



Market Structure Report

of the New York Stock Exchange
Special Committee on Market
Structure, Governance and
Ownership

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Alex Trotman

Clifton R. Wharton, Jr.

Members:

Geoffrey C. Bible

Stephen M. Case

Maurice R. Greenberg

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SECTION I — OVERVIEW

Strong capital markets are an essential component of a strong economy — they facilitate the capital formation and allocation necessary to finance economic growth. The liquidity provided by such markets gives holders of capital the confidence to invest in securities and the ability to freely reallocate capital among investments.

As a committee of *public* directors, representing the interests of listed companies, the investors who own them and the public at large, we conclude that the public interest requires a capital market structure that is fair and stable, that attracts maximum liquidity (for truest price discovery), operates efficiently, and optimizes the interaction of public orders, large and small, without the interpositioning of a dealer. We submit this Market Structure Report with the goal of providing such a market structure at the NYSE and with the recognition that the pace of technological change will require continuous reevaluation.

The NYSE is a vibrant center of capital formation and allocation, and is the market of choice for major companies throughout the world. More than 2,600 domestic and more than 400 foreign companies have chosen to list their securities on the NYSE. It provides investors with a low-cost trading mechanism and unmatched opportunities for price improvement. Today, most regard the NYSE as the fairest and most liquid, most efficient and successful, equities market in the world. Some, however, look upon the NYSE as an anachronism that survives primarily to serve vested interests.

Globalization, technology (both at the point of order execution and order origination) and regulatory change have spurred new competition for the traditional securities markets, including the NYSE. International competition among securities markets, made possible by modern technology, is of particular importance to the Committee. The Committee's recommendations are made with the objective of continuing and enhancing the global reputation, competitive position, and role of the NYSE.¹

Today nearly a dozen electronic communications networks (“ECNs”) — computerized order-matching systems — have captured one-quarter to one-third or

¹ We note that the SEC shares this view: “If the U.S. markets fail to meet investor needs by offering the fairest and most efficient trading mechanisms possible, an increasingly competitive international environment will be sure to offer alternatives for investors.” *SEC Requests Comments on NYSE Rescission of Rule 390 and on Market Fragmentation* (SEC Press Release, February 23, 2000).

more of the trade volume reported on the Nasdaq Stock Market.² It has been suggested that ECNs could capture a similar share of NYSE-listed stock order flow, fragmenting the market for NYSE-listed stocks. While some would view fragmentation (the trading of orders in several locations without interaction among the orders) as healthy competition for the NYSE, others fear that fragmentation would reduce the depth of liquidity present at the NYSE and thereby undermine the foundation of the equity markets.

ECNs demonstrate the effective role technology can and does play in the trading of securities. But should fragmentation cause a loss of investor confidence in the equity markets, the consequences for the U.S. and global economies could be severe. New forms of market linkages and new trading mechanisms have been proposed to address this potential fragmentation. Calls for change have come from many quarters, including from the Chairman of the Securities and Exchange Commission and from some NYSE member firms. On February 23, 2000, as we were nearing the end of our efforts, the SEC issued a concept release requesting comments on the NYSE's proposal to repeal Rule 390 and on issues relating to market fragmentation.³ We have considered carefully the statements made by the SEC and the questions put forth in the release.⁴

The NYSE is in tune with the technological revolution at hand in the securities industry, and has for the last decade been at the cutting edge in deploying leading technologies to enhance the effectiveness of its market. In particular, the Exchange has long recognized the desirability of using technology to enhance its information-dissemination, trading and order-execution functions. The NYSE also recognizes the potential of the Internet and the threats and opportunities it presents. The NYSE has been making major expenditures for new technology and operation

² Rule 11Ac1-1(a)(8) promulgated under the Securities Exchange Act of 1934 (as amended, the "Exchange Act") defines the term "electronic communications network" as "any electronic system that widely disseminates to third parties orders entered therein by an exchange market maker or [over-the-counter] market maker, and permits such orders to be executed against in whole or in part . . ." 17 Code of Federal Regulations § 240.11Ac1-1(a)(8) (1999). On March 14, 2000, it was reported that the Archipelago ECN is acquiring the Pacific Exchange and, subject to regulatory approval, would become a self-regulatory organization. *Archipelago to Set Up New Stock Market*, Wall Street Journal, March 15, 2000, at C1 ("*Archipelago to Set Up New Stock Market*").

³ Self-Regulatory Organizations; Notice of Filing of Proposed Rule Change by the New York Stock Exchange, Inc. to Rescind Rule 390; Commission Request for Comment on Issues Relating to Market Fragmentation, Exchange Act Release No. 34-42450 (February 23, 2000) <<http://www.sec.gov/rules/sros/ny9948n.htm>> ("*Fragmentation Concept Release*").

⁴ In addition, we have reviewed a White Paper on the issue of market fragmentation, published on the *Wall Street Journal Interactive* Web site, that was reportedly submitted on a confidential basis to the SEC on behalf of several large NYSE member firms. *Responding to Chairman Levitt's Call: A Plan for Achieving a True National Market System* (February 29, 2000) <<http://interactive.wsj.com/articles/SB951781063229264679.htm>> ("*Large Firm White Paper*").

and improvement of its systems (over \$2 billion in the last decade alone), and has been developing new electronic and Internet-based platforms to serve its members and their investor clients, both institutional and individual. The NYSE is currently spending more than \$350 million annually for the operation and improvement of its systems. Equally pertinent, the NYSE has also recognized that its present governance and ownership structure may no longer be appropriate in the rapidly evolving technological environment.

In this context the NYSE Board of Directors called upon us, as its public directors, to study, and make recommendations on, issues related to the structure, governance and ownership of the NYSE. At the outset of our work, we determined that an effective exploration of governance and ownership issues would have to be informed by our market-structure determinations. Accordingly, we divided our effort into two parts. This Report contains our recommendations regarding market-structure issues. We intend to address governance and ownership issues later this year.

The next section of this Report (Section II), describes our charter, lists our Committee's membership, provides a brief overview of our fact-gathering process, and summarizes the market-structure issues raised during that process. Section III then sets forth the basic principles we believe should guide the Board in assessing market-structure changes. Section IV contains our specific market-structure recommendations and their bases.

As described in Section IV, we recommend that:

- **The NYSE should continue to develop and implement systems for (a) electronic order execution, and (b) electronic dissemination of market information from the point of sale, to meet customer demand. These systems should be designed to both enhance, and take advantage of, the liquidity of the NYSE trading-floor crowd.**
- **The NYSE should retain positive aspects of its current market structure, including: (a) the integrated agency-auction trading of large and small customer orders for best price discovery; and (b) the specialists' affirmative and negative obligations for fair and orderly trading.**
- **The NYSE should not support implementation of a consolidated limit order book ("CLOB"): (a) none of the proposed CLOB platforms meets**

the needs of all investors, individual and institutional; (b) the CLOB proposal would reduce liquidity rather than increase it; and (c) a CLOB would likely destroy intermarket competition and innovation, running contrary to the policy mandated by Congress in the Securities Act Amendments of 1975.

- **The NYSE should implement the new multi-platform structure it has announced as soon as possible: (a) the multi-platform structure meets investor needs by giving investors a range of execution choices and by enhancing liquidity; and (b) the multi-platform structure does not sacrifice vigorous intermarket competition, and does not have any of the disadvantages of a CLOB.**
- **The NYSE should not facilitate internalization of customer orders in the absence of price improvement, and should continue to urge adoption of an industry-wide rule to such effect.**
- **The NYSE should seek elimination of intermarket order-routing linkages in light of technological developments since the passage of the 1975 Securities Act Amendments and the adoption of the Intermarket Trading System Plan.**
- **The NYSE should develop a communications plan designed to educate investors about order-execution and market-structure issues.**

Appointment of the Committee

Our Committee’s charge is to study and make recommendations to the Board on issues related to the NYSE market structure, governance and ownership. Our charter requires us “to consider the interests of investors, listed companies and other constituents of the NYSE and the competitive position of the NYSE, in the context of the rapidly changing environment in the securities industry.”

The Committee consists of all of the public directors of the NYSE.⁵ It is co-chaired by Alex Trotman, former Chairman, President and Chief Executive Officer of Ford Motor Corp., and Clifton R. Wharton, Jr., former Chairman and Chief Executive Officer of TIAA/CREF. The other members are:

Geoffrey C. Bible	Chairman and Chief Executive Officer, Philip Morris Companies Inc.
Stephen M. Case	Chairman and Chief Executive Officer, America Online, Inc.
Maurice R. Greenberg	Chairman and Chief Executive Officer, American International Group, Inc.
Mel Karmazin	President and Chief Executive Officer, CBS Corporation
Gerald M. Levin	Chairman and Chief Executive Officer, Time Warner Inc.
Lord Marshall	Chairman, British Airways Plc
H. Carl McCall	Comptroller of the State of New York
Leon E. Panetta	Director, The Leon & Sylvia Panetta Institute for Public Policy
Linda J. Wachner	Chairman, President and Chief Executive Officer, The Warnaco Group, Inc.
Kathryn J. Whitmire	James MacGregor Burns Academy of Leadership, University of Maryland

⁵ Under Article IV, Section 2 of the NYSE Constitution, the directors elected by the membership of the NYSE consist of twelve public directors and twelve industry directors. *NYSE Constitution* Article IV, § 2. Broadly, a public director is one “who is a representative of the public” and is not affiliated with a broker or dealer in securities. *NYSE Constitution* Article I, § 2. *See also* note 13.

The Board directed that a senior Exchange officer, and additional staff as necessary, be dedicated to the Committee's work. Robert J. McSweeney, NYSE Senior Vice President, has accordingly been serving as liaison between our Committee and the NYSE. He has made major contributions to the work of the Committee.

Other NYSE officers have routinely made their time available to the Special Committee, including: Richard Grasso, Chairman and Chief Executive Officer; William R. Johnston, President and Chief Operating Officer; Richard P. Bernard, Executive Vice President and General Counsel; and Robert G. Britz, Catherine R. Kinney, and Edward A. Kwalwasser, all Group Executive Vice Presidents. We are grateful for the support and assistance we received from the officers and employees of the NYSE.

Additionally, the Board authorized us to retain special counsel to assist in our work. We engaged Martin Lipton, senior partner of Wachtell, Lipton, Rosen & Katz, as our special counsel. David C. Karp of Wachtell, Lipton, Rosen & Katz worked with Mr. Lipton in advising the Committee.

The Committee's Review

The Board charged us with analyzing a number of complex and important issues. In order to hear and consider the variety of views held by the many constituencies of the NYSE on these issues, we invited a number of representative individuals and organizations to appear before us. We also issued a general invitation to all members of the NYSE to express their viewpoints to our Committee in person or in writing; several did.

From November 4, 1999 through February 28, 2000, we met formally on nine occasions to hear presentations and to discuss the issues that had been raised during the presentations. In most cases the presenters submitted written materials in advance. We found these materials and presentations to be extremely valuable, and we thank all of the presenters for their considerable efforts.

We heard presentations from:

- **Investors** — those who own the NYSE-listed companies.

The investor viewpoints were represented by the Pension Managers Advisory Committee, the Institutional Traders Advisory Committee and the Individual Investors Advisory Committee. We also heard directly from representatives of several large institutional investors.

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- ***Individual Members*** — specialists and floor brokers that participate in the Exchange’s auction market process each day.

The floor of the NYSE was represented by organizations such as the Specialist Association, the Alliance of Floor Brokers and the Organization of Independent Floor Brokers, as well as by the heads of a number of specialist and independent floor broker firms.

- ***Member Organizations*** — broker-dealers that route investor orders to the NYSE and other equity markets.

We heard from representatives of a number of NYSE member firms, including some of the largest providers of order flow to the NYSE. We also heard from the Regional Firms Advisory Committee, representing smaller firms around the country, as well as from the New York Area Firms Advisory Committee.

- ***Listed Companies*** — the companies whose securities are traded primarily at the NYSE.

We received a written presentation from the NYSE Listed Company Advisory Committee. In addition, eight of the members of our Committee lead or have led NYSE-listed companies.

- ***Industry Experts*** — a range of informed market professionals.

