because the competition will push market makers to improve their service. However, many investors will likely not take advantage of more accessible dark pools so the effect may be negligible. Although dark pools have dramatically grown in number in a short matter of time, the SEC should not focus all of its attention on them. Dark pools are merely the solution that firms devised to address the real issue: high-frequency traders. To increase trading transparency, the SEC would be better served by focusing on HFT trading and predatory behavior in the market. Attempting to attack dark pools will likely have negative consequences because investors will shun the public markets completely or they may develop new ways to keep their orders secret, methods that the SEC is even less equipped to regulate than dark pools.