June 16, 2008

ECNs RIP: How Regulation NMS Destroyed Electronic Communication Networks and All Their Market Improvements

Derek N White

Available at: https://works.bepress.com/derek_white/1/
ECNs RIP: How Regulation NMS Destroyed Electronic Communication Networks and All Their Market Improvements

By Derek N. White*

I. INTRODUCTION
II. About ECNs and How They Have Benefited Investors
   a. What are ECNs?
   b. Benefits of ECNs to the Investing Community
      i. Transparency – Reducing Fragmentation
      ii. Lower Transaction Costs – Bypasses Middleman
      iii. Individual Access
      iv. Anonymity in Trading
      v. Reduce Bid-Ask Spreads – Better Pricing for Blocks
      vi. Potential Drawbacks to ECNs
         A. Liquidity Issues
         B. Costs of Regulatory Compliance
III. Impact of ECNs on the National Market System
    a. Competition
    b. Technological Innovation
    c. Consolidation and Demutualization
IV. Regulatory Framework Affecting ECNs
    a. Historical Development
       i. Order Handling Rules
       ii. Regulation ATS
    b. Current Regulatory Regime – Regulation NMS & Its Problems
V. Problems with Reg NMS Produced Problems in the National Market System
    a. Legal Reasons to Overturn Reg NMS
    b. Policy Reasons to Overturn Reg NMS
VI. CONCLUSION

* J.D. Candidate 2009, University of Colorado Law School. I owe thanks to the editorial staff of the Journal, particularly Mike Varco for his guidance and helpful comments; to my father for sparking my interest in the securities markets; to my mother, Danae, Damon, Dan, and Shelly for all your support and love during this difficult time, I’ll never be able to repay you; and to Heidi.
I. INTRODUCTION

Investors—mostly institutional—use Electronic Communication Networks (“ECNs”) as an alternative trading venue to the national stock markets (e.g., NYSE or Nasdaq). ECNs entered the U.S. securities trading market providing never-before-seen benefits to all investors—individual and institutional alike. These benefits range from decreased trading and execution costs to increased market transparency, from depth-of-book market data to healthy competition among trading venues. ECNs were in large part the impetus for many of the recent, far-reaching market developments, innovations, and regulations. Because of these very developments, innovations, and regulations, ECNs are a dying phenomenon and many of the benefits they brought are likely to go with them. Only prompt policy and regulatory reversals can tear down the barriers to entry created by the actions of the U.S. Securities and Exchange Commission (“SEC”). ECNs leave the investor with a more automated, technologically-modern, and efficient marketplace. With the competition swallowed up or destroyed, however, the remnant duopoly—NYSE Euronext and NASD—can settle back into their trenches as the two titans of the U.S. securities trading industry. But will they continue to innovate their technology and product offerings? How will they respond to future customer demands and changing investment techniques?

This comment assesses the current structure of the financial markets and recent SEC regulations. I argue that while the current structure is healthy for investors, the newly implemented regulatory regime will have a detrimental effect on future competition and

---

2 Full depth-of-book means the entire list of bids and offers that exist for a given security, as opposed to just the best price without the order’s size, which is called top of the book. SEC Loves NYSE, WALL ST. J., Dec. 6, 2004, at A14.
innovation. Section II describes what exactly ECNs are and what their role has been in the marketplace and further explains the many benefits with which they provided investors. Section III clarifies the far-reaching impact ECNs have had on what is now the national market system. This point is further elaborated in Section IV where I lay out the regulatory framework that allowed ECNs to influence the markets and also that which has now rendered ECNs largely irrelevant. Section V identifies the negative implications that the current regulatory regime (invoked by increasing ECN competition) has for ECNs, investors, and the markets in general and why recent regulations should be overturned.

II. About ECNs and How They Have Benefited Investors

ECNs are “[t]he most powerful advancements to the U.S. equity market system.”[^3] They have created a healthy competition between traditional exchanges and alternative trading venues, and they have enabled investors, institutions, and traders to electronically transmit their best buy and sell prices.[^4]

a. What are ECNs?

ECNs are an alternative trading system to traditional stock exchanges. In 1969 the first ECN, Instinet, was created to serve as a means for institutional investors to trade directly with one another.[^5] Using telecommunications and high technology, ECN firms act as agencies,[^6] allowing individual buyers and sellers of securities to find one another and execute trades.[^7]

When an ECN subscriber places his order into the “electronic book,” another subscriber’s order

[^3]: E-mail from Phil Bruno, Vice President of Sales, Direct Edge, to Derek White, J.D. Candidate 2009, University of Colorado Law School (Sept. 24, 2007) (on file with author).
[^4]: Id.
[^6]: Id.
[^7]: S. Hearing, supra note 1, at 27 (prepared statement of Douglas M. Atkin, then-CEO, Instinet Corp.); see also Borrelli, supra note 5.
will automatically execute against it or the ECN electronically routes the order for execution in a traditional market or another alternative trading venue.  

b. Benefits of ECNs to the Investing Community

Through technological innovation ECNs have provided investors with new options to execute their trades. Former CEO of Instinet Corporation, Douglas M. Atkin, listed some of the benefits of ECNs, they include: (1) reduction of execution costs, because ECNs eliminate the middleman, (2) improvement of market transparency and reduction of fragmentation, and (3) provision of information to customers regarding depth of trading interest in a security by allowing them to view all orders displayed in the trading book (whereas the exchanges only allow market makers and specialists to benefit from this information). The following discussion represents a nonexclusive list of the benefits ECNs provide and identifies detriments that some have argued arise with the presence of ECNs in the marketplace.

i. Transparency – Reducing Fragmentation

At a congressional hearing, Senator Rod Grams said this of ECNs: ECNs “have provided greater transparency in the markets and created an added source of liquidity.” But what is market transparency and why is it important to Congress and ultimately to investors? Without transparency markets could post varied and different prices for a given security. With transparency, a given security’s price in every (or most) market(s) is known to all market participants. Prior to the Order Handling Rules (largely invoked by and for ECNs), market

---

10 S. Hearing, supra note 1, at 33 (opening statement of Douglas M. Atkin, then-CEO, Instinet Corp.).
11 Id. at 1.
13 See discussion, supra IV.a.i.
makers did not make available all customer limit orders\textsuperscript{14} or their full size to the entire body of investors.

Some market critics accused ECNs of creating fragmentation. Fragmentation is a problem that occurs when markets are not transparent. Fragmentation is the inefficient case where buyers and sellers are in different markets and cannot find one another and are thus forced to buy or sell at an inferior price. Therefore, fragmentation concerns arise where the number of market centers rapidly increases, because brokers cannot determine which market has the best price for their customer, resulting in inadequate fulfillment of their duty of best execution.\textsuperscript{15} ECN firms attacked the fragmentation accusations by arguing that the competition they invoked in the marketplace would create pricing mechanisms that were more efficient and fair.\textsuperscript{16} This potential drawback to ECNs is addressed later in this section.

ii. Lower Transaction Costs – Bypasses Middleman

ECNs eliminated the need for a middleman and, thus, reduced execution costs for investors when compared to the high cost of trading on Nasdaq or NYSE, for instance.\textsuperscript{17} Without a market maker acting as a principal on all trades in a given stock, ECNs allowed the “human” elements of trading to be conducted automatically via telecommunications technology. Thus, ECNs supplied price competition to the marketplace, which encourages competitors (e.g., the exchanges) to offer their own customers improved prices in order to retain their share of trading in the marketplace. The market share held by the exchanges, however, would steadily decrease over time.\textsuperscript{18}

\textsuperscript{14} A public limit order is an order to buy or sell at a specified price.
\textsuperscript{15} Stock brokers have a duty of best execution to their customers, which entails an obligation to obtain the absolute best price in the most efficient manner. Witmer, \textit{Supra} note 8.
\textsuperscript{16} \textit{SPECIAL REPORT: EXCHANGES AND ALTERNATIVE TRADING SYSTEMS} 95 (Dick Frase & Helen Parry eds., 2002).
\textsuperscript{17} Even after ECNs levied access fees on traders, they were still cheaper than the exchanges. Borelli, \textit{supra} note 5, at 859.
\textsuperscript{18} \textit{See} Discussion of Competition, \textit{supra} III.a.
iii. Individual Access

Because of the evidence regarding the exchanges’ failure “to meet their regulatory mandates,” both institutional and individual investors want to trade with venues that don’t allow the possibility of dishonest and unethical practices (i.e., no humans, no middleman); therefore, individuals could use ECNs to become their own market makers, seeking their own sources of liquidity instead of turning to specialists to provide it to them, at a high cost.\textsuperscript{19} ECNs equip investors with the same information with which the exchanges equip their market makers and specialists—that is, “depth” of trading interest in a security, allowing them to view all orders displayed in the trading book.\textsuperscript{20} Major recent developments in market structure may diminish this idea that the “average Joe” investor could become his own market maker. For instance, NYSE now operates a “hybrid” system of trading, where a fully-electronic system runs parallel to the traditional floor traders’ business.\textsuperscript{21}

I have found only one currently existing ECN, TrackECN, that allows individuals to directly access the ECN via an integrated online trading and market data system called MyTrack.\textsuperscript{22} Other ECNs allow individuals access only through a SEC registered broker-dealer.\textsuperscript{23} This limitation on access would still allow for investors to gain competitive pricing, assuming that broker-dealers pass on the cost benefits to their customers. If they refuse, customers could use their buying power to insist their brokers use ECNs in executing trades whenever practicable.