We solicited the views of a number of individuals who are intimately familiar with either the NYSE or the equity markets in general. Among others, we were fortunate enough to obtain the opinions and advice of a number of former NYSE Chairmen and Vice-Chairmen, a former U.S. Treasury Secretary and the chief executive officer of a newly-formed electronic options exchange.

In addition, we reviewed publications containing the views of a wide array of market participants and commentators, the legislative history of relevant parts of the securities laws, and SEC rules, releases, and reports.

Issues Summary

We focused our market-structure inquiry on the issues that arise from the NYSE's traditional role as the primary market for NYSE-listed securities. Congress and the SEC have long relied upon competition among securities marketplaces to ensure the quality of our nation's markets.⁶ Within this competitive environment, the NYSE has long held primacy in trading NYSE-listed stocks. This primacy, importantly, has enabled the NYSE to serve as an efficient price-discovery mechanism for these securities.⁷

Many outside observers and presenters see the NYSE's role as a central market as at risk. Investors can trade NYSE-listed securities on regional stock exchanges, through over-the-counter market makers, over ECNs, and overseas. Although alternative trading mechanisms have been available for some time, they have not substantially fragmented the NYSE's liquidity.⁸ Nonetheless, some presenters argued that regulatory and technological changes will result in increasingly vigorous competition for order flow in NYSE-listed stocks.⁹

Presenters did not agree, however, on the degree to which the NYSE will be able to compete for order flow with the alternative trading mechanisms. At one end of the spectrum, a number of presenters view the NYSE's agency-auction trading model as a superior order-execution mechanism that has already demonstrated that it can adapt as necessary to meet this competition.

At the other end of the spectrum, presenters representing some of the NYSE's largest member firms view the NYSE's trading model as a legacy system that will inevitably succumb to cheaper and faster alternative trading mechanisms. These presenters assert that the resulting fragmentation of order flow would impair price

⁶ See Arthur Levitt, "Dynamic Markets, Timeless Principles," Remarks at Columbia Law School (Sept. 23, 1999) <<http://www.sec.gov/news/speeches/spch295.htm>> ("Levitt, *Dynamic Markets*"); see also *Testimony of Arthur Levitt Concerning Market Structure Issues Currently Facing the Commission before the Subcommittee on Securities, Committee on Banking, Housing & Urban Affairs*, 106th Congress (October 27, 1999).

⁷ "Basic economics tells us that the greater supply and demand that congregate in one place, the more efficient the price-setting mechanism. In terms of our markets, this means the more customer orders that interact with one another, the better the prices will be. Questions about best execution begin to fade. Spreads may narrow, liquidity may increase, and markets become more orderly." Levitt, *Dynamic Markets*.

⁸ The NYSE executes approximately 82.5% of the trading volume in NYSE-listed securities. NYSE, *Fact Book for the Year 1999* (NYSE, forthcoming May, 2000) ("*1999 Fact Book*").

⁹ In early February 2000, the Island ECN, one of the largest ECNs, announced that it would begin trading NYSE-listed stocks, and the Island and Nextrade ECNs have filed with the SEC to register as exchanges, presumably, in part, to compete for NYSE-listed stock order flow. As noted in note 2, Archipelago, which has also applied to register as an exchange, now has plans to ally with the Pacific Exchange.

discovery in NYSE-listed securities. They urge us to recommend implementation of a CLOB. A CLOB, sometimes described as a Super-ECN or a Super National Market System (“Super-NMS”), would aggregate all limit orders in NYSE-listed stocks from originators industry-wide and subject them to automatic execution against matching orders based strictly upon price and time priority. Presenters offered several variations of a CLOB trading model. We use the term here to refer collectively to a Super-ECN or a Super-NMS and all of the proposals for a single, national order-driven intermarket linkage requiring submission of all customer limit orders for automatic matching based upon price-time priority.

Between these two ends of the spectrum, there are a number of other views as to the design of trading mechanisms for the future.¹⁰

In addition, several firms have espoused the view that NYSE member firms must be allowed to deal against their own order flow in order to remain competitive with alternative trading venues. Presenters advocating this view noted that the competitive environment of Internet stock trading is forcing commission rates for retail orders toward zero. On regional exchanges and Nasdaq, broker-dealers can trade against their own order flow. The broker-dealers generate revenue by buying stocks from their customers at or near the bid quote and selling stocks to their customers at or near the ask quote, keeping all or part of the spread as profit. Some internalized orders for NYSE-listed stocks are executed at the so-called “national best bid or offer” (“NBBO”), and are given no opportunity for the price improvement that is frequently available on the NYSE floor. In other cases, internalizing broker-dealers will offer a degree of price improvement determined by the broker-dealer’s internalization algorithms or its assessment of primary market conditions (for example, if the NYSE reports a series of trades at the bid quote, the internalizing broker-dealer may execute the next buy order it receives at or near the bid quote rather than at the ask quote). In each case, the broker-dealer offers a degree of price improvement that is to some degree artificially constrained and that may not reflect the full amount of price improvement available through order exposure in a central market. Since internalized orders are not exposed on the NYSE floor, they do not form part of the central market pool of liquidity, and thus do not contribute to optimum price discovery.

One presenter stated that his firm directed its order flow to a regional exchange rather than the NYSE because it could trade those orders with an affiliated specialist at that exchange. In urging us to facilitate internalization by NYSE mem-

¹⁰ See e.g., Robert A. Schwartz, *The Call Auction Alternative* in *Building a Better Stock Market: The Call Auction Alternative* (forthcoming 2000) (revised draft February 8, 2000) (“*The Call Auction Alternative*”).

ber firms, the presenter said that “[t]he ability to internalize is directly linked to our ability to bring our business back to the [NYSE].”¹¹

The three positions described above raise a number of important market-structure issues for the NYSE:

- What market structure best serves investors?
- What is the true nature of the competitive threat to the NYSE?
- Can/should the agency-auction trading model be preserved?
- Should the NYSE implement automatic-execution systems?
- What, if any, are the continuing roles of the NYSE specialists and floor brokers?
- Should the NYSE support implementation of a CLOB for some or all NYSE-listed securities?
- Should the NYSE facilitate internalization of order flow by its members?
- What role does the national market system (the “NMS”) play in ameliorating the effects of fragmentation?

Regulation can enhance or vitiate the benefits of any particular market structure. It is imperative that the NYSE work with Congress and the SEC to achieve the relationship between trading mechanisms and regulations that creates the market structure that best serves the public interest. The interplay of new trading mechanisms and regulation must be carefully monitored to prevent unintended trading patterns that do not serve the public interest. Similarly, regulation and legislation must be fashioned to encourage market structures that provide true best execution and to discourage new trading patterns that fragment the market in a manner that impedes best execution. In the end, market structure and trading mechanisms are best left to fair competition.¹²

¹¹ The presenter’s statement reveals one of the inherent problems of internalization. The statement could be translated as “[t]he ability to [conduct our business away from the NYSE] is directly linked to our ability to bring our business back to the [NYSE].” As discussed in Section V, internalization is a form of market fragmentation. Internalized order flow cannot represent business “brought back to the [NYSE]” in the sense that internally executed orders are not part of the liquidity of the NYSE’s agency-auction (even if the trades were to be reported as NYSE executions).

¹² In a recent Senate Committee on Banking, Housing & Urban Affairs hearing, Senator Charles Schumer asked Federal Reserve Board Chairman Alan Greenspan for his thoughts about the issue of market fragmentation. Chairman Greenspan responded:

The question really occurs as to what extent government has a role here or should we just let the

SECTION III — PRINCIPLES

As a committee of *public* directors, we naturally consider market-structure issues predominantly from the perspective of listed companies, the investors who own them, and the public at large.¹³ Our role is not to protect vested interests but rather to ensure that the NYSE provides a market structure that serves the public interest. Tens of millions of Americans hold NYSE-listed securities (either directly or through pension, retirement or mutual fund accounts). The NYSE, as the principal U.S. securities market, plays a crucial part in the processes of capital formation and allocation that fuel our nation's economy. Serving the public interest will create a market structure that will ultimately best serve all of the NYSE's constituencies.

The public interest requires a market structure that is fair and stable, that attracts maximum liquidity (for truest price discovery), and that operates in an efficient and cost-effective manner. In sum, the NYSE's market structure must be capable of delivering the best possible order execution. These are the principles that have served as touchstones for the Committee, and nearly all of the presenters implicitly or explicitly invoked these principles.¹⁴

To assist the Board in judging our recommendations, as well as those made by others, we describe these principles more fully below:

- **Best Execution** — The NYSE disseminates market data and provides an order-execution service. Its mission is to provide the liquidity necessary for

private sector create what it needs to create. And my judgment is definitely let's be that [sic] because technologies are not going to be easily forecastable. And the self-interest of traders are going to largely create that sort of instrument, that sort of exchange, that sort of being which they find gives them the lowest costs and greatest liquidity.

Hearing on Federal Reserve Board Monetary Policy Conduct Before the Senate Committee on Banking, Housing & Urban Affairs, 106th Congress 51 (FDCH Transcripts, February 23, 2000), <<http://oncongress1.cq.com/vrty-bin/verity2/3034176488x3418984664x00000010x>>.

¹³ Section 6(b)(3) of the Exchange Act requires that rules of each registered national securities exchange “provide that one or more directors shall be representative of issuers and investors and not be associated with a member of the exchange, broker, or dealer.” 15 U.S.C. § 78f(b)(3) (1999).

¹⁴ See *Fragmentation Concept Release* at 14:

Section 11A(a) of the Exchange Act sets forth findings and objectives that are to guide the Commission in its oversight of the national market system. For purposes of evaluating market structure, these findings and objectives can be summed up in two fundamental principles:

- (1) the interests of investors (both large and small) are preeminent, especially the efficient execution of their securities transactions at prices established by vigorous competition; and
- (2) investor interests are best served by a market structure that, to the greatest extent possible, maintains the benefits of *both* an opportunity for interaction of all buying and selling interest in individual securities and fair competition among all types of market centers seeking to provide a forum for the execution of securities transactions.

(footnotes omitted).

the truest price discovery and to deliver the best executions possible. NYSE members are obliged as fiduciaries to obtain best executions of their customer orders.¹⁵ If the NYSE fails to provide a market mechanism in which its members can obtain best executions for customers, it neither should nor will attract the liquidity that is essential to continue providing such executions.

We applaud recent SEC efforts emphasizing and helping to better define “best execution” obligations. Last November, Chairman Levitt stated:

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.¹⁶

Chairman Levitt went on to note that execution quality must be judged from the perspective of the investor, not that of securities-industry intermediaries. We agree. Market-structure proposals must not be designed to enhance the profitability of broker-dealers at the expense of investors.¹⁷ According to Chairman Levitt: “Whatever changes we face, the core of our approach must remain constant: no market restructuring, no matter how far-reaching or profound, can pull the roots of best execution from the ground of the investor interest.”¹⁸

¹⁵ See *In re Arleen W. Hughes*, 27 S.E.C. 629 (1948) (announcing the fiduciary theory of broker responsibility). Alternatively, under the “shingle theory,” a broker-dealer impliedly represents its fairness to the public by “hanging out a shingle.” Under this theory failure to execute at the best price is a violation of the anti-fraud provisions of the Exchange Act. See *Charles Hughes & Co. v. SEC*, 139 F.2d 434, 436-37 (2d Cir. 1943); see also *Granite Partners, L.P. v. Bear, Stearns & Co. Inc.*, 58 F. Supp. 2d 228, 262 (S.D.N.Y. 1999); see also, *Fragmentation Concept Release* at 27-28:

In accepting orders and routing them to a market center for execution, brokers act as agents for their customers and owe them a duty of best execution. The duty is derived from common law agency principles and fiduciary obligations. It is incorporated both in self-regulatory organization rules and, through judicial and Commission decisions, in the antifraud provisions of the federal securities laws. The duty requires a broker to seek the most favorable terms reasonably available under the circumstances for a customer’s transaction.

(citations omitted).

