Knowledge is Salvation: Informing Investors By Regulating Disclosures to Safeguard Best Execution

Jeremy Schara
NOTE

KNOWLEDGE IS SALVATION: INFORMING INVESTORS BY REGULATING DISCLOSURES TO SAFEGUARD BEST EXECUTION

I. INTRODUCTION

Command and control of information—knowledge—sustain the powerful over the ill informed.¹ In the securities industry, informational disparities and advantages translate into massive gains and catastrophic losses.² Today, the world of high-frequency trading has emerged from the shadows and sparked a technological battle between those who are informed and those who are not.³ Regulators, industry leaders, and scholars have continuously addressed questions hovering around high-frequency trading since the release of Michael Lewis’s book, Flash Boys.⁴ Firms engaging in high-frequency trading use advanced technologies, such as fiber optics, co-location, and advanced algorithms, to implement their trading strategies.⁵ Technology allows high-frequency traders to receive and transmit data at an extremely high rate.⁶ By doing so, they swiftly execute trades based on information

² See id. (calling proprietary trading a “meritocratic” type of trading that can make such traders enormous amounts of money).
³ See infra Part II.C.
⁴ MICHAEL LEWIS, FLASH BOYS: A WALL STREET REVOLT (2013); see Rob Tricchinelli, ‘Markets Are Not Rigged,’ SEC Chair Says of High Speed Trading, BLOOMBERG BNA (Apr. 29, 2014), http://news.bna.com/srln/SRLNWB/split_display.adp?fedfid=45840823&vname=srlr46861&split=0 (noting that “[s]ince the publication of [Flash Boys], the FBI, SEC and New York State Attorney General Eric Schneiderman have all said they are investigating high-frequency traders”).
⁶ Id. at 385-86 (citing the improvements in communication and the ability to trade at an ever-increasing rate).
Recent investigations into high-frequency trading reveal that the strategies implemented, and not the technology used to implement those strategies, should be the focus of any legal debate surrounding high-frequency trading. Importantly, the technology used by high-frequency traders is not illegal. But, the way the technology works may afford traders an opportunity to engage in a strategy that violates best execution, or slips into the realm of market manipulation.

The use of fees and rebates on various exchanges incentivizes traders, specifically high-frequency traders, to trade within any given exchange. Most of these exchanges pay traders for being “market-makers.” Exchanges happily pay these small rebates to high-frequency traders that they see milliseconds before other market players—because of their technology.


8. See Bhupathi, supra note 5, at 382-85 (describing questionable strategies arising from high-frequency trading, and explaining that the technology itself is not at the heart of high-frequency trading issues).

9. See Tricchinelli, supra note 4 (stating that without the front-running of trades, the use of exchange data through high-frequency trading technology is simply not illegal).

10. See Christie Smythe, PR Newswire Reaches Deal With Scheiderman in HFT Probe, BLOOMBERG BNA (Apr. 30, 2014), http://www.bloomberg.com/news/articles/2014-04-30/pr-newswire-reaches-deal-with-scheiderman-in-hft-probe (asserting that high-frequency trading is the “new generation of market manipulators” (quoting Attorney General Eric Schneiderman)). “Best execution” refers to the affirmative duty of industry professionals to execute trades on behalf of their clients that are consistent with the priorities of the client. FINRA R. 5310(a)(1) (2014). For example, some clients may want their broker to execute trades at the best possible price, while others may want their trades executed in the fastest way possible. “Market manipulation” involves fraudulent acts aimed at affecting the price of a particular stock. 15 U.S.C. § 78i (2012).

11. An “exchange” means any organization “which constitutes, maintains, or provides a market place or facilities for bringing together purchasers and sellers of securities.” 15 U.S.C. § 78c(a)(1) (2012). For a discussion of how the courts and the SEC have approached issues of whether an entity is an exchange or not, see J. Scott Colesanti, Trotting Out the White Horse: How the S.E.C. Can Handle Bitcoin’s Threat to American Investors, 65 SYRACUSE L. REV. 1, 18-22 (2014).


13. Id. “Market-makers” provide liquidity to markets by providing for both the buy-side and sell-side of a security. Market Model Overview: DMM Case Studies, N.Y. STOCK EXCHANGE, https://www.nyse.com/market-model/dmm-case-studies (last visited Sept. 2, 2015). When no other buyer or seller exists to match an order placed by an investor, market-makers have a duty to purchase or sell their own personal shares of stock in order to keep the market for any given stock liquid. Id. For example, if a buyer places an order for 100 shares of Nordstrom stock (Symbol: JWN) at $75.00, and there is no seller for her order, the designated market-maker for JWN will execute the trade from her personal holdings of JWN. See id.
traders for being market-makers because high-frequency traders provide liquidity to the market.\textsuperscript{14} High-frequency traders and exchanges enjoy a symbiotic relationship where traders bring business to exchanges, and exchanges offer fee and rebate incentives, as well as the opportunity for co-location.\textsuperscript{15} This relationship is at the core of the legal issues surrounding high-frequency trading, especially regarding exchanges offering high-frequency traders direct access to information, and thus, affording them an opportunity that other market participants do not possess.\textsuperscript{16}

Additionally, the use of dark pools\textsuperscript{17} in conjunction with high-frequency trading has become an issue.\textsuperscript{18} Darks pools are the antithesis of transparency.\textsuperscript{19} Traders send orders to the dark pools, which will execute the trades within the participants of the dark pool.\textsuperscript{20} Dark pools are commonly used as a place for traders to buy or sell large blocks of stock.\textsuperscript{21} On the open market, such trades may greatly affect the price of that stock.\textsuperscript{22} Dark pools help to stifle the volatility of the markets.\textsuperscript{23}

Rules that regulate best execution and disclosure will impose obligations to the market on high-frequency trading in exchange for

\textsuperscript{14.} EUREX, HIGH-FREQUENCY TRADING IN VOLATILE MARKETS – AN EXAMINATION 2 (Nov. 2011), http://www.eurexchange.com/blob/exchangeen/455384/199288/2/data/factsheet_high_frequency_trading_in_volatile_markets.pdf (describing the process by which high-frequency trading "protects the market by placing a rapid succession of small, non-directional buy and sell orders" that decrease volatility).

\textsuperscript{15.} Id. Co-location involves placing computers close to one another to reduce the amount of time needed to send messages via fiber-optic cables. LEWIS, supra note 1, at 63-64.

\textsuperscript{16.} Smythe, supra note 10 (citing various news sources' refusal to provide direct access to high-frequency trading, or their refusal to continue to provide such access).

\textsuperscript{17.} Dark pools are “segregated,” non-public venues that offer buyers and sellers anonymity “to avoid front running by high-frequency traders.” Edwin Batista, A Shot in the Dark: An Analysis of the SEC’s Response to The Rise of Dark Pools, 14 J. HIGH TECH. L. 83, 84 (2014).


\textsuperscript{19.} Peter J. Henning, Secrecy of Dark Pools Can Blur Both Ways, N.Y. TIMES (June 30, 2014, 10:19 AM), http://dealbook.nytimes.com/2014/06/30/secrecy-of-dark-pools-can-blur-both-ways/?_r=0 (noting that “[dark pools] give large investors, like mutual funds and pension plans, a place to trade large blocks of stock without revealing their strategies to others who could take advantage”).

\textsuperscript{20.} Id. (stating that dark pools account for thirty-five percent of the equity traded in the United States).

\textsuperscript{21.} Id.

\textsuperscript{22.} Vassils Vergotis et al., Eurex Exchange Releases Results of Proprietary HFT Research, AUTOMATED TRADER MAG. (2013), http://www.eurexchange.com/blob/526632/723a6bb2128046f6a556392f4d0d8b/data/Automated-Trader_HFT.pdf.

\textsuperscript{23.} Id. (explaining the process by which high-frequency trading participants provide liquidity and decrease volatility).
offering high-frequency trading a permanent and prominent role in today's markets. Part II of this Note presents the historical background of the impact of Regulation Alternative Trading Systems ("ATS")\textsuperscript{24} and the emergence of Regulation National Market System ("NMS").\textsuperscript{25} Additionally, Part II discusses the development of a centralized market, the changing of the guard from "specialists" to designated market makers ("DMM"), and the exponential growth of high-frequency trading.\textsuperscript{26} Part III investigates several legal issues that emerge as high-frequency trading secures dominance in the market: whether high-frequency traders function according to Financial Industry Regulatory Authority ("FINRA") Rule 5310 best execution;\textsuperscript{27} whether Securities Exchange Commission ("SEC" or "Commission") Rule 605\textsuperscript{28} and Rule 606\textsuperscript{29} provide adequate disclosures to investors;\textsuperscript{30} and whether the fragmentation of the market from one monopoly to many privately operated exchanges will benefit investors.\textsuperscript{31} Part IV offers changes to the statutory landscape to protect market participants, decrease volatility, and properly monitor the actions of high-frequency traders to safeguard market integrity, efficiency, and transparency.\textsuperscript{32}

II. REGULATING FOR AN EFFICIENT MARKET AND THE RISE OF HIGH-FREQUENCY TRADING

High-frequency trading emerged over the past two decades as the most efficient and quickest method of executing trades.\textsuperscript{33} The practice developed due to two key SEC regulations: (1) Regulation ATS; and (2) Regulation NMS.\textsuperscript{34} As technology changed, and trading became automated, a shift also occurred in the duties and obligations of the people that worked at stock exchanges.\textsuperscript{35} The New York Stock Exchange ("NYSE") fervently promotes its desire to retain a human element on its trading floor, reclassifying the "specialist" as a DMM.\textsuperscript{36} When the

\textsuperscript{24} 17 C.F.R. § 242.300(a) (2014).
\textsuperscript{25} 17 C.F.R. § 242.600(b) (2014).
\textsuperscript{26} See infra Part II.A–C.
\textsuperscript{27} FINRA R. 5310; see infra Part III.A.
\textsuperscript{28} 17 C.F.R. § 242.605 (2014).
\textsuperscript{29} 17 C.F.R. § 242.606 (2014).
\textsuperscript{30} See infra Part III.B.
\textsuperscript{31} See infra Part III.A–B.
\textsuperscript{32} See infra Part IV.
\textsuperscript{33} See infra Part II.C.
\textsuperscript{34} See infra Part II.A.
\textsuperscript{35} Market Model Overview: DMM Case Studies, supra note 10.
\textsuperscript{36} Id.
exchanges computerized, many employees became obsolete, replaced by the machines produced through the infrastructure of Regulation ATS and Regulation NMS. This transformation poses many issues, such as, whether high-frequency traders assume the same obligations to the market as DMMs, even when they are not trading on behalf of a customer.