\textsuperscript{19} See Jonathan R. Macey & Maureen O’Hara, From Markets to Venues: Securities Regulation in an Evolving World, 58 STAN. L. REV. 563, 578-79 (2005); See also S. Hearing, supra note 1, at 27 (Opening statement of Gerald D. Putnam, Jr., then-CEO of Archipelago).
\textsuperscript{20} S. Hearing, supra note 1, at 27-28 (prepared statement of Douglas M. Atkin, then-CEO, Instinet Corp).
\textsuperscript{21} See discussion on Technological Innovation, infra III.b.
\textsuperscript{22} See Track ECN, Accessing Track ECN, http://www.trackecn.com (click on “New Subscriber”) (last visited Sept. 26, 2007) (MyTrack charges a per-trade fee to individuals instead of just using the pricing scheme of a $0.0022/share rebate for adding liquidity and a $0.0023 charge for reducing liquidity, which is available to institutional investors and broker-dealers. TrackECN would not return emails or phone messages regarding this issue).
\textsuperscript{23} E-mail from Phil Bruno [hereinafter Brun E-mail], Vice President, Direct Edge, to Derek White, J.D. Candidate 2009, University of Colorado law School (Sept. 24, 2007) (on file with author).
With the prevalence of the Internet and rapid developments in technology, “[why] shouldn’t any investor soon be able to turn his desktop into a stock exchange just by Googling up all offers and bids for a given stock?” ECNs made this outlandish statement a viable possibility but, unfortunately, the trend towards sophisticated individuals trading on their own, without the aid of a broker-dealer or market maker, has been slowed due to the market and regulatory dynamics that the evolution of ECNs itself produced.

iv. Anonymity in Trading

A distinct advantage of ECNs to institutional investors is that ECNs permit subscribers to conduct anonymous negotiations over price and size. Institutional investors can use this anonymity to trade their huge blocks of stock without tipping off market participants who would otherwise increase the price of that stock before the institution had completed its desired transactions. Anonymity in trading benefits vicariously the individual, because it is teachers, factory laborers, fire fighters and police officers, and other middle-class workers who use institutions to invest their money (e.g., through pension or mutual funds).

The benefit of anonymity was diminished when the SEC issued Regulation ATS, which required ECNs to publicly display the full size of its best buy and sell orders if the ECN volume in a security was five percent or more of the security’s average daily volume. Institutions still maintain an anonymous identity in an ECN, but ECNs are disallowed from using their “reserve system” of “hiding full order size if a trader wants to retain the ability to post single large orders in a way that does not immediately come to the attention of other dealers.”

25 Bruno E-mail, supra note 23.
26 See discussion of Regulation ATS, infra IV.a.ii.
regulations inspired by the presence of ECNs in the marketplace diminished the benefits that they provided to institutional and individual investors alike.

v. Reduce Bid-Ask Spreads – Better Pricing for Blocks

A bid price is the amount at which a market will sell a security to an investor.\(^\text{28}\) An ask price is the amount at which a market is willing to purchase a security from an investor.\(^\text{29}\) To execute their trades, investors—acting alone or through a broker or an institution—try to obtain the highest ask price and lowest bid price from a given venue. The smaller the “spread” between the bid and ask price, the better off is the investor (i.e., the closer the investor comes to eliminating the costs of trading via a middleman). Therefore, the sophisticated investor (i.e., one who is seeking to minimize execution costs) will seek out the market venue with the narrowest bid-ask spread.

A group of professors from the University of Tennessee have argued that ECNs narrow the bid-ask spreads throughout the markets because they operate more efficiently.\(^\text{30}\) The ECN firms gain efficiency because of the inherent nature of an order-driven market (e.g., ECNs and many other international electronic exchanges) compared to a quote-driven market (e.g., NYSE and Nasdaq). ECNs and other order-driven markets lower or eliminate order-processing costs\(^\text{31}\), inventory-holding costs\(^\text{32}\), and information asymmetry costs.\(^\text{33}\)

\(^{31}\) Order processing costs are the basic costs of doing business. In a quote-driven market these costs include a middle-man’s time and effort, costs to run the administrative offices, bookkeeping and accounting costs, and exchange fees. See id. ECNs eliminate a sizeable portion of these costs by eliminating the middleman. Also, as tech start-ups, ECNs don’t have the burdensome corporate structure of the established exchanges, and therefore further reduce these costs.
\(^{32}\) Inventory-holding costs occur when a market maker or specialist, acting as a principal, is required to deviate his inventory position from the optimum level. See id. These costs do not exist in an ECN, because ECNs act only as an agent between buyers and sellers. Therefore, ECNs cannot make adjustments to inventory holdings.
Because ECNs are not entrenched in the market system, they have a smaller average order size.\textsuperscript{34} Order processing costs are inversely related to trade size, therefore the order-processing costs will edge higher in comparison to the order-processing costs of market makers.\textsuperscript{35} While the average size of ECN trades increases its order-processing costs as compared to those of exchanges, the reductions ECNs yield in these costs, as discussed above, most likely outweigh the increase. If ECNs had been allowed to continue to grow as they were, without the hindrance of regulatory restrictions and negative market developments, this increase in order processing costs would have likely vanished, because their order size and market share was steadily increasing.

In the end, the University of Tennessee studies have shown that ECN spreads were on average forty-three percent lower when alone at the inside (the highest ask and lowest bid) than when market makers are alone at the inside.\textsuperscript{36} Further, bid-ask spreads are greater for market makers during periods of particularly high stress or unusually low stress in the markets than for ECNs.\textsuperscript{37} Thus, the study quells concerns that ECNs may lose their benefit during periods of abnormal market stress.\textsuperscript{38}

Again, the regulations and structural market developments for which ECNs served as the change agent have diminished this reduction in the bid-ask spread, because the quote-driven markets have now become fully automated. While the benefits ECNs provided may now be

\textsuperscript{33} Information asymmetry costs, sometimes called adverse selection costs, occur when market participants include expected losses in their pricing because they are more informed traders. See id. As stated above, see Discussion, supra II.b.iii., ECNs provide all market participants with information regarding trading interest in a given security, thereby reducing information asymmetry costs.


\textsuperscript{35} Id.

\textsuperscript{36} Id.

\textsuperscript{37} Id.

\textsuperscript{38} See discussion, infra II.b.vi.A.
integrated into all market venues in the U.S., that NYSE Euronext and NASD have entrenched
themselves back into a market structure of duopolistic dominance, these invoked benefits are
unlikely to last for long.\(^\text{39}\)

\textbf{vi. Potential Drawbacks to ECNs}

\textbf{A. Liquidity Issues}

Critics of the increasing market share acquired by ECNs centered their argument on the
notion that in stealing market share from the exchanges, ECNs were fragmenting the
marketplace, making it more difficult for buyers and sellers to find each other.\(^\text{40}\) If this were
actually the case, an investor might have difficulty executing a desired trade, especially in a bear
market. The opponents are correct in that ECNs have no inventory holdings of their own, thus
they are unable to provide liquidity if there is no reciprocal party with which an investor can
trade (a unique service provided by market makers in exchanges). However, history tells a story
contradictory to the critics’ fears. In October 1987, when the markets crashed worse than any
period since 1929, Instinet ECN was one of the few places open for institutional investors to buy
and sell stocks when market makers refused to answer their phones.\(^\text{41}\)

Fragmentation between multiple market centers became a nonissue, however, because
ECNs, capitalizing on the relatively low cost of bandwidth, created linkages between market
centers to make it easier for investors to find reciprocal orders in other markets, rather than
paying a market maker to act as principal for the trade.\(^\text{42}\) This electronic interconnectivity
between market centers allows competition for order flow and “permits orders to go back and

\(^{39}\) \textit{See} Duopoly Discussion, \textit{infra} III.c. and V.

\(^{40}\) \textit{See} Borelli, \textit{supra} note 5, at 849.

\(^{41}\) S. Hearing, \textit{supra} note 1, at 36 (opening statement of Douglas M. Atkin, then-CEO, Instinet Corp.).