¹⁶ Arthur Levitt, “*Best Execution: Promise of Integrity, Guardian of Competition*,” Remarks to the Securities Industry Association in Boca Raton, Florida (November 4, 1999) <<http://www.sec.gov/news/speeches/spch315.htm>> (“Levitt, *Best Execution*”).

¹⁷ As noted elsewhere in this Report, we do not believe our task is a “zero sum” exercise in which we must choose between market structures that benefit investors versus those that benefit members. Rather, we believe that an appropriate market structure is one that benefits NYSE members by providing their customers with a reason to trade through them at the NYSE.

¹⁸ Levitt, *Best Execution*.

One must consider the various elements of execution quality, including:

- execution price
- the opportunity for price improvement
- execution speed
- market impact of execution (this element encompasses liquidity-depth and anonymity issues)
- certainty of execution
- cost of execution

The presentations we received from investor representatives were informative concerning the importance of the various elements to different investor groups. While institutional investors often seek to minimize the market impact of executing their large orders (usually by trying to remain anonymous when trading), some individual investors care more about speed and certainty of execution than they do about possible price improvement.¹⁹

The NYSE has always sought to attract a broad spectrum of investors, believing that the integrated trading of institutional and individual orders maximizes liquidity and leads to better price discovery. Both institutional and individual investor representatives told us that this integrated trading is an essential component of the NYSE's deep liquidity and its effective price discovery. Because best execution, when judged from the investors' perspective, is not "one size fits all," it is essential that the NYSE have a market structure that is flexible enough to provide the full range of "best executions" demanded by the full range of investors.

All market-structure proposals approved by the Board should enhance the ability of NYSE member firms to provide their customers the best executions in NYSE-listed stocks (the "Best Execution Principle"). To the extent that technological advances can serve the Best Execution Principle, the NYSE should deploy them. To the extent regulatory changes can serve the Best Execution Principle, the NYSE should support them.

¹⁹ Note, however, that a survey commissioned and presented by the NYSE Individual Investor Advisory Committee revealed that execution speed is not a significant factor for most individual investors. Individual investors are more likely to specify that their broker execute a trade on one market over another when that choice results in price improvement, lower brokers' commissions or faster executions (in that order of priority).

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- **Fairness** — Investor confidence is essential to the operation of the securities markets. The appearance and reality of fairness are critical to the maintenance of investor confidence. As the SEC has stated:

Investors should receive fair treatment for their orders and should not have to compete with their own brokers for quality executions. Ultimately, if market structures and practices work to their disadvantage, investors will lose confidence in the fairness of the market. The tremendous success of our markets over the last 20 years has been due in large part to investor confidence in their fairness, integrity, and efficiency. To the extent that practices and structures such as hidden limit orders, payment for order flow, internalization, and two-tiered markets may not satisfy investor needs and may diminish transparency, these practices threaten to undermine investor confidence and market efficiency.²⁰

Like best execution, fairness must be judged from the perspective of the investor, not the intermediary. Fairness means a market structure in which all investors — from the smaller or less sophisticated investors to the largest and most savvy investors — have appropriate access and the protection of a vigorous regulatory structure. It also means allowing investors to trade with a minimum of dealer participation. The Board should ensure that any market-structure proposal it adopts is fair to all investors, large and small (the “Fairness Principle”).

- **Stability** — The Board should ensure that any market-structure proposal it adopts retains or enhances the NYSE’s ability to provide a continuous and orderly market during periods of high volatility (the “Stability Principle”). Several of the presenters noted that during the 1987 market break the NYSE was the most meaningful source of liquidity.²¹ The stability found at the NYSE is not only a competitive advantage for the Exchange today, but an essential characteristic of any market structure that seeks to retain the trust

²⁰ Order Execution Obligations, Exchange Act Release No. 34-36310, 1995 WL 600238, at *3 (September 29, 1995).

²¹ According to the 1988 *Report of the Presidential Task Force on Market Mechanisms* (the “Brady Report”) which studied the performance of the securities markets during October 1987:

On October 19, specialists as a whole purchased just under \$486 million worth of stock. During the first hour and one half on October 19, specialists bought heavily in the face of unprecedented selling pressure. At this critical time, specialists were willing to lean against the dominant downward trend in the market at a significant cost to themselves.

Brady Report at 49. The same study noted that in the over-the-counter market some dealers formally withdrew from market-making while others were simply unwilling or unable to answer their phones. See *Brady Report* at 50.

and confidence of the general body of investors. To a large extent, the NYSE is the market most looked to during periods of market distress.²² It is difficult in the midst of a strong bull market to remember how severe market breaks can be and what they can do to investor confidence. In analyzing market-structure proposals, the Board must be so mindful.

- **Liquidity** — A securities market that does not attract liquidity cannot deliver accurate price discovery or best order executions. Presenters universally noted that the NYSE’s ability to attract liquidity is a key element in its ability to provide customers with superior order execution. Liquidity begets liquidity. Last September, Chairman Levitt noted, “[t]he NYSE’s liquidity and narrow spreads, by no means, are lost on anyone.”²³ The NYSE should adopt market-structure proposals that enhance its ability to attract maximum liquidity to the point of execution (the “Liquidity Principle”).
- **Efficiency** — Being a low-cost provider is a key competitive advantage in any industry. In addition, technological advances in securities trading have spawned trading styles that rely primarily upon speed of execution. Accordingly, market-structure proposals that enable the NYSE to drive order execution costs down and/or to reduce the time it takes to execute orders (the “Efficiency Principle”) should also be encouraged.
- **Reliability** — The Board should ensure that the NYSE’s market structure be robust enough to handle periods of high trading volume (the “Reliability Principle”). A modern securities market must have adequate system capacity, processing power and redundancy to handle the busiest of trading days.

Finally, we have adopted a principle we call the “Do No Harm Principle.” The world we live in is a dynamic environment in which individuals and institutions adapt their behavior in response to change. As presenters have pointed out, it is a difficult task to make projections about the effects of specific market-structure proposals.²⁴ We believe that it is extremely important that the Board take extra care in assessing the potential secondary and tertiary effects of market-structure proposals.²⁵ The same principle applies to Congressional legislation and SEC rulemaking.

²² *The Brady Report* noted that “[w]hile total NASDAQ trading volume increased during the market break, it declined dramatically as a percentage of NYSE volume.” *Brady Report* at 45.

²³ Levitt, *Dynamic Markets*.

²⁴ See *The Call Auction Alternative* at 14 (“[T]echnology and regulation are not enough to produce good markets. Both can have unintended consequences that are difficult to undo once they occur.”).

²⁵ For example, the rush to provide after-hours trading by online brokers and some of the ECNs has led to investor disappointments and criticism. Trades of as little as several hundred shares have affected market capitalizations of major companies by billions of dollars. See David Barboza, *Wall Street After Dark*, N.Y. Times, February 13, 2000, Section 3, at 1.

Nearly every presentation before our Committee began with a recitation of the extraordinary attributes and importance of the NYSE to the nation; and we never sensed that this praise was either faint or insincere. We recognize the temptation to conservatism inherent in the Do No Harm Principle, and we are mindful that stasis can be just as risky as aggressive movement. The Do No Harm Principle should not be an excuse for timidity: the NYSE must always strive to reinvent itself in ways that serve the other principles described above. But the Do No Harm Principle counsels prudence in taking actions that can unleash unforeseen consequences to an important national asset.

SECTION IV — MARKET-STRUCTURE RECOMMENDATIONS

Based upon an assessment of the market-structure issues put before us, in conjunction with the principles set forth in Section III of this Report, we offer the Board the following recommendations.

RECOMMENDATIONS

- 1. The NYSE should continue to develop and implement systems for (a) electronic order execution and (b) electronic dissemination of market information from the point of sale, to meet customer demand. These systems should be designed to both enhance, and take advantage of, the liquidity of the NYSE trading-floor crowd.**
- 2. The NYSE should retain positive aspects of its current market structure, including: (a) the integrated agency-auction trading of large and small customer orders for best price discovery; and (b) the specialists' affirmative and negative obligations for fair and orderly trading.**
- 3. The NYSE should not support implementation of a CLOB: (a) none of the proposed CLOB platforms meets the needs of all investors, individual and institutional; (b) the CLOB proposal would reduce liquidity rather than increase it; and (c) a CLOB would likely destroy intermarket competition and innovation, running contrary to the policy mandated by Congress in the Securities Act Amendments of 1975.**
- 4. The NYSE should implement the new multi-platform structure it has announced as soon as possible: (a) the multi-platform structure meets investor needs by giving investors a range of execution choices and by enhancing liquidity; and (b) the multi-platform structure does not sacrifice vigorous intermarket competition, and does not have any of the other disadvantages of a CLOB.**
- 5. The NYSE should not facilitate internalization of customer orders in the absence of price improvement, and should continue to urge adoption of an industry-wide rule to such effect.**
- 6. The NYSE should seek elimination of intermarket order-routing linkages in light of technological developments since the passage of the 1975 Securities Act Amendments and the adoption of the Intermarket Trading System Plan.**
- 7. The NYSE should develop a communications plan designed to educate investors about order-execution and market-structure issues.**

We believe that the NYSE should continue, as it has been doing, to adapt its proven floor-based, agency-auction model by integrating a range of technological and Internet-based advances. Our recommendations are designed to encourage further integration of technology-based information and execution choices with the NYSE's floor-based trading model. Such a market structure will allow NYSE member firms to offer their customers a range of execution mechanisms while retaining, and perhaps increasing, the centralized liquidity that currently exists on the NYSE floor.

After extensive review, we have concluded that the NYSE's floor-based agency-auction model remains the most effective way to trade stocks meeting the NYSE's listing standards. Today there appears to be no electronic model which would replicate crucial attributes of the NYSE's trading floor (which we describe below). At the same time, however, we cannot ignore that some investors value certain execution qualities (such as automatic execution) that are not fully provided by the NYSE's current trading model.

The multiple-platform market structure we support is designed to offer investors both the price discovery that occurs in the floor-based, agency-auction market and the opportunity, if they wish, to forgo possible price improvement on the floor for order executions that are fully automatic. We believe the multiple-platform structure has the capacity to draw the most liquidity to the point of execution because it provides investors with a selection of tightly linked execution mechanisms. While we suspect that those seeking an all-electronic automatic-execution market will see our proposed market structure as a merely incrementalist approach, we view the multiple-platform structure rather as the best available trading environment. Indeed, we believe the structure we recommend provides the best basis for continuous adaptation to take advantage both of current technology and of whatever further advances the future may bring. We also believe that the NYSE's current position as the dominant floor-based agency-auction marketplace makes it the only market that could successfully create such a multiple-platform structure.

In the discussion that follows, for readers of this report who may not be familiar with it, we describe the basic structure of the NYSE's agency-auction trading model, including the role technology has come to play in that model. We also review ECN technology and the Super-NMS or CLOB proposals and explain our concerns with the latter. We then describe the initiatives under development by the NYSE that meet our market-structure recommendations. Finally, we address the place that internalization, market order-routing linkages and investor education have in the market structure we envision.

The NYSE's Current Floor-Auction Trading Mechanism

The Auction and the Floor

In the 208 years since its founding, the NYSE has evolved from a group of 24 merchant-brokers operating a simple call market²⁶ to a 1,366-member, continuous agency-auction market trading an average of more than one billion shares a day. In an agency-auction market, buyers' agents compete to purchase a given stock at the lowest possible price while sellers' agents compete to sell the stock at the highest possible price. These agents, called floor brokers and specialists,²⁷ form a "crowd." The crowd represents the concentration of liquidity where the highest bidder and the lowest seller can find each other to execute a trade. When a trade is executed, the crowd interaction has "discovered" the price of the stock.

Sometimes the commingling, in the crowd, of electronic and other orders represented by specialists and orders represented by floor brokers does not reveal a price at which there is a willing buyer and seller. This is an inherent characteristic of a continuous auction — at any given moment, there may be an absence of bids or offers in the crowd at prices reasonably close to prior sale prices. This is particularly true of "less active" stocks, in which the liquidity is more uneven.