If regulators charge high-frequency traders with assuming such duties and obligations, then many of Michael Lewis’s fears that high-frequency traders negatively impact market integrity will be quelled. The speed with which trades are executed today bestows several crucial benefits to the integrity of the market, and a simple regulatory structure aimed at increasing transparency can properly police the activities of high-frequency traders. Imposing regulation to increase transparency and to expressly affirm the duties and obligations of high-frequency traders to the market in general will adequately address Lewis’s warnings.

A. The First Incisions: How the Securities Exchange Commission Fragmented the Market to Defeat the New York Stock Exchange and Increase Competition

In 1998, the SEC promulgated Regulation ATS to increase competition, dismantling the NYSE’s monopoly over the market and leading to market fragmentation. Regulation ATS sought to define and regulate alternative trading systems in a way that would afford them the ability to grow. Regulation ATS an defines alternative trading system

---

37. See infra Part II.A, II.C.
39. See infra Part IV.A–B.
41. See infra Part IV.A–B.
43. 17 C.F.R. § 240.3b-16 (2014). Rule 3b-16 states: “Generally, an entity will be considered an exchange if it brings together buyers and sellers and establishes fixed rules for executing their orders. An entity will generally not be considered an exchange if it routes orders to a market for execution or operates a ‘crossing’ or ‘matching’ system.” Mark Borrelli, Market Making in The
as any system that provides a venue for buyers and sellers of securities to trade that functions like a stock exchange. Additionally, these systems must not “[s]et rules governing the conduct of subscribers,” or “[d]iscipline subscribers other than by exclusion from trading.” Regulation ATS required alternative trading systems, among other things, to register as a broker-dealer, display orders to all market participants, maintain a minimum trading volume, and charge access fees “[consistent] with [the] standard of equivalent access.” Additionally, any trading system which “exceeds certain volume levels and the Commission determines . . . that an exemption is not appropriate,” will be considered an exchange and not an alternative trading system.

The SEC implemented Regulation ATS to “allow developing systems with low volume to operate with minimal regulatory burdens.” Simultaneously, more extensive regulatory burdens weighed down larger volume systems, requiring “more extensive regulation of their quotation dissemination and access standard.” By promulgating Regulation ATS, the Commission opened up avenues for new trading systems to enter the market, tailoring its regulations to allow for increased competition. The SEC endeavored to ease the burden of regulation on alternative trading systems, but even with minimal oversight, the SEC safeguarded investors by establishing specific protective requirements.

In 1975, Congress charged the Commission with implementing a national market system to facilitate trading between various entities.

44. 17 C.F.R. § 242.300(a) (2014).
45. § 242.300(a)(2).
46. See generally 17 C.F.R. § 242.301(b)(4) (2014). Section 242.301(b)(4) created a “major issue surrounding alternative trading systems.” See Borrelli, supra note 38, at 856. The systems “generate revenue by charging access fees,” and are not expressly quantified by the SEC. Id.
47. Borrelli, supra note 43, at 854. Regulation ATS’s provisions for best execution and displaying quotes were only applicable subject to a volume level of a “particular security.” Id. at 855. This means that a system may be subject to Regulation ATS (and not Regulation NMS) for one stock traded on its system, but not for other stocks traded above a certain volume level, subjecting those higher volume stocks to Regulation NMS. Id.
48. Id. at 854.
49. Id.
51. § 242.301(b)(6). Alternative trading systems must establish capacity estimates of their system, conduct capacity stress tests, review their systems integrity, maintain contingency procedures, audit their systems annually, and disclose to the SEC any material issues with their systems. § 242.301(b)(6)(ii)(A)–(G).
across the country. Thirty years later, the time finally came that the Commission could impose Regulation NMS, which created a regulatory environment that could "appropriately respond to fundamental economic and competitive forces" and reigned in the market fragmentation initiated by Regulation ATS. In doing so, the Commission began stripping the NYSE of its monopolistic hold over the market. Since its inception in the early nineteenth century, until the implementation of Regulation NMS in 2007, the NYSE dominated the market by providing the avenue for nearly all trading. With the new regulation and the fragmentation of the market in the late twenty-first century, Regulation NMS enabled competition by affording new entities the ability to enter into this NYSE-dominated market. The Commission sought to achieve consensus between the dominant NYSE and new market participants, but understood that achieving a consensus "should not damage the competitiveness of the U.S. equity markets." Accordingly, the regulation created four substantive rules to "modernize and strengthen" the regulatory structure of the U.S. equity markets, seeking to construct a national system that could efficiently provide a central market for all U.S. equity trading.

Regulation NMS instituted four rules that founded market centralization. First, it established the "Order Protection Rule" requiring all venues to "establish, maintain, and enforce written policies and procedures reasonably designed to prevent the execution of trades at prices inferior" to prices displayed by other trading venues. Second, the SEC required "fair and non-discriminatory access to quotations" at all trading venues, including a "limit on access fees to harmonize the

55. See id.
56. Id. The NYSE, "[i]n a bow to its faster brethren," revamped the technology used on the floor of the exchange as well as constructing a high-frequency trading hub of its own. Id.
58. Id.
59. Oesterle, supra note 46, at 650.
60. See generally Release No. 34-51808, supra note 53 (discussing in detail the four rules which founded market centralization).
61. Id. at 1.
pricing of quotations across different trading centers. 62 This rule also provided that exchanges adopt, maintain, and enforce rules prohibiting “lock” or “cross” quotations. 63 Third, the SEC set the “Sub-Penny Rule,” which prohibited pricing increments smaller than a penny. 64 In 2005, the SEC amended Regulation NMS to include the fourth rule by updating the requirements for consolidating, distributing, and displaying market information. 65 This amendment consisted of two parts: (1) the “Allocation Amendment,” addressing the dissemination of market information that modify the formulas for allocating plan revenues; and (2) the “Governance Amendment,” broadening “participation in plan governance.” 66

Regulation NMS created market winners and losers. 67 Standing atop the winners’ podium was the SEC, which created “a permanent position of enhanced importance for itself.” 68 The Commission became the “eight-hundred pound gorilla of our trading market,” relegating the NYSE and NASDAQ to positions as its “de facto operating branches.” 69 On the farthest losing end of the Regulation NMS bargain were the floor brokers of the NYSE and the American Stock Exchange (“AMEX”). 70 Regulation NMS relegated floor brokers, or “specialists,” into non-existence as the SEC replaced “open out-cry auction exchanges” with an automated system, favoring technology over man. 71

62. Id.
63. Id. The SEC banned “locked market[s]” which is a term of art used when two displayed quotes exist (one on the buy side and one on the sell side) at a particular price and on two separate exchanges. Id. Complimentary orders such as this “lock” the market when both carry with them instructions to only be filled within a particular market. Scott Patterson & Jenny Strasburg, How ‘Hide Not Slide’ Orders Work, WALL ST. J. (Sept. 18, 2012 10:40 PM), http://online.wsj.com/articles/SB1000087239639-0444812704577605840263150860. For example, a buy order with instructions to only fill within Direct Edge (an Electronic Trading Center (“ECN”)) and a sell order on NASDAQ, both of which are to execute at the same price quote create a locked market. Id. These displayed orders would execute but for the instructions to execute only within each exchange, respectively. See id.
64. Release No. 34-51808, supra note 53 (reserving an exception for “quotations, or indications of interest that are priced at less than $1.00 per share”).
67. Oesterle supra note 52, at 648.
68. Id. at 648-49.
69. Id. at 649.
71. Oesterle supra note 52, at 648 (expressing that “[t]he floor brokers . . . [were] the big losers” as a result of automation).
With the changing players and structure of trading markets, traders have fabricated new trading methods in order to gain an edge in the market. It is the high-frequency traders that optimize these methods and strategies to gain a market advantage. However, other types of trades have also arisen to balance the newly changing market, such as the "marketable limit order." While SEC rules require the reporting of basic information about how brokers handle investor orders, industry leaders suggest that investors reach out to their brokers to ensure orders are executed at the best possible prices. The fact that industry leaders charge investors to seek specific trade execution and routing information from their brokers illustrates how the SEC rules fail to disclose sufficient information to investors. Fortunately, simple changes to disclosure rules can align the desire of investors to understand how their trades are executed with the informational advantage that only institutional investors and brokerage firms maintain. A shift in disclosure rules extends the ability to monitor best execution practices to retail investors.

Historically, best execution practices and the monitoring of trade execution rested in the duty-bound hands of floor specialists. However,


74. Jason Zweig, Trading without Tear, WALL ST. J., Feb. 21, 2015, at B1. Marketable limit orders combine the two classic types of orders—market orders and limit orders. Id. Market orders execute according to the market best bid and offer; whatever the market says the stock is worth is what you pay for it. Id. Conversely, limit orders allow an investor to set the highest price at which she wishes to buy, or the lowest price she wishes to sell. Id. The market limit order fuses the two together, basically creating a market order with a cap. Thus, an investor can place a buy market order for a given stock, and also set a limit on that order. Id.

75. Id. "Joe Saluzzi, partner at Themis Trading, [a brokerage firm] . . . suggests calling your broker or financial adviser to ask how your trade was executed and why it was filled at a particular price." Id.