\(^{42}\) Roger D. Blanc, \textit{Intermarket Competition and Monopoly Power in the U.S. Stock Markets}, 1 Brook. J. CORP. FIN.
forth between markets seeking liquidity and price and promotes economic efficiency and investor choice."\textsuperscript{43}

After the fact, some industry participants and regulators have referred to this criticism as the "fragmentation boogeyman"\textsuperscript{44} and deemed fragmentation as "just a buzz word for competition"\textsuperscript{45}. These hindsight comments may imply a sophisticated marketing campaign against ECNs by their more established competitors.

\begin{itemize}
\item \textbf{B. Costs of Regulatory Compliance}
\end{itemize}

While ECNs lowered execution costs for investors, they also invoked, in part, the recent sweeping regulatory changes (\textit{e.g.}, Order Handling Rules, Regulation ATS, and now Regulation NMS). This change will not be cheap for the industry—for market venues, broker-dealers, and other participants. Regulation NMS\textsuperscript{46} likely will increase transaction costs in the short term, at least.\textsuperscript{47} The dollar-costs Regulation NMS had on trading centers (forced “to modify their policies and procedures and internal systems and monitor compliance with the trade-through rule on an ongoing basis”)\textsuperscript{48} will get passed along to individuals or companies that make use of the

\textsuperscript{43} Id.
\textsuperscript{44} Witmer, \textit{supra} note 8 (quoting Paul S. Atkins, SEC Commissioner).
\textsuperscript{45} Id. (quoting Mark Tellini, vice president of Charles Schwab & Co. and enterprise counsel for Schwab’s capital markets and trading group).
\textsuperscript{47} The Securities Industry Association estimated the industry spends $25 billion annually on SEC compliance. A study showed that Regulation NMS implementation and compliance costs equaled $544 million over four years to broker-dealers alone. \textit{See} Peter J. Wallison, \textit{Capital Punishment}, \textit{WALL ST. J.}, Nov. 4, 2006, at A7 (Mr. Wallison is a resident fellow at the American Enterprise Institute, and was general counsel of the Treasury and White House counsel in the Reagan administration).
\textsuperscript{48} Regulation NMS start-up costs were estimated at $143.8 million, with average annual ongoing costs of around $22 million. Dissent of Commissioners Cynthia A. Glassman & Paul S. Atkins to the Adoption of Regulation NMS, June 9, 2005, at 39-40, \textit{available at} http://www.sec.gov/rules/final/34-51808-dissent.pdf [hereinafter Commissioners’ Dissent] (citing Comment Letter of David Baker, Global Head of Cash Trading and Global Head of Portfolio Trading, Deutsche Bank Securities Inc. (Feb. 3, 2005) (“In sum, we are concerned that the adoption of Regulation NMS, unless carefully crafted with sensitivity to practical implementation difficulties and expenses, holds the potential to force upon broker-dealers complex challenges and burdensome costs, the scale of which may not be fully appreciated by the Commission.”).
U.S. securities markets at all levels. Probably, these cost increases will not exceed the cost-savings investors experience with the presence of ECNs in the marketplace.

While dissenting SEC commissioner Paul Atkins hopes the consequences of the recent Regulation NMS will “turn out to be a nonevent,” he regrets the “thousands of hours and multiple millions of dollars spent in an effort by market participants to implement it.”

III. Impact of ECNs on the National Market System

The securities-trading markets experienced competition and implemented unheard of innovation in the late 1990’s and into the 21st century, “in large part [due] to the explosive growth of ECNs, which have been the greatest catalyst for increased competition and technological advances in the Nasdaq Market.” ECNs sparked the regulatory regime that induced vast change in the markets, including competition, innovation, and increased demutualization and consolidation among securities markets—both on a national and an international level. The key element that ECNs brought to invoke such change in the market was increased competition to the established exchanges (NYSE and Nasdaq). Competition among trading venues is good for individual investors; it was the driving force for innovation in the incumbent markets (by the threat of loss of market share) and consolidation of trading venues (via regulatory responses to competition). Competition “keeps costs down, gives rise to new products and services, and provides a greater incentive for traditional exchanges to innovate.”

Competition is needed in the marketplace, above all, to allow for innovation. Even the great economist and critic of monopoly regulation, Joseph Schumpeter, recognized that some

---

50 Commissioners’ Dissent, supra note 48, at 36.
51 Id.
degree of competition was necessary for society to experience technological innovation.\textsuperscript{52} Offering technological innovation, ECNs competed head-to-head with traditional exchanges and gave incentive to exchanges to develop technologies that would improve the quality of their trading practices.\textsuperscript{53} ECNs propelled the market structure into its current form, with demutualization, massive consolidation, and fully-automated securities trading.

\textbf{a. Competition}

In Regulation NMS, discussed further below,\textsuperscript{54} the SEC has tried to mandate certain innovation and trading styles. Competition, however, was itself achieving innovation and creating myriad new styles of productive and efficient trading techniques. For example, ECNs had already added their own version of the trade-through rule\textsuperscript{55} on their own,\textsuperscript{56} without a self-regulating organization ("SRO", \textit{e.g.}, NASD) or SEC requiring them to, but they did so rather through customer demand and a desire to compete for market share with other ECNs and the exchanges. Further, ECNs had signed a letter of intent "to make trading more widely available," in order to promote "transparency and efficient execution of trades."\textsuperscript{57} This intention was achieved through linkages between ECNs and between ECNs and some exchanges. ECNs also were allowed to post quotes to Nasdaq due to the rescission of certain barriers to entry (an event that did not occur on NYSE).\textsuperscript{58}

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{53} S. Hearing, \textit{supra} note 1 (Prepared statement of Douglas M. Atkin, then-CEO, Instinet Corp.).
\item \textsuperscript{54} See Discussion, \textit{infra} IV.b.
\item \textsuperscript{55} A "trade-through rule", first implemented before electronic exchanges existed, is a mechanism that seeks to ensure investors receive the best price. The rule forbids a market from satisfying an investor's order at an inferior price to a price available on another market. The current trade-through rule, now termed the "order protection rule" by Regulation NMS, was forced upon electronic markets and gives a market venue the option of either routing the order to the venue providing superior price or match the price and fulfill the order instantly. This rule will be discussed in more detail in the Regulation NMS discussion, \textit{infra} Sections IV.b. and V.
\item \textsuperscript{56} Oesterle, \textit{supra} note 27, at 652.
\item \textsuperscript{57} SPECIAL REPORT: EXCHANGES AND ALTERNATIVE TRADING SYSTEMS, \textit{supra} note 16, at 90.
\item \textsuperscript{58} Id. (referring to rescission of Rule 390).
\end{itemize}
\end{footnotesize}
Without competition, a monopoly like the “NYSE had little incentive to upgrade its trading technology,” which it obstinately refused to do for years because internal rules made it difficult for competing, niche markets to access NYSE-listed securities. There was a market demand, however, for “swift, efficient electronic markets,” and ECNs capitalized on this unsatisfied demand for more efficient execution of trades and increased transparency. As far back as 2000, ECNs were trying to break through the barriers to entry in the equity trading market. ECN firms begged the SEC to open fully the markets to more competition. This access, it was argued, would spur the exchanges to innovate and modernize. ECN firms’ mentality of market improvement is what produced the current market developments of demutualization and a sweeping regulatory regime, which have in turn diminished ECNs’ impact on and presence in the marketplace. ECNs invoked great change in the markets, but now a further entrenched, leaner, meaner duopoly has re-gained control of the markets for the foreseeable future.

In 2000 ECNs owned five-percent of market share in listed securities and over thirty-percent of Nasdaq’s trading volume. By 2005, ECNs handled more than 50% of trades on Nasdaq-listed securities and seven percent of the total orders of all exchange-listed securities. This shows the reality that existed in the marketplace, prior to implementation of Regulation NMS. That is, ECNs had become “serious competitors to Nasdaq and [NYSE]” due to their “technological advances, trading volume increases, and pressures on trading profits.” These numbers have shrunk a great deal due to the new regulatory regime, the demutualization of the previously non-profit SROs and the subsequent national and international blitz of mergers and

59 WALL ST. J., supra note 2.
60 Id.
61 Witmer, supra note 8, (quoting Douglas Atkin, then-president and CEO of Instinet Corp.).
64 SPECIAL REPORT: EXCHANGES AND ALTERNATIVE TRADING SYSTEMS, supra note 16, at 83
acquisitions (during which the exchanges bought out many of the largest ECNs—a quick way for exchanges to upgrade their technology platforms). Enter SEC from stage-left to save the day, promoting transparency, efficiency, and fairness (an “even playing field”). But SEC transgressed. Due to the over breadth of SEC proposed regulations, one market participant asked: “why not let the market structure result from competition rather than mandates from on high?” The Wall Street Journal noted the question that “the SEC has failed to grapple with: why shouldn’t the markets for trading stocks be free to compete on service and innovation? Instead, it looks like the SEC is going to give investors the same-old, very old, story.”

Due to the competition brought by ECNs, the SEC issued sweeping regulations to solidify automated markets, giving them priority over slower, manual markets. “The NYSE—the queen of slow markets—went wild. … in an effort to qualify as a fast market, [NYSE] introduced the first real reforms in decades.” The NYSE has now become a ‘hybrid’ market, where an automated system runs alongside the traditional floor traders. This system is called Direct Plus. Afraid of losing its monopoly power, the NYSE finally invested in “some long-needed changes toward automated trading.”

Many of the benefits ECNs brought to the marketplace have been forced upon the exchanges because they had to innovate or lose market share to their competitors. What will be the response of this entrenched duopoly in twenty years when their current technologies become antiques and trading styles have continued to evolve? Will they be willing to accommodate the demand for innovation? Or will they refuse to do so because of the security and protection they gained from SEC’s Regulation NMS? History would suggest that they will be resistant to future

---

66 WALL ST. J., supra note 2.
67 WALL ST. J., supra note 2.
68 WALL ST. J., supra note 2.
change. Unfortunately, “despite the fact that competition has driven the manual markets to automate—we [ ] have a trade-through rule and at the same time no assurance of best execution compliance for orders sent to some of these automated markets.”

b. Technological Innovation

ECNs emerged in 2000 as viable competitors to the Nasdaq, a market that did not have a trade-through rule. The NYSE was able to maintain eighty percent of market share in its listed securities with a trade-through rule. Nasdaq lost large percentages of market share to ECNs, whereas NYSE lost very little market share to these innovating systems even though NYSE was the market venue with “an obsolete manual trading system.”