The NYSE specialist function evolved to smooth out temporary unevenness in liquidity. Specialists are required to maintain a fair and orderly market in the stocks assigned to them.²⁸ They do this by maintaining two-sided quotes for the stocks in which they specialize.²⁹ Specialists have an affirmative obligation to "deal...for [their] own account when lack of price continuity, lack of depth, or disparity between supply and demand exists or is reasonably to be anticipated."³⁰ To mitigate the conflicts that may arise when specialists deal for their own accounts while simultaneously holding broker orders, specialists are also subject to a "negative" obligation not to deal unless it is "reasonably calculated to contribute to the

²⁶ In the call market, each stock issue would be called at specific times during the day and an auction would take place only at the time of the call. This system was abandoned following the Civil War in favor of a continuous auction — to compete with a continuous auction market that had informally developed on the street outside the NYSE. See *Report of the Committee to Study the Stock Allocation System* 39 (NYSE January 27, 1976) ("*Batten Report*"). The call auction continues to be used by the NYSE at the opening each morning for every listed stock and in limited special situations during the trading day when there is an order imbalance in, or a significant announcement affecting, a particular stock and trading is halted and then reopened.

²⁷ Specialists at the NYSE serve as agents in the crowd for all of the "system" orders posted to the specialists via SuperDOT (described below) as well as orders entrusted to them by floor brokers.

²⁸ See Constitution and Rules, *NYSE Guide*, NYSE Rule 104 (CCH, Inc. 1999) ("*NYSE Guide*").

²⁹ See *NYSE Guide*, NYSE Rule 60(e)(1).

³⁰ *NYSE Guide*, NYSE Rule 104.10(2).

maintenance of price continuity with reasonable depth, and to the minimizing of the effects of temporary disparity between supply and demand, immediate or reasonably to be anticipated.”³¹

In 1999, shares bought and sold by specialists for their own account represented 13% of the total shares bought and sold at the NYSE.³² When specialists did trade for their own accounts, 82.8% of those trades were made *against* the prevailing trend of the market.³³ More than 98% of the orders executed on the NYSE were made at a price within two-sixteenths of a dollar of the prior execution price, and the quotation spread was four-sixteenths of a dollar or less in 94.2% of NYSE quotes.³⁴ These data suggest that, at least on an aggregate basis, specialists are fulfilling both their “affirmative” and “negative” obligations.

Investors and their representatives appearing before us were nearly unanimous that the NYSE provides the industry’s best executions, and that it does so consistently. The NYSE quote is the NBBO on about 90% of NYSE executed orders.³⁵ On top of the best quotes, the NYSE sets the standard for giving investors the opportunity to receive execution prices *better* than the quoted price. As Chairman Levitt recently said:

The efficiency and integrity of our markets today is due, in no small part, to the efforts of our major markets to honor execution quality. The NYSE, in many respects, has been and remains a standard setter in the area of price improvement.³⁶

It has been suggested that the move toward decimal pricing and the accompanying shrinkage in the minimum price variation to nickels or pennies will reduce or eliminate the ability of the NYSE floor to provide price improvement (especially in the high-volume stocks). We do not subscribe to this view. However, we recognize that it is not possible to predict the full impact of the introduction of decimalization³⁷ and the new

³¹ *NYSE Guide*, NYSE Rule 104.10(3).

³² This figure is calculated as the volume of specialist dealer transactions as a percentage of twice the total volume of orders executed (buy plus sell) at the NYSE in 1999 (a specialist can only participate on one side of each trade and thus the maximum specialist participation rate under this calculation methodology is 50%). Put another way, specialists’ share as dealer of the NYSE’s trading volume in 1999 was 26.2%.

³³ See *1999 Fact Book*.

³⁴ See *1999 Fact Book*.

³⁵ Jeffrey Bacidore et al., *Quantifying Best Execution at the New York Stock Exchange: Market Orders* 13 note 24 (NYSE Working Paper No. 99-05, December 1999) <<http://www.nyse.com/pdfs/wp9905.pdf>> (“*Quantifying Best Execution*”).

³⁶ Levitt, *Best Execution*.

³⁷ See Arthur Levitt, “*Visible Prices, Accessible Markets, Order Interaction*,” Remarks at the Northwestern

NYSE initiatives described below. It is possible that unanticipated trading strategies may develop that will warrant or require adjustments to these initiatives or changes in regulation.

The NYSE is a deep market in which the vast majority of orders are executed against the orders of other customers on an agency basis. Orders represented in the crowd do not trade with the specialist when the crowd itself is supplying sufficient liquidity — and in such a situation no spread is paid by the buyer or seller. This structure contrasts with that of a dealer market, such as Nasdaq, in which investor orders usually do not directly interact with each other. Instead, the vast majority of Nasdaq orders execute against the account of a dealer acting as a market maker. “Since the intervention of a dealer involves an additional spread between the prices at which investors can buy and sell, it is likely that in many instances investors obtain less favorable prices on their trades than if they could trade with other investors.”³⁸

Technology Facilitates the Auction

We have considered the argument that trade execution is a commodity service that computers can provide faster and more cheaply than can human beings on the NYSE trading floor. The shuttering of foreign securities exchange trading floors in favor of screen-based trading systems has fostered this notion, though we note that a number of presenters thought it misleading to rely on these examples.³⁹ In commenting on the rise of electronic screen-based markets overseas, Chairman Levitt recently noted:

While it is true that a substantial amount of trading volume is now executed in

University School of Law, Kellogg Graduate School of Management (March 16, 2000) <<http://www.sec.gov/news/speeches/spch355.htm>> (“Levitt, *Visible Prices*”):

What will decimals mean for our markets? The reality is, many of the most seasoned market veterans disagree in their predictions. But most agree that, in the end, investors will clearly benefit — particularly small investors using market orders. The theory is straightforward: As prices are quoted in smaller and smaller increments, there are more opportunities and less cost for dealers and investors to improve the bid or offer on a security. As more competitive bidding ensues, naturally the spread becomes smaller. And this means better, more efficient prices for investors.

³⁸ SEC, *Policy Statement on the Structure of a Central Market System* (March 29, 1973), as reprinted in [1973] Securities Regulation and Law Report (BNA) No. 196, at D-5 (April 4, 1973).

³⁹ Many of the markets in question had trading floors that may have looked like the NYSE floor but did not operate like the NYSE floor. For example, the often-cited London Stock Market was a “jobber” market much more similar to a dealer market than to an agency-auction market. Following conversion to a “screen-based” system, the retail and institutional markets have nearly completely separated, with institutional transactions occurring almost exclusively in an “upstairs” market. These institutional trades remain confidential for fixed periods of time (in some cases measured in days); the dealers often “lay off” the trades on retail investors who remain unaware of the price and size of the upstairs transactions until they are subsequently reported publicly. Several presenters noted that many of the foreign electronic markets provide very little transparency and are not as liquid as the NYSE.

electronic systems in some foreign markets, significant trading also occurs outside of these same systems. Any meaningful comparison must take into account the entire universe of transactions, and the interplay between multiple pools of liquidity. There is a big difference, in short, between an efficient trading system and an efficient national market system. Our sights should be set on the latter.⁴⁰

The NYSE's floor-based auction is conducted by human beings, but those human beings are assisted by advanced technologies. Today electronic systems at the NYSE are used for routing orders, transmitting trade execution reports and conducting market surveillance. In the last decade alone, the NYSE expended over \$2 billion for new technology and the operation and improvement of its systems. The NYSE is currently spending more than \$350 million annually for the operation and improvement of its systems. Trading posts and broker floor booths accommodate an array of advanced electronic systems for the operation of a modern securities marketplace. These include:

- **Display Book** - the electronic limit-order book that represents to the specialist all limit and market orders they receive and Intermarket Trading System commitments to trade
- **Broker Booth Support System** - the computer workstations, software and network that allow member firms to manage and route their order flow to the floor auction
- **e-Broker** - the wireless, hand-held computers linked to the Broker Booth Support System and "upstairs" trading desks; e-Broker allows floor brokers to automate order-flow management and to communicate order status and "market look" information, and soon will enable floor brokers to transmit "eCrowd" automatic execution orders against the NYSE's quotations⁴¹
- **Virtual NYSe** - the real-time, three-dimensional, virtual-reality representations of the trading floor that, when placed on the Internet, will enable online investors to be in a virtual trading crowd and to look at the limit orders in the specialist's book
- **Display technology** - advanced flat-panel market data displays throughout the floor
- **Wireless communications** - wireless voice and data communications on the floor

⁴⁰ *Hearing on the "Financial Marketplace of the Future" Before the Senate Committee on Banking, Housing & Urban Affairs, 106th Congress (February 29, 2000), Prepared Testimony of the Honorable Arthur Levitt, <http://www.senate.gov/-banking/00_02hrg/022900/levitt.htm>.*

⁴¹ This automatic execution system is discussed below. See "The New NYSE — NYSe Direct+™" below, beginning on page 35.

These communications and technology developments and investments account for the NYSE's ability to handle a more than five-fold increase in average daily trading volume, from 157 million shares in 1990 to one billion shares in 2000. The NYSE routinely handles daily volumes in excess of one billion shares, with a record 1.48 billion shares traded on March 16, 2000. The NYSE's systems, moreover, have the capacity to handle *five-to-six-billion-share* trading days and are ready for all contingencies, including the introduction of decimalization in July.

This technology, together with the large volumes enjoyed by the NYSE, allows the NYSE to be an extremely low-cost provider of execution services.⁴² NYSE-related transaction fees and specialist commissions represent only 3.4% of the total amount paid each year by individual and institutional investors in brokerage commissions for NYSE-listed securities.⁴³ The overwhelming majority of small orders (1,000 shares or less) sent to the NYSE are executed virtually free of NYSE-related costs.

Today, more than 90% of the orders sent to the NYSE (representing about half of the NYSE's total dollar volume) are processed through the "SuperDOT" system.⁴⁴ SuperDOT electronically routes orders (up to 39,099 shares for market orders and 99,999 shares for limit orders)⁴⁴ and trade reports between member firms and the specialists. These orders are called "system orders." On average, a market system order is executed and returned to the originating broker 22 seconds from order entry, often at a price that is superior to the nationally displayed best quotation. Specialists' commissions on system orders executed in five minutes or less are zero.⁴⁶

SuperDOT, however, is not an electronic order-matching system. NYSE Rules require the specialist to expose system orders to the crowd for possible price improvement.⁴⁷ This contrasts with the automatic order executions that take place on ECNs.

⁴² Several member firm presenters noted that they incur significant internal costs to support their trading activities at the NYSE. The NYSE should continue to review member costs and work with the membership to facilitate reductions in these costs.

⁴³ Based upon regulatory reports filed by member firms with the NYSE.

⁴⁴ See 1999 *Fact Book*; see also Guy Moszkowski & Gabrielle Gutierrez, *Trading Up: The Equity Markets and the New World of Electronic Trading* 26 (Salomon Smith Barney Equity Research Report, 1999) ("*SSB Report*").

⁴⁵ The NYSE intends to significantly increase these limits in the near future.

⁴⁶ Under NYSE Rule 123B(b)(1), specialists may not charge floor brokerage for executing market and marketable limit orders received by means of SuperDOT. See *NYSE Guide*, NYSE Rule 123B(b)(1).

⁴⁷ See *NYSE Guide*, NYSE Rule 123B(d).

ECNs, Super-NMS and the CLOB

The Merits of ECN Trading Systems

ECNs are the most-often-cited competitive threat to the NYSE.⁴⁸ ECNs are electronic limit order books that automatically execute matching orders. Investors (usually through broker-dealers) enter their limit orders on a given ECN's system. That limit order interacts with the other limit orders on the system (or entering the system subsequently). The interaction takes place in a computer that has been programmed with execution priority rules. In most cases the execution priority rules are based strictly on price and time (*i.e.*, the system will execute the earliest order on one side of a trade against the earliest price-matching order on the other side).

As noted, some observers extrapolate from the success ECNs have enjoyed in gaining market share from traditional Nasdaq market makers to argue that NYSE-listed-stock order flow will soon fragment to ECNs. Many NYSE member firms (including one specialist firm) have invested in one or more ECNs. According to some estimates, almost one-third of the Nasdaq trading volume is executed through ECNs. Inroads made by ECNs in Nasdaq, however, can largely be attributed to a regulatory environment⁴⁹ created in response to certain anti-competitive practices that existed on the Nasdaq.⁵⁰

ECNs offer their subscribers certain benefits. ECNs are low-cost, scalable trading systems that, like the NYSE, allow public orders to execute against public orders. They provide anonymity⁵¹ and, when there are matching orders, fast executions.