76. See id.

77. See infra Part IV. A–B.


the advent of Regulation ATS and Regulation NMS lifted those duties from the shoulders of specialists, without imposing them on any specific market participant.\textsuperscript{80}

\textbf{B. Bionic Men: The Specialist Turned Designated Market-Maker}

The specialist used to be a human being physically located at a specific location on the floors of stock exchanges.\textsuperscript{81} The specialist assumed a combined role of broker and dealer, functioning within the market itself.\textsuperscript{82} Combining these two market functions—broker and dealer—the specialist assumed positive and negative obligations to the markets as they were “principal sources of regulatory concern” due to an inherent conflict of interest between the specialist’s fiduciary obligations to her customers and her personal trading interests.\textsuperscript{83}

For more than a hundred years . . . a small group of specially qualified human beings helped control the flow of stock trading. In doing so, they maintained the ability to protect both consumers and the economy at large from potentially dangerous swings in market volatility. These men, who . . . maintained a fair and orderly market, were members of a category of market participant called “market-makers.” At the [NYSE], these stewards held the title “specialist.”\textsuperscript{84}

Specialists, in their role as market-makers, catered to markets by enhancing liquidity and protecting the industry from market volatility.\textsuperscript{85} Specialists were obligated to trade stock.\textsuperscript{86} They “stood ready [and] willing” to trade even in the absence of “open market demand.”\textsuperscript{87} Exchanges placed enormous responsibility on the shoulders of specialists, and subsequently subjected them to strict regulations, promoting an essential element of the specialist’s existence—

\textsuperscript{80} Id. at 222; see infra Part II.B.
\textsuperscript{81} Simon & Trkla, supra note 79, at 222.
\textsuperscript{82} Id.
\textsuperscript{83} Id.
\textsuperscript{85} Id. at 224.
\textsuperscript{86} Id. Specialists were in charge of a group of stocks specific to each specialist. Id. at 220. On the floor of the NYSE, any given stock trade would have to have been executed through a specific floor specialist. Id. By having one person execute all trades for a stock, the NYSE insured that buy and sell orders would be matched appropriately and executed according to the principles of best execution. Id. Specialists were required to maintain the stocks they specialized in in their own personal portfolios in an effort to continuously provide liquidity in the stock by always having someone (the specialist) who is ready and able to execute trades. Id.
\textsuperscript{87} Id. at 220.
accountability. In consideration for governing the specialist’s behavior, exchanges (particularly the NYSE) allowed specialists to benefit from the system. Specialists were able to personally profit because they provided liquidity in markets by buying and selling stock from their own accounts, thereby enhancing liquidity and enabling investors to trade stock that would otherwise not be bought or sold on the open market.

As auctioneers for a given stock, specialists acted under the guidance of strict regulatory measures. The obligations of the specialist monitored them in a way that enabled regulators to “curtail the potential for speculative or abusive trading and to mitigate the specialist’s information advantages.” Exchange rules contained the specialist’s potential for abuse by establishing principles of “priority, parity, and precedence” in the exchange rules, principles which must remain an essential element of trading today. Specialists were “prohibited from trading ahead of any order at the same price, and [yielded to]... time priority to any... orders that [she received] after establishing [her] own quote.” By holding specialists accountable for breaching their fiduciary duties to the market as a whole, exchanges aptly halted abuse and manipulation that could have occurred but for strict regulations constraining specialists.

Under the new system, regulated by Regulation ATS and Regulation NMS, high-frequency traders replaced the specialist as the market’s provider of liquidity and protector from market volatility. Fundamentally, the new system refuses to administer the same

89. Id. (pointing out that “[s]pecialists enjoyed a uniquely profitable place in the market arena”).
90. Id. at 3.
91. Id. at 4-5.
92. Simon & Trkla, supra note 79, at 225. The information advantages discussed here relate to the specialist’s unique position to know the intentions of major market participants. Id. at 224-25. A specialist, knowing all the outstanding bids and offers relating to a stock, was afforded an opportunity to profit by trading her own ownership interests in light of market demand or supply of a given stock. Id. Exchanges placed heavy regulations on these specialists as a result of the potential of abusive trading by the specialists themselves. Id.
93. Id. at 225.
94. Id. at 227; see also Colesanti, supra note 88, at 4 (describing the “sanctity of the agency relationship” between specialists and their clients).
95. See Colesanti, supra note 88, at 2-10 (providing a historical account of the evolution of specialists’ duties).
obligations on high-frequency traders—who have assumed the role as market-makers—by not holding high-frequency traders accountable as it did with specialists. To adequately understand the replacement of specialists by high-frequency traders, and to assess what obligations high-frequency traders should possess, it is essential to understand the emergence of Regulation ATS and its impact on the market.

Each market-maker still maintains accountability for the trade volume for her clients’ stock. Corporations hire DMMs to monitor, analyze, and account for the price of the corporation’s stock. Some of the more prominent DMMs manage upwards of fifty different corporations’ stock. These DMMs have the obligation to buy and sell the stock depending on market demands. This obligation arises from the desire to have liquidity in the market. Likewise, DMMs provide liquidity because there are always ready buyers and sellers for the given stock.

Besides providing liquidity by buying and selling from her personal account, the actual person on the floor of the NYSE monitors various sources of information for her clients. Public companies employ

97. See Mark D. Fitterman et. al., Challenges in Requiring High-Frequency Traders to Register as Dealers, MORGAN LEWIS (June 10, 2014), http://www.morganlewis.com/pubs/FinServices_LF_ChallengesRequiringHighFreqTradersRegister asDealers_10June14 (addressing the potential impact of requiring high-frequency traders to register as broker-dealers).

98. See Dean, supra note 84, at 234.


100. Mridhula Raghavan & Avik Das, Goldman to Sell Designated Market-Maker Unit to IMC, REUTERS (May 22, 2014, 6:43 AM), http://www.reuters.com/article/2014/05/22/us-goldmansachs-nyse-idUSBREA4L01W20140522. (discussing personnel hired by IMC and operating on more than one hundred exchanges around the world).

101. See id.

102. Id.

103. Id.

104. See supra notes 87-90 and accompanying text.

105. What We Do, IMC FIN. MARKETS (Dec. 18, 2014, 3:30 PM), http://www.imc.nl/financialmarkets/whatwedoto. For example, the actual person may be employed by XYZ Financial, which provides the capital to buy and sell throughout the day to maintain liquidity. See Designated Market Makers, N.Y. STOCK EXCHANGE, https://www.nyse.com/publicdocs/nyse/listing/fact_sheet_dmm.pdf.

106. See Market Model Overview: DMM Case Studies, supra note 10. Market-makers monitor all trading activity and news about the stocks they manage, including information disseminated from news authorities, and even Twitter activity. See Matthew Philips, How Many HFT Firms Actually Use Twitter to Trade?, BLOOMBERG BUS. (Apr. 24, 2013), http://www.bloomberg.com/bw/articles/2013-04-24/how-many-hft-firms-actually-use-twitter-to-trade. Tweets, even arbitrary or unqualified ones, can affect the price of stock. See id (discussing how trading algorithms responded to tweets, even fake ones). By constantly monitoring all activity and disseminated information, the market-maker reported back to the public companies she
DMMs to maintain a steady watch over the trading activity throughout the day, but companies do not simply desire that a person monitor their stock. They demand that their DMMs ensure a constant trading volume by supplementing supply and demand throughout the day.\footnote{See What We Do, supra note 105. Market-makers “maintain a fair and orderly market [and] regularly commit capital to add liquidity to the market, and to bridge the gap between supply/demand.” Market Model Overview: DMM Case Studies, supra note 10.}

Market-makers have found that a critical area of accountability ceased to exist after the automation of the markets.\footnote{See NYSE Market Model, NYSE (July 12, 2015, 7:00 AM), https://www.nyse.com/markets/nyse/market-model.} For example, prior to the automation of trading, if an investor wanted to buy 10,000 shares of XYZ stock, but accidentally ordered 100,000 shares (due to human error), the specialist would speak to the actual people that sold the shares to the investor and correct the mistake.\footnote{See generally id. (describing how the NYSE utilizes circuit breakers and DMMs on the trading floor to effectively and efficiently correct errors).} The sellers could simply agree to rescind the purchase, resetting the status quo.\footnote{See id. (explaining the NYSE’s “high touch” approach and referencing the market-maker’s—previously the “specialist”—ability to interject a human component into automated trading in order to maintain market integrity).} Buyers and sellers did this because they understood that mistakes occurred, and wanted to maintain professional relationships with other members buying and selling on the floor of the NYSE.\footnote{See What We Believe In, IMC FIN. MARKETS, http://www.imc.nl/financialmarkets/whatwebelievein (last visited Sept. 2, 2015).} If the same situation were to occur today, it would be impossible to reach out to the seller to correct the buyer’s typographical error because the buyers and sellers are computers that execute trades.\footnote{See Designated Market Makers, supra note 105 (speaking to the anonymity of trades).} The buyer, mistakenly ordering 100,000 shares, now owns 100,000 shares without the ability to correct the order. Importantly, the market-maker possesses authority to reverse clearly erroneous trades, but this standard often makes it difficult to justify correcting an errant trade.\footnote{See Market Model Overview: DMM Case Studies, supra note 13 (providing examples of erroneous trades).}

\section*{C. A Speedy Introduction to High-Frequency Trading}

High-frequency trading is often defined by the algorithms it uses, the physical location of its facilities, and the strategies it implements to
gain profits.\textsuperscript{114} No set definition truly exists, and it is important to identify high-frequency trading by looking at the technology used by firms.\textsuperscript{115} First, advanced algorithms assess the market and buy and sell any given stock depending on certain triggers.\textsuperscript{116} The exact algorithmic strategies are largely unknown, being classified as trade secrets.\textsuperscript{117} Second, fiber-optic networks exist to facilitate the fastest speeds in the realm of communication.\textsuperscript{118} Finally, high-frequency traders use co-location of facilities by physically placing their computers in close proximity to exchanges to gain an advantage over other speedy traders.\textsuperscript{119}

This technology blended with trading strategies, such as arbitrage,\textsuperscript{120} has empowered high-frequency traders with the ability to earn profits by executing trades on multiple exchanges and venues.\textsuperscript{121} Regulation ATS provides the overall regulatory structure that empowers high-frequency traders to reap profits by trading on information they see before other market participants.\textsuperscript{122} Fiber-optics\textsuperscript{123} and co-location\textsuperscript{124}

\textsuperscript{114} FUTURES INDUS. ASS’N, FIA SPECIAL REPORT: CFTC DISCUSSES HIGH-FREQUENCY TRADING (2012), available at http://www.eurexchange.com/blob/187322/be3049e213f16793b3cc42001be5798d/data/FIA_special_report.pdf (citing the Technology Advisory Committee’s working definition of high-frequency trading).
\textsuperscript{115} Id.
\textsuperscript{116} Id. Triggers vary among different algorithms as algorithms choose when to buy and sell a stock based on different things—i.e., when a stock drops to a certain level below the median trading price for a given day the algorithm will execute a buy order. See id.
\textsuperscript{118} LEWIS, supra note 4, at 60-62 (describing the process by which fiber-optics provide for faster trading speeds because the infrastructure of fiber-optic networks transmit information much faster than other communication systems such as radio waves or phone lines).
\textsuperscript{119} Id. The buildings containing high-frequency trading systems are physically located next to the buildings that house exchange computer systems. Id. at 62-64 (coining the term “co-location” as a result of selling “proximity services” which is the practice of placing computers in close proximity to exchanges to reduce latency time of trades).
\textsuperscript{120} Arbitrage is a trading strategy based on the ability to receive information faster than others. See Stanislav Dolgopolov, The Maker-Taker Pricing Model and its Impact on the Securities Market Structure: A Can of Worms for Securities Fraud?, 8 VA. L. & BUS. REV. 231, 250-57 (2014). High-frequency traders see the lowest sell and highest buy order among all the exchanges and alternative trading systems, and can act on this information infinitely faster than the average investor. See id. High-frequency traders make a profit by scooping up the difference between prices, as well as through payment of rebates from alternative trading systems that pay money to market-makers trading on their systems. See id.
\textsuperscript{121} Id. at 250.
\textsuperscript{122} See id. at 247 (discussing the exploitation of the rebate/fee structure in equity trading).
\textsuperscript{123} See LEWIS, supra note 4, at 60-62 (describing the process by which fiber-optics create speed).
KNOWLEDGE IS SALVATION

integrated directly into the Regulation ATS regulatory system. Regulation ATS is the skeleton, the technology is the muscle, and the high-frequency traders are the heart, constantly pumping trades throughout the entire system. Powering the new body of the market was the advanced algorithm—the automated brain deciding where, when, and what to trade. For new alternative trading systems, the goal was to entice the newly born market participants to execute trades on their systems, and away from NYSE and NASDAQ. The systems offered cash (at fractions of a penny) to anyone executing trades on their systems. The Maker-Taker Pricing Model ("MTPM") harnessed the power to incentivize traders to execute on alternative trading systems. By paying market-makers—high-frequency traders—alternative trading systems created a novel area of competition in the securities industry, threatening the dominance of NYSE and NASDAQ.