As was introduced in the previous subsection, NYSE created a hybrid market of specialists and an automated market operating next to one another. This hybrid system favors NYSE floor members over other investors, in the hybrid system: (1) specialists and brokers can enter orders not visible to off-floor traders, but with equal priority to pre-existing public orders (thus taking away time-priority of trades), (2) specialists can utilize automated matching engines that match superior quotations on other venues (stealing reward of competitors for offering price improvement), (3) market orders to buy or sell by matching against several limit orders at successively higher or lower prices are given a “clean up” price that gives all the limit buy orders the highest price and sell orders the lowest price (thus severely disadvantaging institutional investors trying to trade large blocks of shares), and (4) specialists can cease operation of the electronic market if certain price parameters are triggered.

69 McTague, supra note 49 (quoting SEC Commissioner Paul Atkins).
70 Oesterle, supra note 27, at 667.
71 Id.
72 Id.; this phenomenon was largely due to NYSE’s trade-through rule, which prohibited access to ECNs.
73 Blanc, supra note 42, at 286.
Due to intense competition, Nasdaq created the SuperMontage System, essentially its own ECN.\(^74\) The distinction between the two approaches is that NYSE innovated only upon regulatory provisions that favored innovated markets (even so, its innovations still heavily favored “in-house” market participants over individual and institutional investors) and Nasdaq innovated due to competition by ECNs. Regulation NMS was not necessary for the entire market, because only the NYSE and its monopoly on NYSE-listed securities refused to adapt to the demands of the marketplace. Therefore, Regulation NMS benefits NYSE and hinders all other market participants: “efficiencies born of competition have benefited investors and issuers alike. The majority’s adoption of the trade-through rule assists one market to step forward, while forcing the other markets to take two giant steps backward.”\(^75\) Had the SEC simply opened the door to competition with NYSE, NYSE would have been forced to innovate; however, protected by regulation, NYSE has regrouped and now maintains its control on the securities trading market. Meanwhile in the rest of the marketplace “competition between markets and ECNs drove technological innovation as a means of attracting orders and liquidity to their markets.”\(^76\) This phenomenon did not occur in NYSE because ECNs and other alternative trading venues were not allowed access to NYSE-listed securities.

**c. Consolidation and Demutualization**

By 2004 the world’s securities exchanges had set a trend of massive consolidation. This market dynamic took place among ECNs, exchanges, and between ECNs and exchanges. This section is a brief history of the last decade’s consolidation in trading venues.

\(^{74}\) Oesterle, *supra* note 27, at 664.  
\(^{75}\) Commissioners’ Dissent, *supra* note 48, at 37.  
\(^{76}\) Commissioners’ Dissent, *supra* note 48, at 29. As will be shown below, this competition-driven change is the fulfillment of Congress’ intention in amending the securities acts in 1975.
In 1997, Archipelago launched its Arca Electronic Communication Network and soon rose as a top contender for market share in regards to both the other ECNs and the exchanges. It began in 1999 by buying up other, smaller ECNs such as REDIBook ECN and GlobeNet ECN. Archipelago desired to become a regulated exchange, and it did so in 2001 when it joined the Pacific Exchange. In 2004, Archipelago Holdings launched an initial public offering and used its stock to acquire the Pacific Exchange, forming ArcaEx. The NYSE, in an attempt to upgrade its technology and utilize its new found stock value (after going public itself), merged with ArcaEx to form NYSE Group, Inc. which began trading publicly March 8, 2006.

Not to be outdone by its national rival, Nasdaq began seeking out its own ventures to increase its global market share of the trading of securities. Nasdaq first bought out its largest competitors in INET (the largest of ECNs and owned and operated by Instinet) and Brut (another ECN, focusing on large institutional investors). In bidding for the London Stock Exchange (LSE), Nasdaq also sought its own trans-Atlantic deal, though with little success. For LSE was and is highly resistant to takeover bids. Nasdaq began acquiring LSE shares in hopes of an eventual takeover, holding up to 30% of LSE at one point. Admitting defeat, however, Nasdaq then began the difficult task of offloading its large minority stake in LSE, as an exchange that refused to sell creates difficulty in valuation.

Meanwhile, major exchanges in Europe were allying themselves to form Euronext, the first pan-European exchange. Euronext was first formed by Paris Bourse, Brussels Exchange, 

---

78 This desire stemmed from Regulation ATS, which forced ECNs to choose to become an exchange (and be regulated as such) or a broker-dealer (and be regulated by an SRO, such as NASD—parent company of ECNs’ competitor, Nasdaq). See Discussion infra IV.a.ii.
80 Blanc, supra note 42, at 290.
81 LSE has successfully repulsed “no fewer than four suitors … this decade.” Aaron Lucchetti & Alistair MacDonald, Moving the Market: Browsers, but No Buyers, for an LSE Stake, WALL ST. J., August 28, 2007, at C3.
and Amsterdam Exchange, but soon acquired other European exchanges, such as Lisbon Exchange and London International Financial Futures and Options Exchange.  

Now that NYSE has merged with ArcaEx, and Nasdaq has merged with Instinet, the major national players have been consolidated into NYSE and Nasdaq. This consolidated national market left the international exchanges as potential merger or acquisition targets. In an unprecedented move, NYSE Group and Euronext merged in 2007 to form the “first truly global financial marketplace group.” This new trans-Atlantic merger was a “major step” in the consolidation trend occurring across the globe. The coalition also formed an alliance with the Tokyo Stock Exchange and paid $115 million for a five-percent stake in India’s National Stock Exchange. Industry experts have also reported NYSE’s desire to “expand further in China.”

In response to NYSE Group’s formation of a trans-Atlantic exchange, Nasdaq quickly acquired Scandinavia’s Nordic Exchange, forming Nasdaq OMX. Nasdaq was not bluffing in its signal to match NYSE step-for-step in the exchanges’ intent on global dominance of securities trading, for it raised the ante in acquiring Philadelphia Stock Exchange (the oldest exchange in the U.S.) in November 2007. NYSE matched and made Nasdaq its sole rival by acquiring the American Stock Exchange early this year. Evidence is clear that an international arms race was

83 NYSE Euronext Corporate Timeline, supra note 79.
85 Id.
86 Id.
87 Id.
88 Id.
89 Id.
sparked; Nasdaq and NYSE are intent on swallowing up any independent exchange, whether it be technologically advanced, small, regional, or foreign.

Three reasons explain the cause of substantial consolidation in the securities trading industry. First, the competition from ECNs had reached a critical mass, exchanges had to act quickly in order to retain and regain their market share. As is the case with most industries, mergers and acquisitions occur, at least in part, because of the desire to gain or maintain monopoly power. The Exchanges have always been near-monopolies, but ECNs were threatening this comfort. Unfortunately, the exchanges were helpless to do anything about the threat, unless they had a new source of capital with which to negotiate mergers and acquisitions. This came in the form of public stock, which goes to the second reason, demutualization.

Second, the demutualization of the major national and world stock exchanges.\(^{92}\) Demutualization gave exchanges “the private sector incentives to use their powers to maximize revenues, crush their competitors, and increase their share prices.”\(^{93}\) As for-profit entities exchanges had an abundance of their own public stock to use as “acquisition currency” in acquiring their competitors, both ECNs and other exchanges.\(^{94}\) Consolidation of newly public entities also results from pressures of investors to cut costs and increase profit margins.\(^{95}\) Public companies can achieve this by acquisition of competitors to gain market share or through investment in technology platforms. Shareholders were thrilled about the NYSE-Euronext merger because it was expected to yield “the ability to cut costs by consolidating trading technology [economies of scale] and to bring company listings to Europe that may not go to the

---

\(^{92}\) The question of the lack of prudence or wisdom behind allowing the demutualization of SROs is largely beyond the scope of this note. See Onnig H. Dombalagian, *Self and Self-Regulation: Resolving the SRO Identity Crisis*, 1 Brook. J. Corp. Fin. & Com. L. 317 (2007).

\(^{93}\) Blanc, *supra* note 42, at 290.

\(^{94}\) *Id.*

\(^{95}\) Lucchetti & MacDonald, *supra* note 81.
In the case of ECNs, the exchanges were able to utilize both these strategies, thus upgrading their technology platforms and simultaneously increasing their market share.

Third, after the SEC announced Regulation NMS, announcements of the mergers and acquisitions discussed above and others spread like wildfire across the country and globe. The new regulatory regime, induced by ECNs, heavily influenced the recent developments in market structure and will be discussed in more detail, but suffice it to say that Regulation NMS was so sweeping and had been so hotly debated for so long that market participants were anxious to put an end to it and move on. That is, take advantage of the benefits and adjust to the new rules put in place—as most business-related industries say: “give me a rule, any rule, so I can adapt and move on.” The regulation also required market participants to upgrade technology and automate trading systems, which could be done more easily by acquiring technologically advanced ECNs.

There are two major problems with this global consolidation and demutualization of the securities trading industry—a national problem and an international one. First, the national problem, that is: the resulting situation is a powerful national duopoly. Duopolies come about either through mergers or through growth of the dominant firms in a given industry. As discussed in this section, in the case of the securities trading markets, mergers have been the means to this end. The combining of entities increases market share for the new firm and achieves greater economies of scale and power in price negotiation. While it is evident that merging can provide great benefits to the firm itself, what about the rest of the marketplace?