⁴⁸ See, for example, *Archipelago to Set Up New Stock Market*.

⁴⁹ The Order Handling Rules, adopted by the SEC in August 1996, permit Nasdaq market makers to satisfy quote obligations by directing order flow to qualified ECNs rather than reflecting those orders in their own quotes. See Order Execution Obligations, Exchange Act Release No. 34-37619, 1996 WL 493303, at *11 (August 29, 1996).

⁵⁰ In 1997, 24 Nasdaq market makers entered into a settlement with the Department of Justice under which they agreed not to engage in anti-competitive practices. Nasdaq market makers also agreed to pay plaintiffs approximately \$1 billion to settle civil antitrust claims. See *U.S. Judge Approves Record Settlement in Nasdaq Lawsuit*, Wall Street Journal, November 10, 1998, at C19.

⁵¹ Several presenters representing institutional investors suggested that the market impact of executing large orders on the NYSE is on some occasions exacerbated by information leakage that occurs somewhere in the order-routing and order-execution process. While many of these presenters were unsure whether the leakage occurs at the NYSE or before orders reach the NYSE, it is clear that institutional investors desire more anonymity than they currently enjoy when they trade NYSE-listed stocks through member firms on the NYSE.

Those who suggest ECNs may succeed in garnering some of the order flow for NYSE-listed securities often cite presumed ECN advantages in cost or speed and certainty of execution. An “apples-to-apples” comparison of smaller-sized marketable limit orders (the type of orders usually executed over ECNs), however, reveals that NYSE trading costs are competitive with the costs of trading over an ECN.⁵² It is more difficult to compare trading costs on large orders because ECNs (other than Instinet) tend to attract few such orders (the typical ECN order being well under 1,000 shares), and because the market-impact costs of large orders become more important than their explicit costs (*i.e.*, fees and commissions). Representatives of several large institutional investors did tell us, though, that the NYSE holds a significant all-in (*i.e.*, fees, commissions and market-impact costs) cost advantage on large orders.

As to speed, it is true that, if two orders in an ECN’s system match, the computer can execute the trade instantaneously. But, because ECNs are passive, order-driven systems in which limit orders wait on the ECN’s book until a matching order arrives, the actual time from order entry to order execution can be quite long. In fact, the vast majority of ECN orders never execute on the ECN. According to research analysts, “[t]he percentage of orders matched internally on emerging [alternative trading systems] is typically low (about 5%–10%), with an execution rate of 25% considered extremely good in these less liquid markets.”⁵³ The ECNs do not have a specialist or other market maker obligated to ensure that the ECN market is continuous, fair or orderly.⁵⁴

Though a number of regional stock exchanges (*e.g.*, the Cincinnati Stock Exchange’s National Securities Trading System) and third-market dealers apply automatic-execution technology, neither those exchanges nor ECNs in general have captured a significant amount of NYSE-listed stock trading volume from the NYSE.⁵⁵ When these alternate trading venues do generate order flow, it has often resulted from internalization and preferencing; it has not usually been attracted by superior quotes.⁵⁶

⁵² See *SSB Report* at 26. We recognize that this situation is susceptible to change if ECNs begin to capture significant trading volume in NYSE-listed securities. Today the NYSE enjoys this cost advantage due to the economies of scale created by large trading volumes.

⁵³ *SSB Report* at 10.

⁵⁴ Of course, Nasdaq market makers can choose to provide liquidity by interacting with the orders placed on ECNs. *But see Archipelago to Set Up New Stock Market.*

⁵⁵ The *SSB Report* reports that Instinet and other alternative trading systems have garnered about 4%, regional exchanges 8%, and the third-market dealers 4%, of NYSE-listed stock trading volume. See *SSB Report* at 16.

⁵⁶ ECNs and other alternative trading venues have had some success in attracting the “commoditized” smaller-sized order flow in NYSE-listed stocks. It seems likely that this is primarily because the investors

Even for stocks that have not been subject to off-board trading restrictions, the vast majority of orders (especially larger orders) for NYSE-listed stocks are brought to the NYSE.

Proponents of a CLOB suggest that alternative trading systems have simply not yet attracted enough NYSE-listed-stock order flow to achieve “critical mass.”⁵⁷ They argue that, once a sufficient level of liquidity appears on these systems, they will dominate trading in NYSE-listed securities. Advocates of the floor-based trading model, on the other hand, suggest that the ECNs’ failure to achieve critical mass is itself telling. They argue that ECNs have brought to Nasdaq what the NYSE has always had — an agency-auction trading model. They further argue that order flow remains, and will continue to be, attracted to the NYSE floor precisely because of the benefits derived from the human intervention that floor brokers can offer: informational advantages; judgments about timing and manner of order exposure; and the negotiation that occurs in the crowd.

A CLOB Cannot Replicate the Floor

Several NYSE member firms, including some of the largest providers of order flow to the NYSE, urged the adoption of a CLOB. As noted above, a CLOB is a single, national, order-driven intermarket linkage requiring submission of all customer limit orders for automatic matching based upon price-time priority.⁵⁸ A CLOB is not a new Internet-based concept; it was first proposed over 25 years ago.⁵⁹

Its proponents maintain that a CLOB would provide a cheap, fair, fast, anonymous, transparent and scalable means of trading NYSE-listed stocks.⁶⁰

involved in placing these types of orders are generally not well informed about order-execution practices, and consequently do not actively monitor their broker-dealers or otherwise seek to direct their order flow to a particular market. See the discussion under “Investor Education” below, beginning on page 44.

⁵⁷ Some have blamed this failure on the NYSE’s market-responsibility rule (*NYSE Guide*, NYSE Rule 390). See the discussion under “Internalization Only With Price Improvement” below, beginning at page 36.

⁵⁸ Some CLOB proposals envision only the NYSE’s most-active stocks trading in the CLOB, with its other, less-active stocks continuing to trade in the NYSE’s floor-based, agency-auction market. Proponents of this approach acknowledge that, due to unevenness in liquidity during the trading day, the less-active stocks may not be suitable for electronic, automatic-execution trading on a CLOB, and that the NYSE specialists play an important role in moderating the effects of uneven liquidity in these stocks.

⁵⁹ See note 99.

⁶⁰ CLOB proponents also suggested to us that a CLOB could accommodate a simplified, unitary regulatory structure. See also note 77. We will consider issues relating to market governance in the months to come.

They further contend that in high-volume stocks, the CLOB would provide sufficient transparency and attract sufficient liquidity to dispense with the affirmative and negative obligations of specialists.

We accept the arguments of CLOB proponents that the floor auction has some limitations. While the NYSE's liquidity minimizes the market impact of large orders placed by institutional investors, information leakage sometimes does occur.⁶¹ We also recognize that, while NYSE system orders are executed quickly, the search for price improvement in the crowd makes it impossible for the NYSE to execute marketable limit orders as quickly as can a computer. The lack of an automatic-execution facility at the NYSE does not allow NYSE member firms to meet (through a NYSE trade execution) the demands of Internet investors seeking near-instantaneous trade executions.

Nonetheless, we reject the CLOB proposals because:

- by segmenting (or fragmenting) the market between large and small orders, a CLOB significantly impairs price discovery
- since its features work to the particular advantage of some industry participants at the expense of other industry participants, implementation of a CLOB would be a complex and divisive project that would undoubtedly require intrusive legislation and regulation, with no assurance that the mandate would create a system as good as investors enjoy today
- the NYSE specialists' affirmative obligation would be eliminated under most CLOB proposals, which would likely increase volatility and would widen bid-ask spreads for less actively traded stocks
- a CLOB would dramatically impair intermarket competition and innovation
- the "New NYSE," described below, provides almost all of the benefits of a CLOB and has none of the detriments

We discuss these reasons below.

First, a CLOB eliminates, without replacing, the critical price discovery that occurs in the crowd.⁶² We believe a CLOB would likely jeopardize true price discovery by segmenting the market between large and small orders. While retail and other small-order executions would take place on the CLOB, we do not believe the

⁶¹ See note 51.

⁶² The price discovery that occurs at the NYSE is almost always the price that competing exchanges and Nasdaq market makers use when setting their quotes. In fact, to fulfill their quote obligations, specialists

CLOB would attract meaningful institutional order flow. Several presenters, including representatives of large institutional equity portfolios, suggested that institutional investors would *not* expose their true trading interests in the CLOB.

We believe it is likely that, in order to reduce the market impact of large orders, institutional investors would parcel out orders to the CLOB in small sizes,⁶³ would take their order traffic overseas,⁶⁴ would look to dealers to provide liquidity off of the CLOB, or would engage in some combination of these alternatives.⁶⁵ Large orders of 10,000 shares or more represented approximately 50.2% of the NYSE's trading volume in 1999.⁶⁶ It is thus probable that a CLOB would reduce or otherwise distort information in the central marketplace, undermining price discovery. In effect, the *apparent* transparency of the CLOB would itself reduce the *actual* transparency of the marketplace.

We recognize that investors seeking to buy or sell large positions do not expose their full interest all at once to the NYSE auction. However, the floor-based agency auction remains the most effective method of drawing latent liquidity to a single point of execution. Investors have shown their willingness to entrust their liquidity to human beings capable of negotiating in the NYSE's floor auction.⁶⁷ Many

on regional exchanges have employed "autoquote" programs to keep their quotes at or near the quotes set by the NYSE specialists. Some regional-exchange specialists and Nasdaq market makers give a "primary market guarantee," executing transactions at the NYSE quotes without even waiting to find a matching agency order on the other side of the trade (enabling fast executions). These markets seek to compete on bases other than quotes, such as speed and commission costs. See Joel Seligman, *The SEC and the Future of Finance* 14 (Praeger 1985); see also *The Call Auction Alternative* at 11 ("[A] critical cause of the [market] fragmentation has been the ability of others to free-ride on NYSE-discovered prices.").

⁶³ Some CLOB models (like several ECNs) attempt to do this automatically by implementing a "reserve feature" that allows the true size of orders to be hidden within the system — once the exposed portion of the order is matched and executed, an additional portion of the remaining order is then exposed and maintains its time priority (the process repeating itself until the full order is executed). Obviously, the reserve feature reduces transparency. If the feature were to induce the placement of large orders on the CLOB, an investor might enter an order at the market expecting a quick execution (based upon revealed limit orders on the CLOB) but might instead receive a slow execution or no execution as the inside quote continuously refills from a "reserved" order revealed as a series of small orders with priority over the later orders (some have likened this to getting in what looks like a short line at an amusement park, only to find that it winds back and forth many times, masking the true length of the line).

⁶⁴ See Corinne Bronfman et al., *The SEC's Market 2000 Report*, *The Journal of Corporation Law* 542 (Spring 1994) ("*The SEC's Market 2000 Report*") (describing the shift of NYSE order flow to offshore markets that are subject to rules requiring less transparency).

⁶⁵ Presenters representing institutional investors voiced significant concern about a "dealerization" of stock trading in NYSE-listed stocks were a CLOB to be implemented.

⁶⁶ See *1999 Fact Book*.

⁶⁷ One could view the NYSE trading floor as the NYSE's very sophisticated "reserve feature" (without time priority — see note 63) in which latent trading interest is represented in the crowd by floor brokers expert in judging, based upon market conditions, how best to reveal an order to the market for execution.

institutions commonly place large orders with trusted NYSE floor brokers who “work” the orders as market conditions dictate.⁶⁸ In this way, even though their trading interest is not immediately fully revealed, that trading interest is indirectly reflected in the price discovery that occurs in the crowd.