MTPM disturbs best execution by potentially incentivizing adverse selection. High-frequency traders may execute trades on venues that offer the highest rebate, instead of trading according to best execution.

---

124. See id. at 62-64 (coining the term "co-location" as a result of selling proximity services which is the practice of placing computers in close proximity to exchanges to reduce latency time of trades).

125. See id. at 65-66 (stating the various institutional investors and proprietary investors who purchased co-location services to enhance their trading speed).

126. See id. at 81-82 (examining the problems the SEC faced after the Flash Crash of 2010 and how the regulatory environment was not ready to truly assess high-frequency trading).

127. See FUTURES INDUS. ASS’N, supra note 106 (explaining the difficulty in defining HFT because different algorithms implement different strategies).

128. Dolgopolov, supra note 120, at 235.

129. See id. at 234-35.

130. Id. Dolgopolov details the basics of MTPM: In its standard form, MTPM is a matching mechanism that imposes a fee on liquidity-taking / "aggressive" orders, i.e., market orders and marketable limit orders, and provides a rebate to liquidity-making / "passive" orders, i.e., nonmarketable limit orders, while the trading venue in question retains a portion of this fee.

131. Id.

132. See Michaels, supra note 12 (reiterating the NYSE’s position against rebate structure of other platforms and the growing number of trades occurring on different exchanges). ECN "launched a payment system" that created competition where it had not existed before. Dolgopolov, supra note 112, at 235. MTPM, whether high-frequency traders use it to the detriment of the market or not, is consistent with Congress’ goal of creating a national market system where various venues compete to execute trades. Id. at 238-39.

133. Dolgopolov, supra note 120, at 247-48.

134. Id. at 248. The threat is that a high-frequency trader trading on behalf of another investor will not execute a trade based on the best price, but rather on the exchange that pays the best rebate. Id.
A regulatory incentive also exists to afford high-frequency traders narrow discretion to execute trades that keep them operating in the black—high-frequency traders increase liquidity and decrease market volatility.\(^\text{135}\) In other words, a best execution analysis not only assesses whether trading occurred at the best price, but also whether the most efficient trade occurred.\(^\text{136}\) The MTPM is not inherently bad, but Lewis portrays MTPM as a villain in *Flash Boys* to show that the model can be abused.\(^\text{137}\) Regulators must be able to effectively halt abuse, and ensure that the use of rebates does not negatively impact DMMs’ duty of best execution.\(^\text{138}\)

Even with the looming threat of abuse, high-frequency trading profits have sharply declined in recent years.\(^\text{139}\) In 2009, high-frequency trading earned approximately five billion dollars, as compared to a meager one billion in 2012.\(^\text{140}\) The reduction in earnings mirrors diminishing trade volume executed through high-frequency trading.\(^\text{141}\) The waning dominance of high-frequency trading may be attributed to the same regulatory landscape that enabled it to exist.\(^\text{142}\) In fact, the competition and efficiency that Regulation NMS and Regulation ATS aspired to promote between the NYSE and the rest of the market has spurred competition between high-frequency traders.\(^\text{143}\) Just as high-frequency trading syphoned dominance from the NYSE, the firms engaged in speed trading now compete against each other.\(^\text{144}\)

\(^{135}\) See Vergotis et al., *supra* note 22 (claiming that high-frequency trading provides a service to the market by providing liquidity and reducing volatility).

\(^{136}\) FINRA R. 5310. The rule states relevant factors in determining best execution:

\(\text{A) the character of the market for the security (e.g., price, volatility, relative liquidity, and pressure on available communications); (B) the size and type of transaction; (C) the number of markets checked; (D) accessibility of the quotation; and (E) the terms and conditions of the order . . . .}\)

\(^{137}\) LEWIS, *supra* note 4, at 169 (maintaining that “[t]he rebates were the bait in the high-frequency traders' flash traps”).

\(^{138}\) See infra Part III.A.


\(^{140}\) Id.

\(^{141}\) Id. Trades executed by high-frequency trading firms constituted two-thirds of all stock trades in 2011, dropping to half of all stock trades in 2013. Id. Likewise, high-frequency trading accounted for 3.25 billion shares a day in 2009 to 1.6 billion shares a day in 2012. Id.


\(^{143}\) Id.

\(^{144}\) See generally H.-Johannes Breckenfelder, *Competition between High-Frequency Market Makers, and Market Quality*, NYU STEEN (May 6, 2013), http://people.stern.nyu.edu/
this competition, the investors are beginning to reap the rewards of high-frequency trading in the form of faster, more efficient, and cheaper executions of trades.\textsuperscript{145}

III. WHY THE CURRENT PROTOCOL HANDICAPS INVESTORS BY FAILING TO ADEQUATELY DISCLOSE MATERIAL INFORMATION

The mission of the SEC—and the reason Congress established the agency—is to "protect investors, maintain fair, orderly and efficient markets, and facilitate capital formation."\textsuperscript{146} The proper regulation of high-frequency trading can provide liquidity and decrease volatility, providing a fair, orderly, efficient, and safe market for investors.\textsuperscript{147} Most importantly, the current regulation fails to protect the investors from losing out to corrupt trading strategies.\textsuperscript{148} This Part presents the current state of securities regulation regarding best execution and protocol for reporting material information required to assess whether broker-dealers follow best execution practices.\textsuperscript{149}

A necessary aspect to any investigation of high-frequency trading involves an assessment of whether these speedy traders maintain any duties and obligations to the market in general.\textsuperscript{150} Whether high-frequency trading negatively impacts the integrity of the market depends on the reach and control that the regulations have on high-frequency trading.\textsuperscript{151} Since the new trading method involves a drastic shift in how market participants execute trades among each other, one must ensure that those who use high-frequency trading are not violating best execution obligations owed to their customers.\textsuperscript{152}
Additionally, the Commission can modify the rules governing the disclosure of trading statistics. Today, broker-dealers report under the guidance of Rule 605 and Rule 606. These rules require broker-dealers to divulge what types of orders they execute and the percentage of their business coming from each type of order. However, these Rules should be modified to provide material information that is accessible to the market participants, as well as retail investors.

A. FINRA Rule 5310: Toothless Best Execution Principles Cannot Take Bites Out of High-Frequency Trading

As a compliment to governmental regulation, FINRA dedicates itself to providing regulatory measures that protect the efficiency and effectiveness of the securities industry. FINRA drafts, implements, and enforces rules "governing the activities of more than 4,055 securities firms." Importantly, FINRA established Rule 5310: Best Execution and Interpositioning. FINRA charges broker-dealers handling customer orders to "use reasonable diligence to ascertain the best market for [a] security." Rule 5310(a)(1) also obliges a broker-dealer to "buy or sell in such market so that the resultant price . . . is as favorable as possible under prevailing market conditions." Notwithstanding the language of FINRA's Rule 5310, the requirements remain murky and vague. The SEC has not promulgated its own best execution rule, nor has it expressly defined best execution. The securities industry, through private entities like FINRA, the NYSE, and NASDAQ, assumes the duty of establishing and

155. § 242.605; § 242.606.
156. See infra Part IV.B.
157. About FINRA, FINRA (Nov. 5, 2014, 12:35 PM), http://www.finra-.org/AboutFINRA. FINRA is an "independent not-for-profit organization authorized by Congress to protect America's investors by making sure the securities industry operates fairly and honestly." Id.
158. Id.
159. FINRA R. 5310.
160. FINRA R. 5310(a)(1).
161. Id. (emphasis added).
163. Id. at 191. The SEC merely requires the disclosure of information to assess best execution while FINRA promulgates the actual best execution rule. FINRA MANUAL R. 5310.
monitoring best execution.\textsuperscript{164} Best execution assures "the practicability of brokers executing investors' orders in the best markets."\textsuperscript{165}

Coupled with the obligation to execute trades in the most favorable way is the prohibition of interpositioning.\textsuperscript{166} If a third party "interjects" itself into the middle of a trade, resulting in the violation of best execution, that third party unnecessarily interpositions itself between market participants.\textsuperscript{167} Regulators view interpositioning as an unnecessary impediment to the operation of a fair and efficient market.\textsuperscript{168} Moreover, the prohibition applies to proprietary trading firms,\textsuperscript{169} and not only traders that execute trades in an agency role for investors.\textsuperscript{170}

High-frequency trading links customers' buy and sell orders to earn profit on the differences in quoted price (arbitrage) and to earn rebates.\textsuperscript{171} However, notwithstanding the existence of interpositioning or front running, the arbitrage strategies utilized by high-frequency traders are legal.\textsuperscript{172} Any legal determination relies heavily, and almost exclusively, on whether high-frequency trading satisfies best execution, even with the addition of the high-frequency trader as a middle man.\textsuperscript{173}

\begin{thebibliography}{9}

\bibitem{165} Macey & O'Hara, supra note 162, at 191.

\bibitem{166} FINRA R. 5310(a)(2).

\bibitem{167} Id. ("No member or person associated with a member shall interject a third party between the member and the best market for the subject security in a manner inconsistent with [best execution].").