---

96 Gason F. Ceron, Moving the Market: NYSE Group’s Shareholder’s Approve Takeover of Euronext, WALL ST. J., December 21, 2006, at C3.
97 Commissioners’ Dissent, supra note 48, at 43.
98 A duopoly is a type of oligopoly where a market is dominated by two large producers, each with “considerable control over their prices.” Oligopoly falls in the market structure spectrum just below pure monopoly. CAMPBELL R. MCCONNELL & STANLEY L. BRUE, MICROECONOMICS: PRINCIPLES, PROBLEMS, AND POLICIES 235 (15th 2002).
99 Id. at 236.
100 Id.
One industry commentator stated that “[a] consolidated trading market is a market inherently resistant to innovation and change.”\textsuperscript{101} Other disadvantages over-consolidation brings to the market are: increased barriers to entry for new higher cost producers and collusive tendencies.\textsuperscript{102}

Take Ford and GM as an illustration of a damaging duopoly. The two companies until recently dominated the U.S. auto market. They temporarily prevented penetration from foreign competitors due to their size, power, and historical “head-start” in the U.S. auto market, but this market structure only caused negative repercussions to the end consumer because the quality of product became sub-standard given the lack of necessity for innovation. Further, the two companies have lost billions of dollars over the last decade,\textsuperscript{103} due to inefficiencies inherent in a duopoly.\textsuperscript{104} Fortunately for the U.S. driver, the deficiencies in the business plans of national automakers have allowed room for foreign producers to fill that void. And now, due to intense foreign competition, Ford and GM are beginning to innovate (creating hybrids and flexfuel vehicles to compete with the high efficiency vehicles of Toyota, Honda, Volkswagon, etc.).

Similarly, ECNs broke through a similar market structure in the self-regulating NYSE and NASD, because the incumbents refused to innovate. Unfortunately, however, ECNs have been mostly swallowed up by the incumbents and have become fairly insignificant players in the marketplace. The investor and the overall marketplace are better off in the short-term because of ECNs’ impact on the marketplace, but the SEC has allowed the exchanges to re-entrench themselves for a future duopoly of like-suppression as it has been for recent memory.\textsuperscript{105}

\textsuperscript{101} Oesterle, \textit{supra} note 27, at 672.

\textsuperscript{102} See McConnell & Brue, \textit{supra} note 98, at 235-38; See also, Kate Kelly & Susanne Craig, \textit{NYSE Traders Will Pay Fines of $240 Million}, Wall St. J., February 18, 2004, at C1 (NYSE’s five largest floor-trading firms settled civil charges that they traded ahead of customer orders).


\textsuperscript{104} See McConnell & Brue, \textit{supra} note 98, at 239.

\textsuperscript{105} See Discussion regarding Problems with Reg NMS, \textit{supra} V.
It is possible, however, that the detriment caused to investors by a powerful duopoly will create a new desire for alternative venues to Nasdaq and NYSE, which could revitalize the ECN business, perhaps on an international level. But whether the barriers to entry are too large may prevent investors from finding alternative venues, because none have been able to rise from the fray. This void may require investors to seek out international venues which may become increasingly efficient as modern communications continues to make the world smaller.

The second problem relates to international consolidation, which is best explained by finishing the story of LSE. As was explained above, it had been thought that the publicly-traded LSE would be a “potential predator,” however, during the international consolidations it became target “prey” and was “considered a trophy property.” Nasdaq was the first to try to acquire the coveted exchange, acquiring thirty percent of its equity despite that the LSE “management and many shareholders [had] no interest in selling.” Two failed attempts at a take-over caused Nasdaq to seek to offload its minority stake in LSE. Borse Dubai purchased a twenty-eight percent stake in LSE from Nasdaq, and not to be outdone by its regional rival, Qatar Investment Authority purchased a twenty percent stake in LSE. Now, LSE members and management find “two government-funded Middle Eastern Companies controlling nearly half [the] company.” This may be a good thing, because it gives LSE access to a fast-growing region rich in oil royalties and the two competitors claim they have no plans for a takeover (though given the deep pockets of its new minority shareholders, LSE can’t be too certain on this latter point).

---

107 Alistair MacDonald, For LSE Chief Furse, Takeover-Fighting Skills Could Be Put to the Test, WALL ST. J., Sept. 21, 2007, at C1; and Lucchetti & MacDonald, supra note 81. But LSE may become an international predator after all, as it recently finalized a merger deal to purchase the Milan-based Borsa Italiana.
108 Lucchetti & MacDonald, supra note 81.
109 MacDonald, supra note 107.
110 Id.
LSE has problems, however. LSE now has two large minority “shareholders who are fierce rivals. … [who] are backed by governments whose priorities may be different from most shareholders.” Director of international economics at the Council on Foreign Relations, Ben Steil, stated that LSE needs to be weary of state-controlled entities, because they don’t necessarily make decisions on purely commercial or financial determinations.\(^{111}\)

This is the major problem with the international consolidation of securities exchanges: many exchanges are run by the host country’s government. Having a partner that is in part motivated by factors other than economics and finance, could backfire on American and European exchanges.

**IV. Regulatory Framework Affecting ECNs**

Beginning in the late 1980’s ECNs first began entering the marketplace bringing with them their price-improvement, transparency, automation, and other benefits and the SEC allowed them to compete. But the most recent and sweeping regulatory enactment has heavily-favored the monopolies of the incumbent exchanges. ECNs were the impetus for these regulations and the exchanges’ reactions to them; in a way, ECNs caused their own demise. They induced anticompetitive measures that have now set a course that will destroy the market dynamics (\textit{e.g.}, competition and innovation) that they initially invoked in the markets. As will be discussed, Regulation NMS is a step backwards from the innovative and competitive environment that was fostered in part by prior regulations. I will describe first the two major historical regulations that affected ECNs, followed by a discussion of the newly implemented Regulation NMS.

a. **Historical Development**

i. **Order Handling Rules\(^{112}\)**

\(^{111}\) \textit{Id.}

The name of this regulation indicates well what it was aimed at—how market venues execute customer orders. These rules were created in part to deal with ECNs’ alleged problems and required them to open their full book of orders to the entire market, not just to their own subscribers.113 As discussed above, the fear of ECNs was that they would create market fragmentation.114 The Order Handling Rules in fact created a surge in ECN activity,115 though this may have been an unintended result.

The rules actually helped fostered one of the key benefits ECNs brought to the marketplace, transparency. The rules required market makers and specialists to display a customer’s limit order, including its full size, when the orders are at a better price than the market maker’s public quote.116 This rule helped prevent the common practice of posting better prices on ECNs (which provide anonymity of trading) for institutional investors executing large block trades, but contemporaneously quoting an inferior price on the exchange display board for individual investors or their broker-dealers. The SEC rightfully stepped in and scolded the market makers and specialists for this inequitable practice and disallowed further use of price discrimination.

It may seem reasonable that institutional investors should receive superior prices because they buy in bulk; just as it seems reasonable that a twenty ounce bottle of ketchup at Safeway might cost the consumer more per ounce than a one-gallon jug of ketchup at Costco. The manufacturers’ advantages of selling in bulk are a cost-savings from a decrease in materials required and an increased profit multiple because of the increased quantity sold. This analogy does not apply seamlessly to the securities markets, however, because market makers are mere

113 Borrelli, supra note 5, at 827.
114 See Discussion, supra II.b.i. and II.b.vi.A.
115 Borrelli, supra note 5, at 827.
116 Borrelli, supra note 5, at 849.
middlemen, they do not save on their costs if they sell 1,000 shares instead of 100. While the profit advantages still exist in selling larger quantities of shares, given the greedy capitalist’s tendency to take advantage of the “little guy,” having a policy of allowing any entity—large or small—equivalent access to the markets may be advantageous to the whole national economy. It further seems fair that institutional investors and broker-dealers should receive equivalent pricing because institutional investors represent individuals (e.g., in pension funds) and broker-dealers represent individuals.

The SEC allowed specialists and market makers to not make publicly available their quotations if the ECN itself, made its price publicly available and allowed broker-dealers to execute against its orders.117 The effect was the same, broker-dealers and the investors they represented were given equal price opportunity as the institutional investors. Market makers could no longer play favorites.

ii. Regulation ATS118

Because the markets had never experienced an invasion on the scale of ECNs or by a competitor with such nontraditional characteristics, the SEC tried to find some way to fit ECNs into the traditional regulatory framework (it would have been too clever to develop a new regulatory framework for these new entities). They accomplished this piecing-together of the nation’s financial markets by requiring ECNs to choose to register either as national exchanges or as broker-dealers. On the one hand, if an ECN chose to become a broker-dealer (which the majority of them did), it would become a member of an SRO (i.e., become subject to NASD oversight, NASD being the parent of ECN competitor, Nasdaq, creating obvious conflicts of

117 Id. at 850.
Further, registering as a broker-dealer came with special licensing requirements of the new Regulation ATS. On the other hand, registering as a national securities exchange would require extremely expensive licensing requirements of the Securities Exchange Act of 1934, and a long regulatory lag.

ECNs earned revenues by charging membership fees to subscribers and by charging access fees to non-subscribers. If SEC required ECNs to make their orders available to non-subscribing broker-dealers, meant that ECNs would become insolvent quickly. Using excellent foresight, the SEC created an exception to the regulation allowing ECNs and other alternative trading systems to charge a fee that is not “inconsistent with equivalent access to the alternative trading system required [by regulation ATS].” This somewhat vague rule is now understood to require ECNs to only charge “reasonable” fees that are roughly equivalent to communications or access fees that other markets charge broker-dealers.