CLOB proponents acknowledge that the CLOB would not be suitable for trading large orders. Before our Committee, one group of CLOB proponents suggested that there would be exceptions from CLOB exposure and priority rules only under “strict guidelines,” but did not specify the guidelines beyond suggesting that block trading would constitute one such exception. Another CLOB advocate called for reexamining the NYSE’s block-positioning rule without specifying any proposed changes.⁶⁹ More recently, in testimony before the Senate Committee on Banking, Housing & Urban Affairs, the chief executive officers of two large member firms advocated a CLOB with large-order exceptions.⁷⁰

We, however, believe that to segment or fragment the market for NYSE-listed stock order flow between large and small orders would have devastating effects on execution quality, liquidity, price discovery, stability and perceived and actual fairness.

A second significant reservation we have about the CLOB proposals is that they seem narrowly tailored to accommodate the specific business models of their proponents. NYSE members have different customer profiles and business models; some cater to individual investors, others primarily serve institutions. Specific CLOB features would confer advantages on certain business models and not others.⁷¹

⁶⁸ A number of independent floor brokers have developed a significant business taking agency orders directly from the trading desks of large “buy-side” institutions. See Justin Schack, *Cost Containment*, Institutional Investor, November 1999, at 43, 48.

⁶⁹ See *NYSE Guide*, NYSE Rule 127.

⁷⁰ *Hearing on the “Financial Marketplace of the Future” Before the Senate Committee on Banking, Housing & Urban Affairs*, 106th Congress (February 29, 2000), Prepared Testimony of Mr. Henry M. Paulson, Jr. <http://www.senate.gov/-banking/00_02hr/022900/paulson.htm> (“And there should be appropriate, volume based block trade exceptions to assist in reducing the volatility (and the resulting implicit costs to investors that the Commission correctly identifies) that large transactions can have on the market.”), and Prepared Testimony of Mr. David Komansky <http://www.senate.gov/-banking/00_02hr/022900/kmansky.htm> (“We also support a trading protocol of price/time priority at the superlinkage level, with certain exceptions. For example, we would support certain exemptions, such as block size exemptions, where size trumps time.”). See also *Large Firm White Paper* at Section 4.1 (“Some exceptions to price/time priority, automatic execution bear consideration. For example, block trades should be excluded from an automatic price/time priority requirement because these trades generally benefit from being shopped or negotiated away from the exchange floor.”)

⁷¹ For example, while CLOB proponents would like strict price and time priority rules for small orders (and the ability to trade large orders off of the CLOB — see above), some broker-dealers that generate large retail order flow want the right to execute small order trades internally off of a CLOB. See Michael

Some have suggested, for example, that what large-firm CLOB proponents are after is simply a stream of pricing data generated from the interaction of retail order flow; the thesis is that the CLOB advocates will then use this information to price large block trades off of the CLOB, in a less transparent environment.⁷²

In the end, the debate between broker-dealer firms over the CLOB and internalization rules (see “Internalization Only With Price Improvement,” below) seems to be a contest between those broker-dealers that wish to internalize small customer orders and those broker-dealers that wish to internalize large customer orders. Without much more than the obligatory nod toward customer interests, broker-dealers appear to be leaving investor and listed-company interests largely out of this debate.

Given the disagreements within the securities industry regarding the various CLOB proposals, we do not believe a consensus among industry participants (let alone one satisfying retail and institutional investors⁷³ and listed companies) will develop around a single CLOB model. As our recommendations make clear, we believe the NYSE can more effectively accommodate its members’ various business models — and investor interests — by adopting a market structure that offers a variety of alternative execution mechanisms.

Our third reservation with the CLOB concerns the elimination, under most CLOB models, of the specialist’s affirmative obligations.⁷⁴ The CLOB proponents suggest that trading volume in the high-volume stocks is sufficient to maintain a continuous market even absent a specialist’s affirmative obligation. However, we believe that the cushioning effect of the specialist’s affirmative obligation, supported by specialist capital, plays an important role in moderating the severity of market volatility, even in the highest-volume stocks. We also believe that the CLOB would result in wider bid-ask spreads for the less actively-traded stocks. While, as CLOB proponents argue, specialist capital may be inadequate today to stand in the way of significant price declines, and while that circumstance may counsel an increase in specialist capital, we think it misperceives the core function of the specialist’s affirmative obligation to suggest that the obligation may accordingly be done away with.

Carroll et al., *Trading Meets the Millennium*, Institutional Investor, January 2000, at 36, 51-52.

⁷² An investor-representative presenter noted that this is a market structure similar to what exists in London today. *See also* note 39.

⁷³ The clear weight of investor opinion appearing before our Committee opposed implementation of the CLOB.

⁷⁴ *But see Archipelago to Set Up New Stock Market.*

The affirmative obligation is not designed to stabilize prices at levels inconsistent with market forces. Rather, specialists simply cushion price movement while the market searches for a new equilibrium. By adding the liquidity that they do possess, specialists maintain a degree of market continuity and orderliness by dampening trade-to-trade volatility. This dampening can be especially important during violent market moves. The underlying psychology of market panics has not been repealed by electronic trading mechanisms. It is not difficult to imagine significant volatility in a CLOB market structure in the event of dramatic disequilibrium, as buyers disappear from the CLOB and sellers flood it. We cannot at this time recommend a market structure that eliminates the affirmative obligation of the specialist.

Fourth, from a public-policy perspective, we note that a CLOB is inconsistent with the promotion of competitive marketplaces. The 1975 Securities Act Amendments to the Securities Exchange Act of 1934 and SEC policy have consistently envisioned a system of competition among markets to serve the public interest.⁷⁵ A CLOB would in effect homogenize the NYSE, the regional exchanges, the Nasdaq market makers and the ECNs.

CLOB proponents contend that in a CLOB environment, markets will still compete on the basis of market-related items,⁷⁶ but they do not address the crucial fact that the CLOB eliminates competition based upon order execution. Securities markets provide order-execution services. Today, competition among markets providing different order-execution mechanisms is fierce — the NYSE and some regional exchanges provide a floor-based agency-auction environment, Nasdaq provides a competing dealer environment, and ECNs provide an automatic execution price-time priority environment. Yet the CLOB takes the job of executing orders away from the markets and places it into a centralized structure requiring automatic executions based strictly upon price and time priority — in effect, what we think of today as competing securities markets become simple order conduits to the CLOB. As a result, investor choice is eliminated. For example, investors seeking the price-improvement opportunities available in an agency-auction market will no longer be able to choose to route orders to a floor-based agency auction. In the absence of investor choice, the incentive and opportunity for innovations in order-execution technology is virtually destroyed.

⁷⁵ See note 6. See also *Fragmentation Concept Release* at 20 (“Assuring fair competition among market centers is another of the principal objectives for the national market system.” (footnotes omitted)).

⁷⁶ See *Large Firm White Paper* at Section 4.4.

Further, we do not agree with the contention of CLOB proponents that securities markets will continue to compete as they do now based upon regulatory oversight and compliance. CLOB proponents suggest eliminating what they deem “redundant or inconsistent” rules and procedures.⁷⁷ This position is irreconcilable with vigorous competition based upon trading regulatory regimes. For example, the NYSE has enacted or proposed a number of trading rules and policies to protect investors trading on the NYSE that no other market has embraced.⁷⁸ We believe that these “inconsistent” rules and policies are a competitive strength of the NYSE — they allow the NYSE to attract greater order flow and more listings by creating a fair and orderly market for investors and listed companies.⁷⁹

We believe that the competition among our nation’s securities markets has been a source of strength for the U.S. capital markets, including the NYSE. Homogenization of the U.S. securities markets would mean an end to that competition, and would place at risk the primacy of those markets at a time when they face growing competition from markets abroad.

Finally, in addition to the foregoing concerns, the Do No Harm Principle comes into play here. CLOB proponents advocate their market structure as “bold action” to ensure U.S. marketplace primacy. But none of the CLOB proponents has dealt with the possible adverse consequences to our markets (let alone how to remedy the situation) should the CLOB fail, in the manner we have described or in some other way neither we nor they envision. The “bold action” proposed simply invites unacceptable risk to an asset that is critical to our nation’s economic well-being.

We are confident, in sum, that the competitive zeal with which the NYSE and other market centers embrace new technology and the genius of the competitive marketplace will do more to ensure U.S. securities market primacy than will legislation or rulemaking eliminating execution alternatives and mandating only one — a CLOB.

⁷⁷ See *Large Firm White Paper* at Section 2.2.5.

⁷⁸ See e.g., restrictions on broker-dealers trading ahead of or with customers (see *Positioning to Facilitate Customer Orders*, NYSE Information Memorandum Number 95-28 (July 25, 1995) and *NYSE Guide*, NYSE Rule 92 proposed amendments (Exchange Act Releases Nos. 34-35139, 60 Federal Register 156 (December 22, 1994); 34-36015, 60 Federal Register 38875 (July 21, 1995); 34-37428, 1996 SEC LEXIS 1822 (July 11, 1996); 34-39634, 1998 SEC LEXIS 213 (February 9, 1998) and 34-42224, 1999 SEC LEXIS 2636 (December 13, 1999)).

⁷⁹ As noted previously, we will consider governance issues in the coming months. See note 60.

The New NYSE

It is clear to us that, good as it is, the NYSE trading model can use some re-engineering. Many institutions want to be closer to the point of sale. They believe that the market impact of large orders can be reduced by enhanced access to the floor, and that market transparency can be improved by providing “actionable information” from the point of sale. Among individual investors, moreover, there appears to be a small but active category that seeks certainty and speed of execution — even at the expense of possible price improvement. A number of member firms want an NYSE facility to accommodate these individual investors, many of whom wish to enter their orders via the Internet and some of whom desire after-hours trading capability.

To meet these investor desires, the NYSE for some time has been developing a number of initiatives, such as *Institutional Xpress*[™] and *NYSE Direct+*[™]. These initiatives expand, rather than restrict, the order-execution choices NYSE member firms may make available to their customers; they exemplify the types of market-structure improvements our recommendations are designed to support. We describe these initiatives below and point out the ways in which we believe they will address perceived investor needs.

Institutional Xpress[™]

Announced in 1999, Institutional Xpress[™] is an information-and-execution product that is expected to be implemented beginning within the next quarter. Institutional Xpress[™] is a series of initiatives (*XPress Information*[™], *XPress Order*[™] and *XPress Routing*[™]) that provide direct electronic communication links between institutional investors and the NYSE trading floor.

XPress Information[™] will provide market information to member firms and institutions in a customizable electronic format. The data provided will include pre-opening ITS indications, market-on-close and market-on-open imbalances, and trading-halt and -delay information. Additionally, Institutional XPress[™] will provide institutions and member firms with the information in the specialists’ electronic order books.

A new order type, XPress Order[™] is designed to provide increased certainty of immediate execution for system orders at or above a minimum size of 15,000 shares.⁸⁰ For an Xpress Order[™], if the quote for a security equals or exceeds the

⁸⁰ This 15,000 share threshold will initially be set at 25,000 shares for the first four months after launch.

minimum size and has been displayed for at least 15 seconds,⁸¹ a notification will be disseminated that an XPress condition exists, allowing anyone with access to SuperDOT to enter an XPress Order™ (for at least the minimum size, but not larger than the quoted size). If the XPress condition still exists when the XPress Order™ reaches the point of sale, the order will be filled, up to the size of the quote, at the quoted price or *better* (*i.e.*, the Xpress Order™ is exposed to the crowd only for potential price improvement).

XPress Routing™ will allow member firms to sponsor clients to route large orders anonymously to the NYSE's SuperDOT system without using a member firm's order-entry infrastructure. The NYSE will manage a credit-authorization service that will allow member-sponsored investors (pre-approved by the member sponsor) to enter orders within a predefined credit limit and order size.

Institutional Xpress™ (Xpress Order™ and Xpress Routing™) provides institutional investors the opportunity to interact directly with the NYSE trading floor. This will permit them to minimize the potential market impact of information leakage that sometimes accompanies large-order executions. Xpress Information™ and phase two of Institutional Xpress™ (which will make available information on the specialists' limit order books) will enhance transparency at the point of sale.

NYSE Direct+™

To address demand for Internet-based electronic order execution, the NYSE is developing "NYSE Direct+™," an enhanced ECN that exposes orders that cannot be immediately matched to the floor auction. NYSE Direct+™ will allow member firms (and will permit member firms to allow their customers) to specify limit orders of 1,099 shares or less as "Auto ex" orders. An Auto ex order will receive automatic electronic execution against the NYSE quotation (which reflects both the limit orders in the specialist book and trading interest in the crowd) to the extent a matching bid or offer is available at the time the Auto ex order is received.