\bibitem{168} See id.

\bibitem{169} Id. Proprietary trading firms execute trades for themselves, as opposed to firms that execute trades for and on behalf of a client. Definition of Proprietary Trading, FIN. TIMES, http://lexicon.ft.com/Term?term=proprietary-trading (last visited Sept. 2, 2015).

\bibitem{170} FINRA R. 5310(e) ("The obligations ... exist not only where the member acts as agent for the account of its customer but also where transactions are executed as principal.").

\bibitem{171} See LEWIS, supra note 4, at 65. Front running occurs when a proprietary firm executes a trade and takes advantage of knowledge of customers' orders. Kate Kelly & Susanne Craig, NYSE 'Front-Running' Probe Involves Five of Seven Firms, WALL ST. J. (Apr. 18, 2003), http://www.wsj.com/articles/SB105061361377009700.

\bibitem{172} See Tricchinelli, supra note 4.

\bibitem{173} Id. Journalists, scholars, and industry leaders question whether the markets are "rigged" in favor of high-frequency trading. Id. How regulators see the role of the high-frequency trader is crucial; if high-frequency trader's position as middle man accommodates best execution then it should not be seen as a violation of FINRA Rule 5310. See FINRA R. 5310(a)(2). However, the fact that firms like Virtu Financial, Inc. can have five consecutive years of gains with only one day of reported losses causes regulators to question whether the market is, in fact, rigged. See Tricchinelli, supra note 1.
\end{thebibliography}
The overarching question is whether high-frequency trading interjects unnecessarily, thus interposing and violating FINRA’s best execution rule.\(^\text{174}\) Two situations arise where the potential for interpositioning exists: (1) a high-frequency trading platform sees a buy and sell order faster than other investors and matches up the lower sell order with the higher buy order so it can make a profit by recouping the difference between the two prices;\(^\text{175}\) and (2) a high-frequency trader executes a trade for her client not regarding the best bid available, but instead trading on whichever venue provides the highest rebate (also known as “Payment for Order Flow”).\(^\text{176}\) In the first situation, some people believe that high-frequency trading burdens investors with an unnecessary tax on investors.\(^\text{177}\) However, groups utilizing advanced technology for arbitrage have always existed in the market, and earned the right to use technology to arbitrage because they invested in the technology while other investors did not.\(^\text{178}\) Importantly, this situation does not mesh with the discussion of whether high-frequency trading breaches best execution.\(^\text{179}\) Additionally, the benefits of such...
computerized trading have been documented to include a decrease in market volatility and an increase in market liquidity.\textsuperscript{180}

Harm to investors by high-frequency trading develops not from arbitrage, but from high-frequency trading associated with executing trades for a customer.\textsuperscript{181} By executing trades on the venue that provides the most profitable rebate, an “inherent conflict of interest” emerges because high-frequency traders can “pocket the [rebates] instead of passing them on to clients.”\textsuperscript{182} The question becomes whether routing trades to the venue providing the highest rebate, and not at the best price, remains consistent with best execution practices, under FINRA Rule 5310.\textsuperscript{183}

However, best execution does not only depend on executing trades at the best price.\textsuperscript{184} Indeed, many institutional investors, executing thousands of trades a day, may prefer that high-frequency traders trading on their behalf trade according to other factors as opposed to trading at the best price.\textsuperscript{185} For example, institutional investors may be more concerned with anonymity, liquidity, and speed, instead of the price at which they buy and sell.\textsuperscript{186} Importantly, the rebates remain small, amounting to “20 to 30 cents per 100 shares traded.”\textsuperscript{187}

Thus, institutional investors may prefer that the high-frequency trading firms that execute trades on their behalf execute trades that keep

\textsuperscript{180} EUREX, supra note 14, at 2; see also Zurcher, supra note 148 (quoting John Aziz, from The Week, explaining that computerization is a “double-edged sword” because “[e]ven with high-frequency traders taking their cut, investors are benefiting from transaction costs that are lower than” before the computerization period).

\textsuperscript{181} FINRA R. 5310(a)(2). When high-frequency trading occurs on behalf of a customer it falls within the regulatory arms of Rule 5310 and must be executed according with “reasonable diligence.” Id. 5310(a)(1).


\textsuperscript{183} Id. (noting that critics say that some of the advantages that high-frequency traders benefit from are unfair).

\textsuperscript{184} FINRA R. 5310(a)(1)(A)–(E).

\textsuperscript{185} Arthur Levitt, Chairman, Sec. Exch. Comm’n, Speech at the Securities Industry Association: Best Execution: Promise of Integrity, Guardian of Competition (Nov. 4, 1999), available at http://www.sec.gov/news/speech/speecharchive/1999/spch315.htm (explaining that several factors besides best price may be “overriding concerns” for institutional investors). Arthur Levitt stresses that “the quality of execution must always be viewed from the customer’s perspective, not the firm’s.” Id.

\textsuperscript{186} Id.

\textsuperscript{187} Patterson, supra note 182.
the firm making profit from the rebates. If the high-frequency trading firm operates in the black, then the institutional investor that pays them to trade can ensure that the firm trading for them continues to exist in the market. This payment for order flow (rebates) "is acceptable if—and I underscore if—the quality of execution is not sacrificed."

Moreover, payment for order flow contributes new competition among market centers. Arthur Levitt stressed in a speech to the Securities Industry Association:

> With more market centers than ever before, the duty of best execution must be woven more fully into the fabric of our markets. It must be at the very core of our promise of integrity to investors—a promise that brokers will act in their customers' best interest when they route and execute orders. It must reinforce competition, rewarding those markets that improve their execution quality, and punishing those that don't.

Although spoken in 1999, these words have reverberated in subsequent regulation of the markets.

SEC Chair Mary Jo White addressed growing concerns that brokers failed to provide best execution for investors, and charged FINRA and the Municipal Securities Rulemaking Board with amending the best execution rule to "provide practical guidance" for brokers in the age of high-frequency trading. White further warned, however, that "we must be mindful to strike the right balance" between regulation and market participants themselves in order to maintain efficient and competitive markets.

---


The notion that adequate disclosures protect investors has existed since the beginning of securities regulation. This Subpart deals with

---

188. See Levitt, supra note 185 (explaining the varying factors to best execution, especially regarding institutional investors).
189. Id.
190. Id.
191. Id.
192. Id.
193. Id. (showing the speech was given in 1999); Mary Jo White, Chair, Sec. Exch. Comm'n, Speech at the Economic Club of New York: Intermediation in the Modern Securities Markets: Putting Technology and Competition to Work for Investors (June 20, 2014), available at http://www.sec.gov/News/Speech/Detail/Speech/1370542122012#.VGfrUvnF-0s.
194. Id.
195. Id.
196. Id.
the adoption of SEC Rule 605 and Rule 606 (formerly Rules 11Ac1-5 and 11Ac1-6, respectively) requiring disclosure of order execution and routing practices.\footnote{197} Under Rule 605, the SEC requires any market center (exchanges or alternative trading systems) that trades NMS securities to make monthly statistical reports available to the public.\footnote{198} For example, Goldman Sachs discloses this information on its website for all trades it executed.\footnote{199} Rule 606 provides guidance on reporting securities transactions that are routed through another entity (as in trades given by Goldman to a high-frequency trader to execute).\footnote{200}

1. **Who Can Read This?: SEC Rule 605 and the Misfortune of Information Geared Towards Computerization**

   By promulgating Rule 605, the SEC pursued better disclosure and visibility of executed orders in securities markets.\footnote{201} The rule requires market centers, including DMMs, to “make monthly disclosures of basic information concerning the quality of executions.”\footnote{202} This rule provides investors (and the SEC) with the ability to collect and analyze data with respect to how broker-dealers process and execute trades.\footnote{203} Importantly, the rule arose “out of the Commission’s extended inquiry into market fragmentation,” and sought to quell issues arising due to order flow through various venues.\footnote{204}

---


\footnote{198. Id. at 7.}


\footnote{201. Release No. 34-43590, supra note 197, at 75415 (asserting that the SEC’s overriding concern involved in disclosures is assuring that investors receive the best possible price).}

\footnote{202. Id. at 75414.}

\footnote{203. Id. at 75415.}

\footnote{204. Id. at 75414. One growing concern in the securities industry is “Payment for Order Flow.” Payment for Order Flow, SEC. EXCHANGE COMMISSION, http://www.sec.gov/answers/payordf.htm (last update June 25, 2007). Payment for Order Flow acts as a way to induce brokers to execute orders to a particular venue. Id. The issue is whether routing orders to a particular venue in order to receive payment for the order flow is appropriate. Id. The SEC requires: (1) that brokers divulge whether they receive payment for order flow; (2) that brokers provide a detailed description of such payments; (3) that brokers disclose, on the trade confirmation itself, whether they received payment; and (4) that brokers provide for customers with information regarding the payment, if the customer requests such information. Release No. 34-43590, supra note 197, at 75427-28.}
Rule 605 expressly states that its required disclosures are not the only material pieces of information that investors seek. While it requires disclosures that promote "visibility and competition" within the market, the Rule must be adaptable to changing investor concerns. In particular, Rule 605 seeks to disclose information that pertains to "factors of execution price and speed."

Furthermore, the information that Rule 605 requires broker-dealers to disclose is merely a "starting point" for the types of disclosures that should be disseminated to investors. As a starting point, Rule 605 must be malleable enough to include information relevant to high-frequency trading practices, and if they cannot keep up with high-frequency trading, the rules must be amended to ensure fair and efficient markets.

When viewing the disclosure first hand, one notices the symbol for a given stock followed by eleven numerical values. For example, disclosures pursuant to Rule 605 are written as follows: [YGE]11|21|12|2498|0|2498|2498|0|0|0.062|0.0100|0|0.0000|0.0|2498|0.0|0.0000|0.0. Starting from the left, YGE is the symbol for Yingli Green Energy, a Chinese solar company. The subsequent numbers correspond to sections 242.605(a)(1)(i)(A)–(K) of Title 17 of the Code of Federal Regulations ("Rule 605"). Matching the numbers to the regulation, one finds that "11" corresponds to the number of covered orders, "21" is the cumulative number of shares of covered orders, "12" is the cumulative number of shares of covered orders cancelled prior to execution, and so on. These disclosures simply do not promote visibility and competition between market centers, which is a crucial purpose of the regulation.