In a step in the right direction the SEC shaped the regulatory regime to enable “developing systems with low volume to operate with minimal regulatory burdens”—ECNs—and contemporaneously to require “systems with larger volume to comply with more extensive regulation of their quotation dissemination and access standards.” This new regulatory regime was structured to foster the best possible competition (e.g., removing many barriers to entry) and opened the door to all the benefits that ECNs brought to the marketplace (e.g., transparency,

---

120 Oesterle, supra note 27, at 664.
121 Id. at 663.
122 These difficulties were experienced all too well by Arcipelago as one of the few exchanges that tried to gain exchange status, it finally gave up the fight and simply merged with Pacific Exchange, giving it instant exchange status.
123 Requirements for alternative trading systems, 17 C.F.R. §242.301(b)(4)).
125 Borrelli, supra note 5, at 854.
price-improvement, innovation, etc.). This phenomenon was especially poignant because the regulatory burdens on a given venue depended on “the significance of [its] market presence.”

Where the Order Handling Rules were targeted in large part at market makers and specialists and only indirectly aimed at ECNs, Regulation ATS targeted directly ECNs and other similar alternative trading systems, requiring them “to display their best customer orders via Nasdaq linkages so all investors have access to these orders.” There was a five-percent threshold, however, that allowed ECNs to keep from displaying through linkages customer orders in a security in which the ECN did not have at least five-percent of the security’s trading volume.

Regulation ATS created a regulatory framework that encouraged “market innovation while ensuring basic investor protections.” Unfortunately, however, after taking two steps forward, the SEC would take three giant leaps backward in its regulation of the national securities markets.

b. Current Regulatory Regime – Regulation NMS & Its Problems

The SEC’s 1975 congressional mandate provided the two chief goals by which the SEC should live in fulfilling its new duty to create a national market system. Those are: (1) to maintain “stable and orderly markets,” and (2) to centralize “all buying and selling interest so that each investor will have the opportunity for the best possible execution of his order, regardless of where in the system it originates.” The remainder of this note explains how the SEC exceeded this mandate by attempting to codify market developments instead of facilitating market development through free competition.

126 Id.
127 S. Hearing, supra note 1, at 27 (Prepared statement of Douglas M. Atkin then-CEO of Instinet).
128 Borrelli, supra note 5, at 859.
129 Commissioners’ Dissent, supra note 48, at 35.
The SEC had to respond to the fast-changing markets and the increased competition and innovation that ECNs provided with these goals in mind. The SEC attempted to fulfill its mandate by implementing Regulation NMS ("Reg NMS") with its alleged goal “to modernize an increasingly laborious and inefficient structure put into place in the 1970s.”\(^{131}\) The new trading rules incorporated in Reg NMS include a requirement that “investors’ trades be completed at the best price that can be executed immediately.”\(^{132}\) This requirement provides investors with the best price available at the instant the trade is sent to the markets, problems with this seemingly positive trade execution rule abound.

Reg NMS contains four major topics that change the regulatory structure of the U.S. equity markets more than any legislation or regulation since at least 1975, but possibly since the inception of the Securities Exchange Act in 1934. The four topics are: (1) the order protection rule (previously known as the trade-through rule, to be discussed below), (2) an access rule, (3) rules regarding market data availability and pricing, and (4) outlawing of sub-penny pricing.\(^{133}\) The most momentous and most hotly debated topic is Reg NMS’s imposition of the order protection rule.

The SEC relabeled the well-known “trade-through rule” as the new “order protection rule.”\(^{134}\) Possibly because of the negative sentiments in the minds of some market participants at the old “trade-through rule” term, as some feel it to be an overly restrictive burden on a free market economy. Whatever the reason for the change in terminology, the idea behind the rule remains the same.

\(^{131}\text{WALL ST. J., supra note 2.}\)
\(^{132}\text{Aaron Lucchetti, SEC May Delay Implementing New Wall Street Trading Rules, WALL ST. J., Jan. 7, 2006, at B3.}\)
A trade-through occurs if a specialist on the floor of NYSE, for example, executed a customer order at a price that is inferior to a quote that was displayed by Nasdaq. The new order protection rule proscribes such trade-throughs for all market venues, including electronic markets (e.g., ECNs). Under Reg NMS, brokerage firms must send their orders to whichever electronically accessible market has the best price in the market, or in the alternative, the market in which the customer limit order was initiated may match the best price available in another electronically accessible market, thus executing the limit order itself.

The initially proposed Reg NMS included both price and time priority, so that the market venue with the best price first, would receive the order, but after many industry comments and compromises, the finalized Reg NMS included only price priority which means the order must be fulfilled at the best available price only, notwithstanding who executes the trade. This rule provides an NYSE market maker, for instance, the option to match a better price offered by Nasdaq or route the order to Nasdaq for execution. The ability of dominant markets to match the best bid or offer in a smaller market (e.g., ECNs) will decrease market competition and increase likelihood of collusion (one of the inherent problems in duopolistic industries), contrary to the assertions of the SEC majority that voted for implementation of Reg NMS.

While Reg NMS did force some markets to automate (chiefly NYSE—the only major market that had resisted trade execution automation), the trade-through rule will bring “no assurance of best execution compliance for orders sent to” automated markets. One dissenting Commissioner, Paul Atkins, further labeled Reg NMS “unworkable” and a “regulatory

---

137 See Discussion of Reg NMS Problems, supra Section V.
138 Commissioners’ Dissent, supra note 48, at 36.
139 McTague, supra note 50.
misstep.” The reason Commissioners Atkins and Glassman felt this regulation to be such a misstep was because it did not adequately address “issues of connectivity, access, and automated execution.” Instead the majority of the SEC’s five member Board of Commissioners implemented the hotly debated trade-through rule. Commissioner Atkins declared Reg NMS “a carte blanche for unsupervised meddling by the SEC staff in the marketplace for years to come.”

There are numerous other deficiencies found in Reg NMS. For instance, the inclusion of price priority to the exclusion of time priority provides no incentive for markets to offer price improvement over their competitors because they can simply match any price that might be better in a competing market center. This lack of incentive will produce inferior prices to investors, thus violating SEC’s congressional mandate of assuring best execution. One industry participant wisely recommended that Reg NMS provide investors with the choice of which execution attributes are most important to them, encouraging markets to compete in all dimensions of trade execution. Price remains only a single element in trade execution. For instance, institutional investors may prefer to sacrifice price for liquidity, timeliness of execution, or myriad other elements of trade execution.

The new rules arbitrarily codify a specific style of trading that a narrow SEC majority felt was best. This codification disallows trading centers to offer services specifically tailored to the unique and developing needs of their target customer base. Whereas fostering competition would allow trading centers to compete with one another for market share by offering more of what

---

140 Id.
141 Id.
142 Id. (quoting SEC commissioner Atkins).
143 See Chevron Discussion, supra V.a.
144 Commissioners’ Dissent, supra note 48, at 26 (quoting Comment Letter of Minder Cheng, Managing Director, Barclay’s Global Investors (Jan. 26, 2005)).
145 Id.
146 Id.
their customers want for a lower price. This is a stark example of a government agency opting for government-controlled market structure rather than choosing to allow “competitive market forces to determine the appropriate market structure.”

Also, the new rules codify the current state of technology which will control future innovation. History is clear that technological innovation is most rapid and far-reaching when uninhibited by regulatory burdens. Because Reg NMS decreases competition among markets and limits order routing to the price offered by a particular market, the rules “sacrifice competition among SROs and ECNs, which will have a negative impact on innovation.” That is, markets have no incentive to compete with each other in terms of technological innovation. The markets currently have up-to-date trading technology, but a lack of incentive to continue to innovate could yield obsolete systems in the near future.

As was described above, the competition that ECNs brought to the marketplace coupled with adequate linkages among market centers had already begun to fulfill Congress’ desire to create a national market system. The first goal comes from SEC’s original purposes under the Securities Exchange Act of 1934 §11A, where Congress laid out five principles to follow in maintaining fair and orderly markets. Reg NMS violates the second of these five principles, which is to assure “fair competition…among exchange markets, and between exchange markets and markets other than exchange markets [e.g., ECNs].” The linkages between market centers increased the stability and reduced fragmentation of the markets (achieving goal one). The last phrase of goal two, “regardless of where in the system it originates,” contemplates a network of trading centers, a phenomenon easily achieved by proper linkages among competing

\[147\] Id. at 30.
\[148\] Id. at 35 (citing Comment Letter of Jeffrey T. Brown, Senior VP, Charles Schwab (Feb. 1, 2005) (“A centralized routing algorithm stifles innovation of new mechanisms for handling orders”)).
\[149\] Id. at 29-30.
market centers. In fact, Congress recognized that communication systems between markets would “form the heart of the national market system.” The SEC ignored its congressional mandate when it failed to foster the competition that was growing in the marketplace, wiped it out by creating barriers to entry for new competition, and codified innovation.