NYSE Direct+™ will be fully integrated into the NYSE's floor-based agency-auction model. Any Auto ex order that cannot be immediately executed (*e.g.*, because it arrives after the quote has changed) will be automatically converted into a system limit order for execution in the auction market. Floor brokers will have hand-held wireless computers through which they will be able to enter orders into NYSE Direct+™. Investors will have the ability to trade on NYSE Direct+™, through member firms, over the Internet. In addition, NYSE Direct+™ will allow member

⁸¹ This 15-second requirement will initially be set at 30 seconds for the first four months after launch.

firms to internalize execution of their order flow when they offer investors price improvement (see “Internalization Only With Price Improvement”).

NYSE Direct+™ gives NYSE member firms the ability to provide their clients direct Internet access to an automatic-execution facility that is tightly integrated with the floor auction. With NYSE Direct+™, investors will have the ability to choose between the opportunity for price improvement and the speed and certainty of an automatic execution.

By maximizing the opportunity for direct interaction of public orders and reducing the need for dealer intervention, both NYSE Direct+™ and Institutional Xpress™ integrate tightly with the price discovery occurring on the floor. NYSE Direct+™ can also serve as a platform for the future offer of extended-hours trading.

Both Institutional Xpress™ and NYSE Direct+™ fulfill the overarching principles described in Section III above. These initiatives will provide a flexible, multiple-platform market structure that will improve member firms’ ability to deliver best executions to all of their customers and should attract a wide variety of trading interests. We believe that these new NYSE initiatives will deepen the liquidity on the NYSE floor.

Were investors to drive all of their less-than-1,100-share system limit order flow to NYSE Direct+™, 71% of the NYSE’s system limit orders (representing 8% of the NYSE’s overall volume) could receive automatic executions. We recommend that the Board stand ready to adjust the initial parameters of NYSE Direct+™ (*i.e.*, by increasing the maximum eligible order size) and Xpress Order™ (*i.e.*, by reducing the quote size and quote aging requirements that create an Xpress trading condition) as investor demand and market performance warrant.

Internalization Only With Price Improvement

As noted in Section II of this Report, one large member firm that did not propose a CLOB instead proposed that the NYSE facilitate internalization by member firms. A broker-dealer internalizes when it either executes as a dealer against a customer agency order or directs the order to an affiliated dealer for execution.⁸² As discussed above, broker-dealers internalize agency market orders by buying from sell orders at or near the bid price, and selling to buy orders at or near the offer price. Such agency orders do not interact with other public orders, and they are often

⁸² The NYSE strictly regulates affiliations and associations with specialists (who must yield to all agency orders, as well as expose them for potential price improvement). See *NYSE Guide*, NYSE Rules 91, 92 and 98.

denied the opportunity to receive the full degree of price improvement available at the NYSE. The internalizing broker-dealer profits by retaining all or part of the spread or by trading against customer order flow to establish or liquidate a proprietary position. In contrast, customer orders executed in agency transactions on the NYSE floor are frequently price-improved (*i.e.*, executed *between* the bid/ask spread or bought at the bid and sold at the offer) and the customers do not yield the spread to broker-dealers. The practice of payment for order flow involves similar redirection of orders away from the auction to market makers or regional exchange specialists that will pay for the orders.⁸³

In its 1997 *Report on the Practice of Preferencing*, the SEC found that internalization and preferencing can create competition for the traditional market centers and “that such practices are not necessarily inconsistent with best execution of customer orders.”⁸⁴ It is difficult, however, to see how internalization benefits investors. Internalization allows the order-originating broker-dealer to profit at the expense of the customer’s ability potentially to obtain a better-priced trade execution. While it is true that preferencing may reduce the customer’s commission cost (the explicit execution cost) when all or a portion of the dealer’s profit is passed back to the customer (which does not always occur), it can also *increase* the customer’s total cost by adversely affecting the execution price. The SEC has enacted a rule requiring better disclosure of payment-for-order-flow policies, but has not yet prohibited or otherwise limited the practice.⁸⁵

Last fall Chairman Levitt revisited this issue, saying that he was troubled with the preliminary results of an SEC review of preferencing practices. He stated that the study revealed that some firms have been selling their order flow at the expense of quality executions:

I worry that best execution may be compromised by payment for order flow, internalization and certain other practices that can present conflicts between the interests of brokers and their customers. Are conflicts in the order routing and execution process diluting the natural forces of competition in our markets — reducing price competition and isolating pools of liquidity?⁸⁶

⁸³ See *Fragmentation Concept Release* at 22-23 for a description of internalization and payment-for-order flow practices.

⁸⁴ See SEC, *Report on the Practice of Preferencing* Part II (April 1997) <<http://www.sec.gov/news/studies/prefrep.htm>>.

⁸⁵ See *Payment for Order Flow, Exchange Act Release No. 34-34902*, 1994 WL 587790 (October 27, 1994).

⁸⁶ Levitt, *Best Execution*.

In addition to the conflicts internalization and preferencing practices raise, we view these practices as a serious threat to price discovery. Internalized order flow is not exposed to, and therefore does not directly interact with, the overall liquidity of the marketplace.

Broker-dealers that internalize often simply rely on the quotes set by the NYSE when pricing their trades instead of introducing orders to the marketplace for pricing. In effect, the broker-dealers free-ride on the NYSE's pricing mechanism.⁸⁷ This practice becomes more problematic as it becomes more common — if all broker-dealers internalized their orders, the agency-auction pricing mechanism would largely disappear, in favor of a fragmented, “dealerized” marketplace similar to Nasdaq. Such an outcome was opposed by nearly every presenter representing investors. The profitability to broker-dealers of internalization creates an irresistible incentive toward wider and shallower quotes. In essence, investors would be offered reduced opportunities for price improvement.

We are deeply concerned that internalization is becoming more common in the securities industry and will truly fragment the market for NYSE-listed stocks, reducing overall market transparency, impairing price discovery and harming investors.

We recognize that the failure of the NYSE to facilitate unfettered internalization may affect the NYSE's ability to “attract” order flow. However, order flow that is internalized (even if “attracted” to the NYSE in the sense of being reported as a NYSE trade) does nothing to improve the liquidity or price-discovery of the floor auction — instead, that liquidity remains fragmented within the broker-dealer firms. The Best Execution, Fairness and Liquidity Principles dictate that we recommend vigorous opposition to internalization and current payment-for-order-flow practices.

The SEC has tolerated preferencing and internalization in order to support competitors to the NYSE and other major markets. We believe it has done so at the expense of, rather than for the benefit of, investors. Section 11A(a)(1)(C)(v) of the Exchange Act specifically reflects Congress' finding that “[i]t is in the public interest and appropriate for the protection of investors and the maintenance of fair and orderly markets to assure an opportunity [consistent with the other goals of Section 11A of the Exchange Act,] for investors' orders to be executed without the

⁸⁷ See Levitt, *Visible Prices*:

In particular, I am concerned that broker dealers who buy and sell from their retail customers, and wholesale firms that pay for order flow, may have little meaningful incentive to compete through quotes with the rest of the market. Rather than vying for individual orders, they instead buy privileged access to those orders. Then, they trade at prices set, for the most part, elsewhere in the market.

See also note 62.

participation of a dealer.” The SEC recently interpreted this provision of the Exchange Act, stating that “dealer participation in securities transactions is warranted only to the extent that it leads to more efficient execution of securities transactions or the best execution of investor orders.”⁸⁸

The NYSE’s Market Responsibility Rule (Rule 390), subject to limited exceptions, requires NYSE members to execute principal trades (and crossed agency orders) in pre-April 26, 1979-listed stocks only on an exchange.⁸⁹ The Rule’s intent is to maximize the opportunity for investors’ orders to interact with one another in agency-auction markets for potential price improvement. However, critics view Rule 390 as an impediment to competition among markets.⁹⁰

Largely for the reasons described above, the Board concluded late last year that the protections afforded investors by Rule 390 ought to be applied industry-wide. The Board decided to rescind Rule 390 while at the same time asking the SEC to adopt an industry-wide rule that limits internalization to those situations where public investors are given improved prices.⁹¹ Under such a rule, investors capture the bid/offer spread (or at the very least investors and broker-dealers will share the spread).⁹² The SEC has now issued a release requesting comment on

⁸⁸ *Fragmentation Concept Release* at 19 note 28.

⁸⁹ See *NYSE Guide*, NYSE Rule 390.

⁹⁰ Nobel Prize-winning economist Ronald H. Coase pointed out that “[e]conomists observing the regulations of the exchanges often assume that they represent an attempt to exercise monopoly power and aim to restrain competition. They ignore or, at any rate, fail to emphasize an alternative explanation for these regulations: that they exist in order to reduce transaction costs and therefore to increase the volume of trade.” Ronald H. Coase, *The Firm, the Market, and the Law* 9 (University of Chicago Press 1988). See also *Fragmentation Concept Release* at 15:

In fulfilling their intermediary role, organized markets reduce the costs that every investor would otherwise incur to find contra-parties to their securities transactions and to negotiate a price. Fair and efficient securities markets thereby benefit investors by reducing their transaction costs, as well as the economy in general by establishing prices for the allocation of capital among competing uses.

⁹¹ We heard a view that specialists should be subject to a similar “price improvement” obligation. However, we are not persuaded that specialists are analogous to internalizing broker-dealers. The specialist quote must represent the best bids or offers available and the specialist must expose orders and are subject to rules relating to yielding to other market participants who may offer the same or better prices. In contrast, broker-dealers internalizing agency orders would not be subjecting their orders to market exposure or price improvement by other market participants. We also note that specialists, unlike broker-dealers, are subject to the affirmative and negative dealing obligations described above.

⁹² This rule is not as good as a rule prohibiting internalization because (1) it fails to protect the investor who has an order represented in a crowd by one member firm, since that order never gets access to the order flow being internally executed by another member firm, and (2) it fails to ensure that orders placed

the NYSE proposal.⁹³ We note that the Investment Company Institute, representing over 8,000 mutual funds which manage more than \$7 trillion in assets, has submitted a comment letter to the SEC supporting adoption of the NYSE’s rule proposal.⁹⁴

Ideally, the SEC would enact rules designed to eliminate internalization.⁹⁵ In the event that such rules are not forthcoming, NYSe Direct+™ has been designed to accommodate internal executions by NYSE member firms in a manner consistent with the NYSE’s rule proposal. NYSe Direct+™ will allow member firms to deliver coupled buy and sell “Auto ex” orders at the same price to the NYSE for automatic execution against each other. Coupled Auto ex *agency* orders must be matched at or between the NBBO, with the first investor order received by the broker-dealer being entitled to price improvement (*i.e.*, if the first coupled Auto ex agency order is a buy, then the coupled Auto ex agency orders must be executed at a price lower than the ask; conversely, if the first Auto ex agency order is a sell, then the orders must be executed at a price higher than the bid).⁹⁶

However, when one side of the coupled Auto ex order is for the account of the member firm (*i.e.*, the member is internalizing), NYSe Direct+™ rules would require that the coupled orders be matched on a price-improved basis. If the customer is on the sell side, the coupled orders must be priced at the national best offer or between the national best bid and offer. Conversely, if the customer is on the buy side, the trade must be priced at the national best bid or between the national best bid and offer.

If the SEC fails to promulgate rules designed to eliminate internalization, to create meaningful order-exposure obligations, or to require price improvement as a condition of internalization, we believe the price-improvement requirement contained in the NYSe Direct+™ Auto ex internalization feature must be reevaluated in that context.

with the internalizing firm receive best-priced executions with maximum opportunity for price improvement. Nonetheless, the Board’s proposed rule may be the best that can be obtained in the current environment.

⁹³ See *Fragmentation Concept Release*.

⁹⁴ Letter from Craig S. Tyle, Investment Company Institute, to Mr. Jonathan G. Katz, Secretary, SEC (File No. SR-NYSE-99-48) (March 20, 2000).