206. Id.
207. Id.
208. Id.
209. Id. Rule 605 states: "The statistical information required by this section alone does not create a reliable basis to address whether any particular broker-dealer failed to obtain the most favorable terms reasonably available under the circumstances for customer orders." Id.
210. Id. The values correspond to the eleven categories of disclosure stated in 17 C.F.R. §§ 242.605(a)(1)(i)(A)–(K).
211. See id.
212. YGE Company Summary, GOOGLE FINANCE (July 12, 2015, 7:00 AM), https://www.google.com/finance?q=yge&ei=zrinVZHBLpa_mAHAhZzgCw.
214. Id.
215. See § 242.605 (preliminary note).
One must note that these disclosures are designed to be readily and easily imputed into a computer system. However, the disclosure is largely useless for the average retail investor. Since the data is not designed or regulated for individual use, the retail investor cannot pull useful information out of the Rule 605 disclosure efficiently. The regulation’s design provides for ease of use by computers, without providing the same level of accessibility to retail investors.

The Commission notes that Rule 605 disclosures provide only a “starting point” to promote “visibility and competition” between market centers, as well as between broker-dealers. Unfortunately, this starting point clearly misses the mark by failing to properly educate retail investors. The Commission states that the statistical information “alone does not create a reliable basis” to address best execution concerns. The entire purpose of the Rule, however, is to consolidate trade statistics and present them to retail investors so they can make informed decisions about their broker-dealers. Better informed investors make wiser decisions regarding who should execute their trades. Wiser and more well-informed decisions bolster competition and create a better market.

The current disclosure requirements fail to require broker-dealers to divulge material information in a readily accessible way, especially with regard to the retail investor. Moreover, the information disclosed must be regulated in a way to promote transparency, protect market integrity by monitoring best execution factors, and account for rebate relationships between broker-dealers and trading systems.

2. SEC Rule 606 and Disclosing Routing Information

SEC Rule 606 requires broker-dealers that route orders for customers to disclose which venue customer orders were executed on. Investors, industry leaders, and regulators can analyze this information to properly monitor whether broker-dealers are trading according to best execution practices and not simply to earn the most profit from

---

216. § 242.605(a) (stating the requirements for electronic disclosures).
217. See id.
218. See id.
219. See Disclosure of SEC-Required Order Execution Information, supra note 199.
220. § 242.605 (preliminary note).
221. Id.
222. Id.
223. See RBC GLOBAL ASSET MANAGEMENT, supra note 141, at 2 (stating that the tools used to monitor best execution are “only as effective as the human capital a firm deploys behind it”).
224. Id. at 2-3.
Providing this information is essential to understanding whether a broker-dealer acted according to best execution, but must be changed to facilitate the changing markets. Regulators need more meaningful disclosures, especially in the context of high-frequency trading and where trading actually occurs, in order to better inform investors.

Rule 606 requires that broker-dealers disclose how they route orders by stating the following information in terms of the percentage of total orders that were “non-directed.” The rule divides non-directed orders into three categories: (1) market orders, as a percentage of total non-directed orders; (2) limit orders, as a percentage of total non-directed orders; and (3) other orders, as a percentage of total non-directed orders. The SEC has previously noted that disclosure of such information can provide customers with sufficient knowledge of the routing practices of their broker-dealer. However, examination of actual Rule 606 disclosures often shows the failure of Rule 606 to keep pace with trading trends.

If a broker-dealer executes order types other than market or limit orders, then its Rule 606 disclosure proves completely inadequate, failing to provide a snapshot of the broker-dealer’s trading practice.

Order types, such as the “hide-not-slide,” can be hidden by broker-
dealers in the "other" category in Rule 606 disclosures and would defeat one of Rule 606’s purposes: to provide material information so customers can make informed decisions on who they want executing their trades. When ninety-nine percent of orders are qualified as "other order" types, there is simply no way for a customer to paint a complete picture of her broker-dealer, failing to ensure the broker-dealer trades according to the customers desires.

Not all broker-dealers trade so centrally within the “other” category. Looking at data from the Royal Bank of Canada ("RBC") Equity Electronic Trading, some broker-dealers execute the majority of their trades through more classic order types. RBC, a secondary protagonist in Lewis’s Flash Boys, reported 71.05% of its non-directed orders as limit orders, while other order types only totaled 20.41%. The important distinction made by analyzing Goldman and RBC’s Rule 606 disclosures is not that one executes trades more efficiently or according to best execution, but that a customer gains more knowledge from RBC’s disclosure than from Goldman’s. This is not necessarily because Goldman is keeping information from its customers, but more of a clear showing of the failure of Rule 606. The focus of Rule 606 disclosures should encompass, and be limited to, the who, what, when, where, and why of the particular trade. By understanding the answers to these questions, one can assess whether high-frequency traders act according to best execution principles.

Furthermore, Rule 606 charges broker-dealers with divulging the percentage of orders executed on major exchanges, including: NYSE,
NASDAQ, BATS Global Market, and others.\footnote{243. 17 C.F.R. § 242.606(a)(1)(ii) (2014).} In identifying the major markets that the broker-dealers trade through, Rule 606 also requires that broker-dealers discuss their relationships to such markets.\footnote{244. § 242.606(a)(1)(iii).} Additionally, broker-dealers must provide “a description of any arrangement for payment for order flow and any profit-sharing relationship” with trading venues.\footnote{245. Id. In Goldman’s Rule 606 disclosure report, this requirement is met by the inclusion of a final paragraph on the report, which states: “The Firm accepts payment for order flow . . . . Further information about the source and nature of payment for order flow received by the Firm will be provided upon your written request.” Disclosure of Order Execution and Routing Information, supra note 200.} These requirements force broker-dealers to fully assess their order types, relationships with venues, and payment-for-order-flow received, but does not address Rule 606’s purpose—to adequately inform investors.\footnote{246. Rule 606 must be altered to ensure that its purpose is achieved, and investors can readily access material information regarding their broker-dealer’s order routing practices.} Rule 606 must be altered to ensure that its purpose is achieved, and investors can readily access material information regarding their broker-dealer’s order routing practices.\footnote{247. Some Rule 606 reports lack meaningful commentary concerning a firm’s relationship with various venues on which it trades.\footnote{248. Similarly, other market-makers provide only brief explanations of the relationships they maintain with the venues that they trade through.\footnote{249. These disclosures do not speak to any problematic situations such as the use of dark pools and internalizing trades.\footnote{250. Internalization occurs when a broker-dealer provides both ends of a trade for its customer.\footnote{251. Internalization is not illegal, and in fact, provides liquidity in a similar way as high-frequency trading and DMMs.\footnote{252. Conversely, if a firm is interpositioning, they clearly violate the FINRA best execution rule.}}}}

Some Rule 606 reports lack meaningful commentary concerning a firm’s relationship with various venues on which it trades.\footnote{248. Similarly, other market-makers provide only brief explanations of the relationships they maintain with the venues that they trade through.\footnote{249. These disclosures do not speak to any problematic situations such as the use of dark pools and internalizing trades.\footnote{250. Internalization occurs when a broker-dealer provides both ends of a trade for its customer.\footnote{251. Internalization is not illegal, and in fact, provides liquidity in a similar way as high-frequency trading and DMMs.\footnote{252. Conversely, if a firm is interpositioning, they clearly violate the FINRA best execution rule.}}}} Similarly, other market-makers provide only brief explanations of the relationships they maintain with the venues that they trade through.\footnote{249. These disclosures do not speak to any problematic situations such as the use of dark pools and internalizing trades.\footnote{250. Internalization occurs when a broker-dealer provides both ends of a trade for its customer.\footnote{251. Internalization is not illegal, and in fact, provides liquidity in a similar way as high-frequency trading and DMMs.\footnote{252. Conversely, if a firm is interpositioning, they clearly violate the FINRA best execution rule.}}}} These disclosures do not speak to any problematic situations such as the use of dark pools and internalizing trades.\footnote{250. Internalization occurs when a broker-dealer provides both ends of a trade for its customer.\footnote{251. Internalization is not illegal, and in fact, provides liquidity in a similar way as high-frequency trading and DMMs.\footnote{252. Conversely, if a firm is interpositioning, they clearly violate the FINRA best execution rule.}} Internalization occurs when a broker-dealer provides both ends of a trade for its customer.\footnote{251. Internalization is not illegal, and in fact, provides liquidity in a similar way as high-frequency trading and DMMs.\footnote{252. Conversely, if a firm is interpositioning, they clearly violate the FINRA best execution rule.}} Internalization is not illegal, and in fact, provides liquidity in a similar way as high-frequency trading and DMMs.\footnote{252. Conversely, if a firm is interpositioning, they clearly violate the FINRA best execution rule.}} Conversely, if a firm is interpositioning, they clearly violate the FINRA best execution rule.\footnote{253. FINRA R. 5310(a)(2).}
FINRA’s bar on interpositioning concerns a firm interjecting itself between its customer and a third party. The best execution rule does not bar extraneous high-frequency traders that interject themselves between trades through arbitrage strategies. While historically this type of arbitrage was legal, the ability of high-frequency traders to interject into transactions must be assessed to ensure that trades are executed at the best possible price.

By forcing institutional investors to divulge information regarding internalization and the use of dark pools, regulators can increase transparency simply and efficiently. Notably, trades executed on dark pools become public after execution, but are not available to the public when the trades are un-executed orders. This allows sellers wanting to sell large blocks of stock to hide the fact that a large sell order has been placed. If the large sell order was known, buyers would be able to offer less than the market value for the stock. However, regulating away the ability to use dark pools to conceal large orders would eliminate an effective way to control volatility in the market. Dark pools decrease volatility because the ability to sell large blocks of stock at the actual market value ensures that stock value does not dramatically increase or decrease. Controlling volatility is critical to market integrity. Rule 606 must be altered to account for these pieces of information.

254. Id.
255. See id.
256. See SEC Required Report on Routing of Customer Orders for Quarter Ending Mar. 31, 2015, supra note 249, at 535 (stating that orders “may be preferenced to the UBS Securities Market Maker” (emphasis added)); see also Lewis, supra note 4, at 211 (“IEX had done something no Wall Street dark pool had ever done: it had published its own rules.”).
257. Lewis, supra note 4, at 211.
259. See id.
260. But see id. (stating that markets have proven sturdy enough to withstand volatility, even without the use of dark pools).
262. See Investor Alerts and Bulletins, Securities and Exchange Commission, New Measure to Address Market Volatility (May 21, 2012), http://www.sec.gov/investor/alerts/circuitbreakersbulletin.htm (describing the various measures used to address market volatility).
263. See Release No. 34-43590, supra note 197, at 75424 (enabling investigation by thorough disclosure and assessing whether “prices were moving against [the market] for reasons such as news or market volatility”).
IV. UPDATING THE PROTOCOL TO ENSURE BEST EXECUTION AND ADEQUATE DISCLOSURE

Trading strategies must be better regulated in order to provide for a fair and efficient market. To properly regulate such conduct (and other dangerous trading strategies), the SEC must promulgate amendments to Rules 605 and 606, including reporting of significant information. To properly regulate the market, the SEC should collect more data on the trading activities and strategies to better understand high-frequency trading’s role in today’s market, especially considering the fact that participants are investing in even faster—and less known—technology that will improve transaction speed. With the collection and monitoring of trading statistics, one can assess whether high-frequency trades trade according to best execution. Regulating the changing market in this way affords the ability to impose limited duties and obligations on all high-frequency traders.