V. Problems with Reg NMS Produced Problems in the National Market System

Many disadvantages exist in the finally implemented Reg NMS. The remaining sections will discuss the reasons why Reg NMS should be overturned or amended to save the advancements and benefits ECNs brought into the national securities markets.

a. Legal Reasons to Overturn Reg NMS

It can be difficult to overturn actions by administrative agencies. In *Chevron*, the Supreme Court created a two part test for judicial review of administrative agency decisions. A reviewing court must ask whether Congress directly spoke to the “precise question at issue.” Once that question is settled the court must determine whether the administrative agency’s determination was “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.”

First, the question of whether Congress directly spoke to the question at hand. If Congress’s intent is unambiguous the court and agency both must give effect to Congressional intent. If the reviewing court finds that Congress has not addressed the precise issue but has left a gap for the administrative agency to fill, the court cannot impose its own statutory construction on the agency but must determine whether the agency’s construction is

---

153 *Id.* at 843.
155 *Id.*
“permissible.” Several policies support this judicial deference to an agency’s interpretation of a statute, including:

(1) agencies tend to be familiar with, and sophisticated about, the statutes they administer; they understand the relationships among various provisions, the practical implications of adopting one interpretation as opposed to another, etc. (2) As unforeseen problems develop in the administration of a complex regulatory scheme, the agency needs flexibility if it is to make the program function effectively. (3) As Chevron noted, an agency has ties to the incumbent administration, and thus is politically accountable for its choices in a way that a court cannot be. (4) Deference promotes uniformity in the law because it makes reviewing courts scattered across the country less likely to adopt differing readings of a statute; instead, the view taken by a single centralized agency will usually control.

Nevertheless, SEC should not be given such vast judicial deference in this instance. The above-quoted policies for administrative agency deference are not always fully acknowledged, because many feel that agencies should not be given so much trust to be the final arbiters of their own power and that the independence of courts is a necessary and inherent check in our system of government. Also, commentators who have studied the entire line of cases regarding judicial review of administrative agency determinations feel that “the *Chevron* opinion, if read in isolation, would give an exaggerated picture of the deference that courts actually give to administrative constructions.”

In fact, with Reg NMS, many of the policy arguments supporting judicial deference are weakened. For instance, while it is true that SEC is most familiar with the securities markets, that there was a 3-2 vote of commissioners signifies that there is plenty of room for disagreement among those most qualified to make decisions as to what regulatory regime would most effectively carry out SEC’s congressional mandate. Further, even though the agency is tied to

---

156 *Id.*
158 *Id.* at 82.
159 *Id.* at 87.
the current political administration, it is a “politically-neutral” agency because the compilation of
the five commissioners requires that no more than three be from the same political party.\textsuperscript{160} Reg
NMS’ vote was the two left-wing commissioners and the chairman (a political conservative)
voting in favor of the sweeping regulations and the two more conservative commissioners that
dissent (an outcome detached from the Bush administration’s conservative policies). Also, the
effects of Reg NMS are years away, the political accountability of the current administration will
long have passed.

Should a reviewing court find that, in adopting Reg NMS, the SEC correctly understood
its congressional mandate (the law) and adopted a rational view of the facts? In considering
1975 Amendments to the securities acts of 1933 and 1934, the Senate Banking Committee made
this statement clarifying SEC’s responsibilities moving forward:

\begin{quote}
[T]he Commission’s responsibility [is] to balance the perceived anti-competitive effects
of the regulatory policy or decision at issue against the purposes of the Exchange Act that
would be advanced thereby and the costs of doing so. Competition would not thereby
become paramount to the great purposes of the Exchange Act, but \textit{the need for and
effectiveness of regulatory actions in achieving those purposes would have to be weighed
against any detrimental impact on competition}.\textsuperscript{161}
\end{quote}

In establishing the objective of creating a national market system in 1975, Congress’ clear
intent was that “competitive forces, rather than unnecessary regulation” would be the driving force of
the development of the desired market structure.\textsuperscript{162} That is, SEC was to use the broad discretion that
Congress granted it,\textsuperscript{163} to implement regulations and rule-making merely to foster and encourage an
evolution into national market system that the industry and competitive forces created, rather than
one that three SEC commissioners envisioned.

\begin{footnotes}
\textsuperscript{162} Commissioners’ Dissent, supra note 48, at 2 (citing Securities Acts Amendments of 1975, H.R. REP. NO. 94-229 at 92 (1975) (“It is the intent of the [House and Senate] conferees that the national market system evolve through the interplay of competitive forces as unnecessary regulatory restrictions are removed.”)
\end{footnotes}
The quoted passages from the 1975 congressional reports show Congress’s unambiguous intent to allow healthy competition to determine how the U.S. securities markets should evolve into a national market system, rather than SEC mandating how the national market system should look and function. A reviewing court should not, therefore, defer to SEC’s interpretation of the statute but can rely on Congressional intent in making the 1975 amendments to the securities acts. SEC should have merely required NYSE to open its doors to outside competition (internal trading rules had prevented ECNs from stealing market share from NYSE as they had so successfully done from Nasdaq, which lacked the barriers to entry of NYSE), instead the commission implemented what three of five commissioners felt was the “proper” market structure. As Reg NMS violates Congress’s intent to allow competition to create the national market system, a reviewing court should overturn the regulation.

While a court should find that Reg NMS violates Congress’s intent in manifesting its desire to create a national market system, even if SEC’s interpretation of Congress’s intent is deemed to be within its discretion, the analysis does not end there. The second step in the *Chevron* analysis requires a reviewing court to determine whether Reg NMS was “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.”\(^\text{164}\) The Supreme Court, in *Overton Park*,\(^\text{165}\) defined this inquiry as “whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment.”\(^\text{166}\) Courts normally ask whether “an exercise of discretion rests on an analysis that is at least plausible in light of the record, the parties’ contentions, and the constraints of the underlying statute.”\(^\text{167}\)


\(^{166}\) *Id.* at 416.

\(^{167}\) GELLHORN & LEVIN, *supra* note 156, at 94.
Sometimes this “arbitrary and capricious” review is quite deferential, other times it is quite probing, as in *Greater Boston Television*. The D.C. Circuit stated that a court should intervene if it determines that the administrative agency has avoided its fundamental duty to take a “hard look” at the relevant factors and did not participate in “reasoned decision-making.” In *Schurz*, the Seventh Circuit vacated a Federal Communication Commission order promulgating the Finsen rules for television as arbitrary and capricious. The court reached this conclusion because FCC’s explanation of the rules was inadequate to show that the agency considered *all* the comments and objections filed by industry participants.

While the majority, here, can argue that its 242 page release of Reg NMS discussed the most substantial objections to the new regulation, it did not use the studies and research conducted by the SEC staff to determine the best decisions to make. Rather, the majority practiced “selective interpretation” of the data reported by its Office of Economic Analysis “to justify the need for a trade-through rule” to be applied to all markets, when some of the data refuted this assertion. Further, the majority used anecdotally a study (showing the difference in execution quality statistics between Nasdaq- and NYSE-listed stocks) by its Division of Market Regulation to impose the trade-through rule on all markets, instead of only NYSE, which was the only market that needed one. The studies did not show any lack of depth on Nasdaq, which had developed voluntarily into a completely automated market and

---

169 *Id.* at 851.
170 *Schurz Communications, Inc. v. F.C.C.*, 982 F.2d 1043 (7th Cir. 1992).
172 Commissioners’ Dissent, *supra* note 48, at 11.
174 Commissioners’ Dissent, *supra* note 48, at 15.
provided equal access and fair competition to all investors, due in large part because ECNs were able to challenge its market share, whereas they were not allowed to compete for trades in NYSE-listed securities.

In codifying a specific type of trading style (that which places price as the chief and sole priority in trading), SEC arbitrarily favored long-term investors over others, a clear violation of its congressional mandate to protect “investors.” This distinction between long- and short-term investors is manifestly unreasonable. As dissenting Commissioners Atkins and Glassman stated, in accord with the congressional mandate, “all investors [should be] entitled to efficient executions and access to the best markets.” The majority even admits that short-term investors “clearly provide valuable liquidity to the market.” Short-term investors also narrow bid-ask spreads, give better executions for all investors, and take risks that strengthen the marketplace. Could Congress have intended for this class of investors to be harmed by SEC regulations rather than protected like other types of investors? Clearly not, yet the majority acknowledges that the rule may harm short-term investors and market intermediaries. SEC should have allowed uninhibited competition and free market entrance to new participants to determine which types of trader interests were catered to by trading venues.

The argument supporting Reg NMS that SEC must balance its mandate to protect investors with the mandate of ensuring that customers receive best price is a valid one; but in

---

175 Commissioners’ Dissent, supra note 48, at 24.
177 Commissioners’ Dissent, supra note 48, at 25 (emphasis in original).
179 Commissioners’ Dissent, supra note 48, at 25.
180 Commissioners’ Dissent, supra note 48, at 25.
181 Regulation NMS, Exchange Act Release No. 51808, 85 SEC Docket 1642, at 10 (June 9, 2005) (“But when the interests of long-term investors and short-term traders conflict in this context, the Commission believes that its clear responsibility is to uphold the interests of long-term investors.”)
182 See Discussion of congressional mandate, supra IV.b.
not allowing certain types of investors to choose what trade parameters are most important to them, the new rules actually may yield inferior prices to some investors. For example, disallowing time priority, as discussed above, decreases the incentive for markets to compete in price, because they can simply match any better price that exists in another market. Further, the myriad exceptions to the trade-through rule means that many trade-throughs will continue to occur.\textsuperscript{183} It is apparent that Reg NMS accomplishes neither the mandate to protect all types of investors, nor the mandate to ensure best price execution for investors.