⁹⁵ In addition to the internalization-subject-to-price-improvement proposal made by the Board, there are a number of alternatives for addressing internalization and similar practices. See *Fragmentation Concept Release* at Section IV.C.2.

⁹⁶ In such a case, because investors are on both sides of the trade, no spread is being earned by the member firm regardless of the price at which the trade is executed.

Intermarket Linkages

As discussed above, with the passage of the Securities Acts Amendments of 1975, Congress explicitly adopted a policy of promoting technology-based linkages among the securities markets to facilitate competition among them and to offset the potential adverse effects of any fragmentation that does arise.⁹⁷ As a result of this legislation and agreements among industry participants, the NYSE participates, along with the seven regional securities exchanges and the National Association of Securities Dealers, in three NMS Plans:

- The Consolidated Tape Association Plan — which consolidates and reports trade data from all participating markets
- The Consolidated Quotation Plan — which consolidates and reports quotation data from all participating markets
- The Intermarket Trading System (“ITS”) Plan — which permits participants to route orders among the participating markets to execute trades with the best-priced quotes

A number of presenters, many of whom are CLOB proponents, believe the ITS market-linkage system is both outdated and too slow.⁹⁸ ITS was never intended to be an automatic-execution facility, but rather a mechanism through which an order placed in one market could be sent to another market for execution if a better price existed at the second market.⁹⁹ The theory underlying this structure is that competition among markets will generate superior trading mechanisms and produce an overall increase in market liquidity. For example, ITS does not guarantee time priority — specialists can match ITS quotes to retain order flow at their exchange even when those orders are received later than existing matching orders on another exchange.¹⁰⁰ This induces specialists and market makers to provide liquidity within their own markets to attract and retain execution volume.

⁹⁷ See note 6.

⁹⁸ According to the SEC, “[t]he ITS linkage has weaknesses that must be addressed, including restricted ECN access and slow and inefficient execution procedures.” See *Fragmentation Concept Release* at 25; see also *Large Firm White Paper* at Sections 2.1.4 and 3.

⁹⁹ As early as 1976 the SEC proposed a CLOB-like universal central message switch designed to create quote competition rather than market competition. See Request for Public Comment on Issues Related to the Development of a Composite Central Limit Order Repository, Exchange Act Release No. 34-12158, 1976 WL 16720 (March 2, 1976). Due to lack of industry support, the SEC did not pursue this approach.

¹⁰⁰ See *Fragmentation Concept Release* at 26, 39-40 (discussion of rule concept to eliminate this market practice).

We believe that the philosophy of competing markets has served investors well. We also believe, however, that developments in communications technology have eliminated the need for an intermarket order-routing system such as ITS.¹⁰¹ Enactment of the Securities Act Amendments of 1975 took place against the backdrop of the “back office” crisis of the late 1960s, which revealed the securities industry’s under-investment in technology. This lack of technology coupled with growing market fragmentation made it difficult for broker-dealers to fulfill their best execution obligations: the ability of broker-dealers to find the best quote and quickly route an order to that quote was limited. Intermarket order-routing linkages seemed like the fastest way to remedy the situation as it related to that component of a broker-dealer’s “best execution” order-routing obligations.¹⁰²

Circumstances have changed. Since 1975 the securities industry has taken advantage of the latest technological innovations. Additionally, the explosive growth of the Internet could not have been foreseen by Congress, the SEC or industry participants. Given these advances, we believe that broker-dealers now have the ability to fulfill their fiduciary obligation to deliver best executions on an order-by-order basis without the need for intermarket order-routing linkages. Today, the electronic systems developed by broker-dealers themselves — *i.e.*, their own information and order-routing systems — make equities trading a global operation in which customer orders are executed in equity markets around the world. As several presenters noted, these order-routing systems provide for a degree of market competition that goes beyond the competition that exists over ITS. Today the NYSE competes with ITS-participating markets and non-ITS markets both in the U.S. and abroad. Charles Schwab recently noted before the Senate Committee on Banking, Housing & Urban Affairs, that:

To the extent that the market perceives that aggressive quote competition is important, one would expect the market to respond with a market-based solution, which is in fact what we’re seeing today with the next generation of order routing technology. Various firms, including one we bought earlier this month, have developed routing technologies (message switches) that send orders to the market that quotes most aggressively. (Indeed, the ingenuity of these private vendors takes this technology one step further, considering not only which market was first to quote the best price, but also which market

¹⁰¹ See *As Market Issues Simmer, Grundfest Floats New Proposal Based on Latest Technology*, 2 Broker/Dealer Compliance Report (BNA) 168 (March 8, 2000).

¹⁰² In addition to seeking the best quotes, broker-dealers must pursue the other elements of “best execution,” including opportunities for price-improvement. See the discussion of “Best Execution” under “Section III — Principles” above, beginning at page 12.

has been the most aggressive in quoting the best price throughout the trading day.) If customers perceive a need, this technology will become more widely available and we'll see more routing along these lines, thereby incenting more aggressive quote competition.¹⁰³

Governing, operating, funding, modernizing and expanding ITS has become extremely complex. It would become vastly more complex with the addition of new participants. We believe that managing these complexities is no longer justified given the existence of the extensive, technologically-advanced non-ITS intermarket order-routing systems operated by broker-dealers.

We note that Chairman Levitt has a different view:

The sophistication of brokers in providing connectivity to competing markets will only expand as technology reveals new possibilities. We can expect similar advances in linkages between markets as cutting-edge private sector connections between ECNs, for example, continue to develop. For now, however, basic intermarket linkages still have a role to play.¹⁰⁴

We also recognize that some industry participants believe adding more participants to ITS will increase its utility.¹⁰⁵ Although, for the reasons stated, we disagree with this view, we cannot discount the possibility that this view may prevail. If so, the Board must focus on two issues. First, the ITS Plan should continue to require that ITS participants be self-regulatory organizations ("SROs"). Broker-dealers (including ECNs that have not registered as SROs) should link to ITS only through an SRO participating in the ITS Plan. This is essential to maintaining ITS integrity and a level competitive playing field among the ITS participants. Every ITS participant must be confident that those linked with ITS are subject to adequate market surveillance, and that ITS Plan rules will be enforced. We believe that SRO responsibility (for those ECNs that chose to register as exchanges) and SRO oversight (for those ECNs that choose to remain broker-dealers) are the only mechanisms that will instill such confidence.¹⁰⁶

¹⁰³ *Hearing on the "Financial Marketplace of the Future" Before the Senate Committee on Banking, Housing & Urban Affairs* 106th Congress (February 29, 2000), Prepared Testimony of Mr. Charles Schwab <http://www.senate.gov/-banking/00_02hr/022900/schwab.htm>. We can envision a network that broker-dealers may develop to route orders to the exchange offering the best execution; one intriguing possibility would involve the use by floor-brokers of wireless hand-held technology (such as e-Broker) to access any market as easily (or perhaps more easily) as can an "upstairs" trader (giving broker-dealers the flexibility to re-route orders as changing market conditions may dictate).

¹⁰⁴ Levitt, *Visible Prices*.

¹⁰⁵ See *Large Firm White Paper* at Section 3.1.

¹⁰⁶ In a letter to Senator Charles Schumer, Chairman Levitt wrote that he does "not envision direct ITS

Moreover, a regulatory environment that imposes unequal burdens and restrictions among competing markets will have the effect of inhibiting rather than cultivating competition.

Second, allowing enhanced linkages to ITS should not result in that system being exploited as an order-routing device. In other words, if a “market” linked into ITS ends up executing more of its orders over ITS than it executes internally, it is probable that those entering orders on that alternate system are doing so primarily to reach, on a more “cost effective” basis, the liquidity available over ITS (rather than the liquidity provided by the market at issue). The facilities-and-systems investments made by NYSE members and other ITS participants should not be subject to such “free riding.”¹⁰⁷ Chairman Levitt recently observed:

Any linkage must accommodate innovation and the imperative to compete on the basis of value. Moreover, intermarket linkages are not intended to promote unlimited free access to a competitor’s market. Why, for example, would anyone purchase a seat on the NYSE if a connection to ITS — the listed market linkage — offered equivalent benefits?¹⁰⁸

Investor Education

The market structure we recommend is a flexible structure that enables investors to make the ultimate decisions about how they want their orders to be executed. The head of one member firm told the Committee that his firm does not want to make decisions about how to route order flow to the NYSE. We would hope that most member firms would empower their informed customers to make these decisions. So that investors may make more knowledgeable choices about these options, we recommend that the NYSE develop a communications plan to educate investors on order-execution and market-structure issues.¹⁰⁹

participation by ECNs (other than registered exchanges), but rather believe[s] that ECNs should gain access through an SRO.” Letter from Arthur Levitt, Chairman of the SEC, to the Honorable Charles E. Schumer 1 (December 22, 1999).

¹⁰⁷ See *The SEC’s Market 2000 Report*, at 538-39.

¹⁰⁸ Levitt, *Visible Prices*.

¹⁰⁹ The NYSE already provides broker-dealers with aggregate NYSE price improvement data quarterly and order-by-order price improvement data under the “NYSE PRIME superSM” program. See Self-Regulatory Organizations; Notice of Filing and Immediate Effectiveness at Proposed Rule Change by the New York Stock Exchange, Inc. Relating to Permanent Adoption of a Program to Display Price Improvement on the Execution Report sent to the Entering Firm, Exchange Act Release No. 34-38963, 1997 WL 523291 (August 22, 1997).

Until internalization, preferencing and payment-for-order-flow practices are reformed by regulatory action, or are made less prevalent as a consequence of decimalization, significant agency costs will continue to be borne by uneducated investors. It became apparent from one of the presentations to us that retail investors generally do not understand how their orders are executed.¹¹⁰ This lack of knowledge doubtless leads to ineffective investor monitoring of broker-dealers' fiduciary performance. Ineffective monitoring in turn makes competition based upon order-execution quality (whatever that may mean to a given investor) less important than internalization and preferencing competition.

We believe that the NYSE's competitive position among large institutions is solid and will be enhanced with implementation of Institutional Xpress™. Large investors tend to understand the quality of execution they obtain at the NYSE and to monitor their brokers carefully. But the apparent lack of awareness of individual investors in this area must be addressed. It is not enough for the NYSE just to provide best executions — investors need to know that it does if we expect them to drive their order flow to the NYSE.

Through an effective investor education program, investors will not only be better able to exercise the choice we intend the new market structure to provide, but also will be better able to ensure that their broker-dealers effectively represent their orders at the market that provides the best executions. We believe that market is and will continue to be the NYSE.

Conclusion

The NYSE is facing the most intensely competitive environment it has faced in a generation. As public directors, we are keenly aware that it is critical to do what is right for both individual and institutional investors and listed companies if the NYSE and its membership are to succeed.

The NYSE must provide a market structure that offers investors the best execution of their orders. That market structure must be flexible enough to accommo-

¹¹⁰ A representative of the NYSE Individual Investors Advisory Committee shared with us the results of a survey his committee conducted late last year. When asked how order-routing decisions are made, 28% of the investors said they did not know, 26% believed stocks trade where the stock is listed, 24% believed the execution is made where it can be completed most efficiently, and 20% said they thought the brokerage firm processing the order decided the place of execution. (The remaining 2% thought the place of execution was randomly chosen by the SEC.)

date varying investor execution objectives — including best price, the opportunity for price improvement, low cost, and speed and certainty of execution. At the same time, the structure must not splinter liquidity into different pools in order to accommodate different execution mechanisms; rather, those mechanisms must be tightly linked to preserve optimal price discovery. The NYSE is in a unique position to create such an optimal structure out of what is already the most trusted marketplace with the most trusted brand in the industry.

By implementing the multiple-platform structure endorsed in this Report, the NYSE will afford investors both more order-execution choices and centralized liquidity; investors will reap much of the benefit of a CLOB, while suffering none of its detriments. Through a combination of its regulatory infrastructure and the ongoing employment of new technology to promote competition and price improvement, we believe that the NYSE will continue to attract massive order flow. By facilitating a fair, orderly and efficient price-discovery process, this reservoir of liquidity will benefit listed companies, investors, member firms and the American public at large.

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