The proposed requirements discussed in this Part will not burden market participants with implementing expensive or expansive disclosure monitoring systems. Instead, these changes to regulations will capitalize on the existing infrastructure used by high-frequency trading. Accordingly, this Note proposes to slightly change the information passing through the pre-existing framework of disclosures to impose minimal burden while maximizing information available to average investors. By substantially increasing the quality of information, investors will increase their ability to make educated decisions regarding who they choose to execute their trades.

264. See Patterson & Strasburg, supra note 63.
268. See FINRA R. 5310.
269. See infra Part IV.A–B.
270. See infra Part IV.A–B.
A. Making Market Middlemen: Imposing FINRA Rule 5310 Obligations on High-Frequency Traders

FINRA, as a private regulatory authority, has a unique opportunity to promulgate amendments to Rule 5310 to establish a clear and explicit definition of the duty of best execution. By adding a section explaining the application of the rule on high-frequency traders, the issue of whether the rule places duties on high-frequency traders would disappear. Coupling this affirmative duty and reporting of such trading activity will provide adequate disclosures for investors.

A centralized data system can help stem, or at least identify, the entities that engage in interpositioning. FINRA Rule 5310 states that the character of the market, size and type of the transaction, number of markets reviewed, accessibility of the quotation, and the terms of the order are among the factors at play in best execution. FINRA expressly states that the actual participants in trades should be accounted for in best execution.

Not only would the who and how information assist investors on making appropriate investment decisions, it would also provide regulators with the data necessary to identify entities that are violating securities laws. Naturally, interpositioning violates best execution and would subject such entities to fines, censure, or expulsion by FINRA.

Moreover, certain practices may be violations of §10(b) of the Securities Exchange Act of 1934 and Rule 10b-5. A 10b-5 violation includes the alleged violator’s culpable mental state when committing a

273. FINRA R. 5310(a)(2). FINRA Rule 5310 should be clarified to include all high-frequency traders. See id.
274. See supra notes 166-78 and accompanying text.
276. Id. For example, assume JKL stock trades at a volume of 500,000 shares a day. If one knew that fifteen percent (15%) of those shares were traded between unaffiliated entities, forty percent (40%) was traded between affiliated entities, twenty-five percent (25%) was traded between a parent and subsidiary, and twenty percent (20%) was internalized by a specific broker-dealer, one can see exactly how JKL is being traded. Knowing this information would help investors execute informed trades.
278. See id. (quantifying disciplinary actions in 2014).
279. 17 C.F.R. § 240.10b-5 (2014). Section 10(b) and Rule 10b-5 are the anti-fraud provisions of the Exchange Act of 1934. Eric C. Chaffe, Standing Under Section 10(b) and Rule 10b-5: The Continued Validity of the Forced Seller Exception to the Purchaser-Seller Requirement (2008), available at http://works.bepress.com/cgi/viewcontent.cgi?article=1000&context=eric_chaffee. If a broker-dealer was found to be interposing or violating best execution in connection with the purchase or sale of a security, the broker-dealer could be civilly and criminally liable. Id.
Naturally, proving such a mental state would be difficult since computers execute trades for high-frequency trading firms, but some regulators and prosecutors are taking steps to halt any possible manipulation.\footnote{280. § 240.10b-5. This mental state is known as “scienter,” which has been held to mean embracing the intent to defraud. Ernst & Ernst v. Hockfelder, 425 U.S. 185, 194 (1976).}

FINRA Rule 5310(a)(2) provides that “no member or person associated with a member shall interject a third party between the member and the best market for the subject security.”\footnote{281. See Smythe, supra note 10 (discussing Attorney General Eric Schneiderman’s agreement with Business Wire, Marketwired, and Newswire). Schneiderman has actively sought to impede potential manipulation stemming from unfair use of data distribution networks as well as the use of dark pools. Id. These information networks have been criticized for providing information to high-frequency trading firms (for a premium) in advance of disseminating the information to the public. Id. A central data system would take the place of private information disseminators. Id. By replacing these private information centers, it would be much more difficult to exploit personal or business relationships in order to gain an informational advantage. Id.} This provision defines interpositioning when a member of FINRA (such as a high-frequency trading firm) interjects a third party.\footnote{282. FINRA R. 5310(a)(2).}

Accordingly, this provision should be altered to include the member—utilizing high-frequency trading—that interjects itself absent any relationship to the buyer or seller. This Note proposes that FINRA amend Rule 5310(a)(2) to read as follows:

(2) In any transaction for or with a customer of another broker-dealer, no member or person associated with a member shall interject a third party between the member and the best market for the subject security in a manner inconsistent with paragraph (a)(1) of this Rule; and

(A) No member or person associated with a member shall interject and execute trades for the sole purpose of assessing market conditions for the subject security, including but not limited to placing multiple, high-speed orders that execute in succession.\footnote{283. Id.} This addition is designed to prohibit high-frequency traders from placing thousands of small buy and sell orders (which high-frequency traders use to gain an informational advantage).\footnote{284. See FINRA R. 5310(a)(2) (additions to the text in italics).} This
type of high-speed order execution artificially drives stock prices up and down.\textsuperscript{286}

This Note also proposes a critical shift in best execution.\textsuperscript{287} Historically, interpositioning only occurs in a setting where the broker-dealer interpositions itself between its customer and a third party.\textsuperscript{288} This means that, absent an agency relationship between the broker-dealer and a customer, the broker-dealer can interject himself as many times as she wishes between a buy and sell order because she is not breaching any fiduciary duty to a customer.\textsuperscript{289}

However, much like how the specialist owed a duty to the market since it stood in the role of market-maker, so too should high-frequency traders.\textsuperscript{290} High-frequency traders have assumed the role of market-maker by providing liquidity on both sides of trades.\textsuperscript{291} As such, they should assume the duties that were historically placed on specialists.

To establish this duty, this Note proposes that FINRA amend Rule 5310(3) to read as follows:

(e) The obligations described in paragraphs (a) through (d) above exist where the member operates a registered high-frequency trading entity whether the member is acting as a principal or an agent in the transaction. Such registered high-frequency trading entities shall be labeled market-makers, and as such, assume the obligations of market-makers, including but not limited to practices which provide market liquidity and decrease market volatility. Such obligations are distinct from the reasonableness of commission rates, markups or markdowns, which are governed by Rule 2121 and its Supplementary Material.\textsuperscript{292}

This regulatory change would make clear that high-frequency traders have a duty to the market, and this duty exists according to the purpose of securities regulation—to provide fair and efficient markets.

\textsuperscript{286} See Bhupathi, supra note 25 at 387-88 (explaining how high-frequency trading has created a two-tiered market).

\textsuperscript{287} See infra notes 288-92 and accompanying text.

\textsuperscript{288} See FINRA R. 5310(2).

\textsuperscript{289} See supra Part II.

\textsuperscript{290} See supra notes 94-98 and accompanying text.

\textsuperscript{291} See supra Part II.

\textsuperscript{292} See FINRA R. 5310(e) (additions to the text in italics).
B. Knowledge Transfusion: Supercharging Rule 605 and Rule 606 for Investors

It must be noted that Rule 605 and Rule 606 are merely starting points for providing adequate disclosures to investors. The rules explicitly acknowledge that “factors that may be important to investors” may not be encompassed in the rules themselves. The SEC and industry leaders correctly note that creating a rigid set of factors for best execution and best routing practices is, if not impossible, impractical. However, presenting data necessary to make informed investment decisions is critical, and investors should be able to analyze hard data in making their trade decisions.

1. Bringing Trade Execution into the Light: Requiring Meaningful and Material Information in Rule 605 Disclosures

Several changes must be made to better facilitate information dissemination regarding Rule 605 disclosures. First, the process by which Rule 605 reports are made available must be changed. Rule 605 requires that market centers make statistical information reasonably available to investors. While some groups provide a quick glimpse at this statistical information, the actual reports are simply not reasonably available to investors. As it stands, Rule 605 guides market centers to provide statistics about the number of shares in orders, how those shares are executed, and what the market for those shares was like directly after the trade as well as on different venues, among other

294. Id.
296. See Ensuring High Frequency Trading Performance with SevOne and Terilogy, SEVONE,
terilogy (last visited Sept. 2, 2015) (providing high-frequency trading monitoring and analysis services).
297. See id. (offering increased data collection and dissemination to its customers to bridge the information gap for the customers).
298. See § 242.605.
299. Execution Quality: Consistently Delivering a High Standard, KNIGHT CAPITAL GROUP
300. Id.
301. 17 C.F.R. § 242.605 (2014). SEC Rule 605 requires that reports are made available for download by investors. Id. Market centers and broker-dealers often make these reports available as zip files on their website. See Execution Quality: Consistently Delivering a High Standard, supra note 299; Disclosure of SEC-Required Order Execution Information, supra note 199.
things. The Rule demands that the statistics be categorized by the specific security, order type, and order size.

To promote visibility and reasonable accessibility, this data should be organized in a manner consistent with retail investors’ ability to rely on data and make educated investment decisions. For example, by presenting the data in a fashion that is consistent, readily accessible, and usable, Knight Capital Group (“KCG”) discloses simplified charts, including: (1) execution speed; (2) price-improvement; and (3) at-or-better statistics. The SEC should require all market centers and broker-dealers to present such information in this way.

In three, simplified charts, an investor can see where and how KCG executes trades. By doing this, KCG adapts the information they gathered for its Rule 605 disclosure report and presents it in a more generalized and thus, more accessible way. While no list of factors of best execution is exhaustive, the answers to the following three questions provide the core factors of best execution: How fast are the trades occurring? What opportunity does the investor have for price improvement? And, is the investor getting at-or-better prices through KCG? The answers to these three questions indeed provide a direct and straightforward look at KCG’s trade execution.