Competition had begun to produce Congress’s desired dynamics in the national securities markets. Much of this competition came from ECNs. Reg NMS has destroyed the ability of ECNs to compete with the incumbent exchanges—NYSE and Nasdaq. SEC should have abrogated the NYSE rules that inhibited ECNs from competing with NYSE on a large scale, thus opening the door to competition from firms that offered benefits that market participants desired.\textsuperscript{184} Instead, SEC implemented sweeping regulation that froze technological innovation at its current level and required investors to trade in an unchanging way with SEC-provided objectives. Competition in the marketplace is gone, in clear defiance of Congress’s intent in charging SEC with creating a national market system.

There remains the question of who would have standing in a court to challenge Reg NMS and seek judicial review. Judicial review of administrative regulations is constrained to the perspective of Article III of the U.S. Constitution that courts may only hear “cases” and “controversies.”\textsuperscript{185} In this Article III context, a person seeking to challenge Reg NMS will have

\begin{footnotesize}
\footnotesize\textsuperscript{183} Commissioners’ Dissent, supra note 48, at 21 (“The rule contains numerous exceptions for, among others, intermarket sweeps, self-help, flickering quotes, volume weighted average priced [] trades, and stopped orders, which means that trade-throughs will not be eliminated.”).

\footnotespace
\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace

\footnotespace
to prove (1) that he has suffered an “injury in fact,”\textsuperscript{186} (2) that there was a causal link between the alleged conduct and the injury,\textsuperscript{187} and (3) that it is “likely” that the injury will be redressed if the reviewing court rules in favor of the plaintiff.\textsuperscript{188} Further, the injury must be imminent; it cannot be merely predicted to occur “some day.”\textsuperscript{189} This point prohibits a party from asserting the argument that future innovation will be stunted, because the effects of Reg NMS in this regard may be years away. Sometimes, Congress may identify specific plaintiffs or plaintiff classes who may petition a court for review of an administrative agency action; however, the author has found no such statute for challenges to securities regulations.

Possible Plaintiffs to bring an action against SEC to overturn Reg NMS might include the following. Short-term investors, whose interests were disfavored over those of long-term investors, could challenge Reg NMS as a violation of the Congressional mandate to the SEC to protect “investors” as an entire class, not favoring one type over the other. Most importantly, any ECN that still remains independent of the national exchanges could bring suit for being pushed out of the marketplace or being made incapable of competing against the exchanges (though they may also have an action against the exchanges on antitrust grounds which is beyond the scope of this paper). Any “average Joe” investor could bring suit, because all investors will now suffer inferior prices due to the regulation’s cause of mass-consolidation in the marketplace, barriers to entry from new niche competitors, and lack of incentive for the two national exchanges to compete for price. An industry watchdog would be able to bring an action on behalf of its

\textsuperscript{186} An “injury in fact” is “an invasion of a legally protected interest which is (a) concrete and particularized, and (b) actual or imminent, not conjectural or hypothetical.” \textit{Lujan v. Defenders of Wildlife}, 504 U.S. 555, 560 (1991) (internal quotations and citations omitted); \textit{see also}, \textit{Air Courier Conference of America v. American Postal Workers Union AFL-CIO}, 498 U.S. 517, 523 (1991) (“[T]he [plaintiffs] must establish that they are within the zone of interests sought to be protected.”).

\textsuperscript{187} This causal link is proved if the injury is “fairly trace[able] to the challenged action of the defendant, and not … th[e] result [of] the independent action of some third party not before the court.” \textit{Simon v. Eastern Ky. Welfare Rights Org.}, 426 U.S. 26, 41-42 (1976).

\textsuperscript{188} \textit{Lujan}, 504 U.S. at 561.

\textsuperscript{189} \textit{Lujan}, 504 U.S. at 563.
members—individual investors, institutional investors, or both. Other industry participants (e.g., brokerage firms or financial intermediaries) may have standing to sue based on injury caused by the issues discussed throughout this note.

b. Policy Reasons to Overturn Reg NMS

Market participants’ obscene compliance costs in implementing the burdensome Reg NMS will reduce competition. Only those “firms with bigger, deeper pockets who can subsidize equities trading with other businesses” will survive SEC’s three-steps-backward and two-steps-forward approach.\footnote{Horowitz, supra note 136 (quoting Carlos Hernandez, global head of equities at J.P. Morgan Chase & Co.’s investment-banking unit).} Competition will further be diminished because Reg NMS restricts the marketplace with “anachronistic regulation,” thus reducing “investor choice and rais[ing] investor costs.”\footnote{Commissioners’ Dissent, supra note 48, at 43.} Instead of allowing customer demand, through competition and innovation, to regulate how the markets function, SEC has implemented its own perceptions as to what constitutes proper and fair treatment of investor orders.\footnote{Id.} Further, the economies of scale available to the larger exchanges will act as an additional barrier to entry to small start-up firms (e.g., ECNs) that offer niche products that satisfy unmet needs of the trading market.\footnote{See McConnell & Brue, supra note 98, at 235-36.}

Business has always had a knack for adapting to regulatory and legal developments—whether good or bad—and millions have been spent by the industry to adapt to Reg NMS. Given the high cost that market participants have paid to adapt to the new rules, it may seem imprudent to overturn the rules, just as the industry is learning to cope. Those expenditures, however, should be treated as sunk costs; in moving forward, SEC must now look to implement a regulatory framework that best complies with Congress’s mandate—of best execution and customer order protection—and intent—to use competition to create a national market system.
As discussed above, the resulting duopoly invoked by ECN competition and SEC’s regulatory response to that competition could be a necessary evil in the short term, because the U.S. may need strong market centers to compete with rising international competitors, such as stock markets in oil-wealthy Middle East economies (e.g., Abu Dhabi Securities Market), newly formed European partnerships (e.g., London Securities Exchange and Borsa Italiana), and markets in countries experiencing rapid growth (e.g., China and India). Eventually, however, the demands, tendencies, and practices of broker-dealers, institutional investors, and individual investors will change and require either the existing duopolistic powerhouse to change with them (a unlikely event given basic economic principles and historical observance) or they will seek satisfaction of unmet demands overseas. Private equity guru, David Bonderman, asserted that the U.S. can no longer rely on the notion that companies “have to come here,” because they no longer do.\footnote{David Bonderman, Founding Partner, Texas Pacific Group, Address at the University of Colorado Law School (Feb. 22, 2008).} If the SEC does not create a business friendly regulatory regime, businesses have several viable alternatives (e.g., Dubai, Hong Kong, or London) in countries that create financial and legal ecosystems that actually attract businesses instead of repel them. Therefore, in the long-term, the duopoly, with its protection from Reg NMS, could contribute to the U.S. losing its position as financial capital of the world. This same phenomenon is seen in many industries, where the regulatory burdens on U.S. manufacturers and suppliers highly inflate the cost of an item that would otherwise be available in a developing industrial country (e.g., China) for a small fraction of the cost. Consequently, industries are moving overseas en masse.

VI. CONCLUSION

ECNs brought incredible benefits to the marketplace. They produced transparency in the markets, lowered transaction costs, provided anonymity of trading, reduced bid-ask spreads and,
above all, their technological advances allowed the markets to adapt to a rapidly automated world. The regulatory response of Reg NMS to these changing market dynamics served to destroy these innovating firms and along with them many of the benefits that they brought to the marketplace. Only drastic amendments to or overturning of the new rules will prevent the detriments the U.S. equity markets face in the coming future. As implementation of Reg NMS has just been finalized in the fall of 2007, it remains somewhat unclear what the long-term affects of the sweeping rules will have on the national securities markets. One industry expert claims that “[t]he big are going to get bigger.”\textsuperscript{195} Notwithstanding the long-term effects of Reg NMS, it will need to be overturned or amended in the near future to allow trading centers—or niche competitors if they refuse—to adapt to changing customer demands and evolving market trends. The expressed goal of Reg NMS—to enhance market efficiency—is legitimate, but the finally implemented regulation will not achieve this goal in any helpful manner.\textsuperscript{196}

Businesses and the marketplace have tried to finalize Reg NMS’s effects by mass consolidation and further focus on foreign markets, but Reg NMS is far from final, the industry and SEC are still required to grapple with “[1] imprecise definitions, [2] the acknowledged need for future interpretations that the majority has seen fit to delegate to an opaque process of staff guidance, and [3] uncertainty regarding future examination and enforcement standards.”\textsuperscript{197}

SEC took far-reaching and unnecessary actions that will harm investors. Instead, SEC should have tried to achieve its congressional mandate by defining and clarifying the duty of best

\textsuperscript{195} Horowitz, supra note 136.
\textsuperscript{196} Commissioners’ Dissent, supra note 48, at 1 (“We support Regulation NMS’ overarching goal of enhancing the efficiency of our markets. We do not believe, however, that Regulation NMS will achieve this goal, and we are concerned about its detrimental impact on competition and innovation.”)
\textsuperscript{197} Commissioners’ Dissent, supra note 45, at 44.
execution (i.e., which factors should be balanced in executing customer orders) and allowed competitors access to NYSE-listed securities.\textsuperscript{198}

\textsuperscript{198} See id. at 2-3.