Changing Rule 605 to incorporate this direct, three-tiered analysis of statistics makes the information more readily consumable by retail or institutional investors.

KCG is no stranger to the world of high-frequency trading and the issues associated with such trading. In fact, its computer algorithms caused a $440 million loss in one day. While many believed that this loss would be the end of the firm, KCG was able to recover and continue to exist in the securities industry as a major player. The crucial part of

303. § 242.605(a)(1).
304. § 242.605.
305. See Execution Quality: Consistently Delivering a High Standard, supra note 299.
306. Id.
307. Id.
308. See id.
309. See id.
310. See id.
311. See id.
312. See id.
314. Strasburg & Bunge, supra note 313.
315. Id.
KCG's loss was a failure to disclose how customers' orders were being routed. KCG had routed most of its customers' orders into its own dark pool. Moreover, those orders routed to KCG's dark pool were executed by a wholly-owned trading affiliate. By routing trades this way, KCG was able to interposition and profit from buying large blocks of stock (in small quantities, many times) and selling them to buyers (who KCG already knows want to buy). By modifying its practices, KCG not only protected itself from similar losses in the future, it also enhanced its disclosures to inform investors better than required by SEC rules.

The following is a proposed addition to Rule 605 disclosures that will present three material and simple charts to better inform investors:

(a)(4) Every market center shall make available for each calendar month, a report on the execution quality of trading in accordance with reported trading statistics under paragraph (a)(1)(i) of this section. Such report shall be provided publicly and shall include, at a minimum, the following information:

(i) Execution speed stated in hundredths of a second;
(ii) Percentage of trades reflecting price improvement; and
(iii) Percentage of trades at-or-better than National Best Bid and Offer (NBBO).

Following the example set by KCG, this information breaks down the dense, statistical information already required by Rule 605 into meaningful disclosures for retail investors. By providing execution speed, price improvement information, and at-or-better information, retail investors will be able to understand how their broker-dealers operate, and, thus, be able to make an educated decision as to who executes their trades.

316. See Batista, supra note 17, at 102.
317. Id.
318. See Strasburg & Bunge, supra note 313.
319. See id.
320. See Execution Quality: Consistently Delivering a High Standard, supra note 299 ("We work together with our clients to understand their trade execution priorities . . . . Best execution is our goal.").
321. FINRA R. 605.
322. See Execution Quality: Consistently Delivering a High Standard, supra note 299 (describing the importance of transparency).
2. You Know Where You've Been: Adequately Identifying and Transmitting Routing Information

The standard established in Rule 606 falls short of protecting investors because it does not provide enough transparency regarding trade routing.\(^{324}\) Likewise, by altering the procedures and structure of reporting information, regulators can increase transparency.\(^{325}\)

First, more meaningful disclosure of the relationships between broker-dealers and the venues that they trade on must be made. Requiring broker-dealers to report, in real-time, how and with whom their trades are executed provides a steady data stream that can be easily accessed and analyzed by regulators and investors.\(^{326}\) The data stream shows both ends of every trade, regardless of how fast the trades are executed.\(^{327}\) By monitoring, or at least archiving, the enormous amount of trades that occur can be reviewed post-execution by regulators and investors to ensure there was no interpositioning.\(^{328}\) While reviewing this data stream, one would be able to distinguish between interpositioning and internalization.\(^{329}\) This process allows for quick, efficient, and cost-effective execution of trades.\(^{330}\)

The costs of providing different data, collecting that data, and subsequently disseminating it into a real-time stream of information may prove expensive.\(^{331}\) But, the very nature of high-frequency trading provides a pre-existing structure for this information.\(^{332}\) While the technology and equipment cost for high-frequency trading firms is great up-front, proponents of high-frequency trading often cite the lowered cost of trading for the average investor.\(^{333}\) The lowered cost to investors, and profit gained by high-frequency traders, points to the industry becoming more cost effective.\(^{334}\)

\(^{324}\) Korsmo, supra note 252, at 596.

\(^{325}\) Id.


\(^{327}\) Korsmo, supra note 252, at 535.

\(^{328}\) See id. at 535-36.

\(^{329}\) See id. at 536.

\(^{330}\) Id.

\(^{331}\) But see id. at 549-50 (discussing how high-frequency trading has dramatically reduced liquidity costs).

\(^{332}\) See id.; Disclosure of SEC-Required Order Execution Information, supra note 199. The structure for the dissemination of this information is already in place due to the existing requirements of Rule 605 and Rule 606. 17 C.F.R. §§ 242.605–606 (2014).


Importantly, the cost-effective structure that is already in place must be able to provide real-time execution data. The algorithms are used precisely to act on instantaneous information, place orders, and execute trades thousands of times in a second. Simply parsing out the end result, the actual trade execution, and sending this information to the data stream is reasonable, and would provide efficient and accurate data for use by investors.

Thus, Rule 606 should be amended to require disclosure of this information in a reasonable and efficient way. This can be accomplished by utilizing the existing technological structure of the securities market and sending basic information to a centralized data-stream, enabling retail and institutional investors to better monitor daily trading activity. The following amendment would replace paragraph (c), moving the original paragraph (c) and renaming it "paragraph (d)"

(c) Continuous report on order routing.

(1) Every broker or dealer shall make publicly available, by reporting trade routing information to a centralized data-stream, trade execution and routing information. Each report shall include:

(i) the identity of the buyer;
(ii) the identity of the seller;
(iii) the time of execution in milliseconds;
(iv) the price at which the trade executed; and
(v) the venue through which the trade executed.

The information sought by this addition to Rule 606 is information that is readily available to any entity that executes trades in the current market—this is the information they gather and utilize in algorithms to execute trades. Thus, it should not be overly burdensome for these entities to transmit such post-trade information to a centralized data-stream.

336. Felix Salmon & Jon Stokes, Algorithms Take Control of Wall Street, WIRED MAGAZINE (Dec. 27, 2010), http://www.wired.com/2010/12/ff_ai_flashtrading/ ("High frequency traders ... buy and sell thousands of shares every second.").
337. See id. at 213-14. Companies are already performing this function, but instead of having multiple sources of trade information, the information can be gathered and disseminated through a single data stream to ensure uniformity of prices. See id.
338. See FINRA R. 5310.
V. CONCLUSION

The strategies implemented by high-frequency trading have dramatically changed the landscape of the equity trading industry.\textsuperscript{340} With this swinging change, the regulatory framework in place fails to adequately account for new trading strategies, as well as the new players in the securities industry.\textsuperscript{341} Since high-frequency trading assumes essential functions, like decreasing volatility and increasing liquidity, it is essential that new regulation does not over-regulate high-frequency trading to the point where it cannot provide these functions.\textsuperscript{342} However, protecting market integrity means that there must be a give and take between the freedom with which high-frequency traders conduct their business and ensuring market integrity.\textsuperscript{343}

This Note argues that regulating high-frequency traders and alternative trading systems to include the same positive and negative obligations of specialists, to the extent that they provide best execution and material disclosures, will both ensure market integrity and carve out a place for high-frequency trading in today’s markets.\textsuperscript{344} Importantly, regulation currently exists pertaining to these issues, and amending the regulatory scheme properly will not affect the benefits derived from high-frequency trading (liquidity and lessening of volatility).\textsuperscript{345} While the specialist may be on the verge of extinction, the high-frequency trader must assume the specialist’s duties and obligations.\textsuperscript{346} Appropriating the same requirements on high-frequency traders as we did on specialists will protect the entire industry, and is consistent with the Congressional intent of Regulation ATS and Regulation NMS.\textsuperscript{347}

Furthermore, directing high-frequency traders to disclose material information regarding their trading practices affords investors and regulators the opportunity to investigate and analyze different trading strategies.\textsuperscript{348} By analyzing this information, one can assess whether a particular firm or trading strategy implemented by a firm negatively

\begin{itemize}
\item \textsuperscript{340} See generally LEWIS, supra note 4 (arguing this point).
\item \textsuperscript{341} See supra Part III.
\item \textsuperscript{342} See supra Part II.C.
\item \textsuperscript{343} See LEWIS, supra note 4, at 228-29 (questioning whether the useful function of high-frequency trading—providing liquidity—is necessary for market integrity).
\item \textsuperscript{344} See supra Part IV.A.
\item \textsuperscript{345} See supra Part III.
\item \textsuperscript{346} See supra Part II.B.
\item \textsuperscript{347} See supra Part II.B.
\item \textsuperscript{348} LEWIS, supra note 4, at 186 ("If you didn’t even know the order of trades in the stock market, you could hardly determine if you had traded at a fair price.").
\end{itemize}
impacts best execution principles.\textsuperscript{349} Likewise, best execution principles must be broadened to include high-frequency traders that execute trades on behalf of their own firms—as opposed to executing trades for a customer.\textsuperscript{350} Doing so will place the same duties and obligations on high-frequency traders that operate as market-makers, regardless of their affiliation with parties they trade with.\textsuperscript{351}

As we come to more fully understand the world of high-frequency trading, one must not jump to the conclusion that high-frequency trading is a bane on market integrity.\textsuperscript{352} New, developing trading strategies have positive and negative impacts on the market, and current regulation can be amended to both protect the new industry of high-frequency trading as well as provide an avenue for analyzing these new trading strategies.\textsuperscript{353} Only with an increase in transparency, and an explicit obligation to market integrity, will high-frequency trading be able to cement its place in the securities industry while simultaneously providing best execution.

\textit{Jeremy Schara*}

\begin{flushleft}
\begin{itemize}
\item 349. \textit{Id.} at 187.
\item 350. \textit{See supra} Part IV.A.
\item 351. \textit{LEWIS, supra} note 4, at 187 (explaining that imposing affirmative duties on broker-dealers will keep them “scared” and force them to constantly check their own work to avoid violating securities law).
\item 352. \textit{See id.} at 200-01 (discussing recent flash crashes and market volatility attributable to high-frequency trading strategies).
\item 353. \textit{See supra} Part II.C.
\end{itemize}
\end{flushleft}

* J.D. candidate 2016, Maurice A. Deane School of Law at Hofstra University; B.A. in Cinema and Cultural Studies at Stony Brook University. To Monte Jay and Myla Rose. Thank you to my faculty advisor, Professor J. Scott Colesanti. Thank you to the \textit{Hofstra Law Review}, including Aaron Zucker, Addie Katz, Courtney Klapper, Peter Guinanne, Leron Solomon, Michael Senders, Rachel Summer, and Amanda Regan, for their extra efforts with this Note.