Market 2000

An Examination of Current Equity Market Developments

Division of Market Regulation
United States Securities and Exchange Commission

January 1994

This is a report of the Division of Market Regulation. The Commission has expressed no view regarding the analysis, findings, or conclusions herein.

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

THE CHAIRMAN

January 27, 1994

In the pages that follow, the Commission's Division of Market Regulation has set forth its views regarding some of the most difficult structural issues affecting our securities markets today. While my views, and those of my fellow Commissioners, on the substance of the Study are set forth in the statement that follows this, I wanted to preface those comments with some personal observations.

From 1978 to 1989, I had the privilege of serving as Chairman of the American Stock Exchange. Those years saw much of the development of a national market system in response to the stimuli provided by the Commission and the Congress. I was pleased to participate in that development and to experience first-hand the beneficial effects to the public that flow from competition between and among securities markets.

Accordingly, when President Clinton invited me to serve as Chairman of the Commission, I was particularly pleased to learn that the Division had substantially completed its substantive work on the preparation of this, the Market 2000 Study. This Study seeks to provide a methodology for resolving many of the most difficult and vexing questions that have been posed by the evolution of the markets over the almost 20 years since the Securities Acts Amendments of 1975. In many instances, there is no "right" or "wrong" answer, there is only a choice among equally viable or plausible alternatives. In those cases, the Division has suggested the response it would select, based on its experience and accumulated wisdom. It is time, now, to finalize those answers, and to permit the markets to move forward to the year 2000.

This Study is obviously the result of an enormous amount of hard work and careful thought. All of us, in one manner or another, are beneficiaries of the efficient equity markets of this country. It is therefore fitting that we all express our appreciation to Chairman Breeden for initiating this Study; to William H. Heyman, the former Director of the Division of Market Regulation who led the early months of the Study; to Brandon Becker, now the Division Director, and Howard L. Kramer, Associate Director, who saw the Study through to completion; and to the dedicated members of the staff of the Commission who toiled diligently under their supervision.

Arthur Levitt
Chairman

STATEMENT BY THE SECURITIES AND EXCHANGE COMMISSION, UPON RELEASE OF THE MARKET 2000 REPORT - JANUARY 27, 1994

Twenty two years ago, Chairman William J. Casey sent to Congress the first of a series of reports which would culminate in the restructuring of the United States equity markets. His action was responsive to a growing crisis that affected both institutional and individual investors. Increasing volume could not be accommodated; fixed commission rates had caused inefficient relationships between market participants and unnecessarily high transaction costs; restrictions on access to markets prevented competition from working to serve the investor.

The Commission's Statement on the Future Structure of the Securities Markets proposed a vision of how our markets could be enhanced to provide a foundation for the future as well as to fulfill a compelling public need. As amplified by subsequent Commission statements, this vision was premised on the use of technology to link markets and market participants efficiently within a fair regulatory framework. The orders placed by large and small investors alike would be executed in the best market, with market information available to all. Within this system competition would drive the evolution of the markets. Where diversity of interest impeded progress, the Commission was granted the authority to act directly.

The principles which Congress enacted into law in the Securities Acts Amendments of 1975 have served our markets and our country, enhancing a system that by any measure is the cleanest, fairest and most efficient in the world. The technological advances of the last two decades have made it possible to display, expose, and execute orders in volumes that were unheard of even ten years ago. Communication among markets and participants, once costly and cumbersome, is now instantaneous and inexpensive. Investors, now more than ever, can expect that their orders will be executed at the best bid or offer quoted across a spectrum of markets. We have been successfully able to weather crises that would have paralyzed the financial systems of other nations. The principles in the 1975 amendments provide the underlying rationale for the proposals for action in the Division of Market Regulation's Market 2000 Study.

The title "Market 2000" has proven too facile. It has generated unwarranted expectations that the Commission should design the markets for the year 2000. It is neither the Commission's mandate nor its desire to do so. Rather, the study is an attempt by the Division to assess the state of our equity markets and to provide guidance for the development of a national market system.

Given the dynamic nature of our markets, there are issues that transcend such an analysis and are not included. The study does not address whether additional regulation of the burgeoning market in derivative products is necessary, and, if so, how; nor does it separately address the growing size and importance of large unregistered traders, or attempt to resolve issues arising out of the growing international commerce in financial markets. These issues among others will continue to be examined separately.

The study makes clear that our markets are not in crisis today. By all measures, our system is working well to raise capital and provide a wide range of investment opportunities for an even wider range of investors. The trading that was envisioned by Congress in the 1975 amendments has been largely realized. The study reaffirms that the objectives of the Act, which have conferred so many benefits on our markets, remain valid as guiding principles for the Commission.

The proposals recommended in the study are incremental. They represent the continuation of a policy process established with the Future Structure Statement. The progress toward a national market system over the last two decades has occurred for the most part in discrete, deliberate steps. This has been consistent with the Commission's mandate to facilitate the development of the national market system by allowing competitive forces to shape market structure within a fair regulatory field.

Protecting investors while maintaining a fair field of competition is the touchstone of the study. To achieve this end, the study identifies three broad themes. First, that arrangements between customers and broker-dealers should be as clear as possible. Second, that markets should have as much information about supply and demand as is consistent with customer interests. Third, that competition and innovation in the provision of trading services should be encouraged.

The importance of the first goal, clear arrangements between customers and broker-dealers, is self-evident. Investors' decisions to participate in the equity markets are critical to the success of the economy and our national well-being. The decision to participate is predicated on the perception, and reality, of fairness and integrity. Well-informed and fulfilled expectations regarding what customers get and how much compensation they pay for it are the essence of fairness and the basis of investor confidence.

Broker-dealers earn income in a variety of ways, some of which are more apparent than others. They can, for example, charge commissions, they can profit through spreads and mark-ups when they fill customer orders from their own inventory, and they can profit by trading for their own account. The Division's recommendations regarding treatment of customer orders would continue to put investors first and reinforce the need for broker-dealers to provide best execution by allowing the opportunity for customer orders to meet.

The proposals regarding market oversight have the same goal: to support investor confidence. Broker-dealers have a comparative advantage in monitoring the quality of executions. Brokers who route order flow or receive inducements for order flow should, at a minimum, monitor execution quality. The self-regulatory organizations are directed to assert greater third market oversight to maintain market integrity. The Division's recommendations regarding display and exposure of customer orders, and monitoring of execution quality arise from this concern as well.

The second theme, the desirability of well-informed markets, lies behind the recommendations regarding the development of finer pricing for securities, more complete and accurate reporting of trades, and greater display and exposure of customer orders. The flow of customer orders contains valuable information. In assessing whether that information should be publicly disclosed, or only available to market professionals, the Division again takes the side of giving more information to the market.

The third theme, that competition and innovation should be encouraged, is seen in the recommendations that relate to proprietary trading systems, and those that relate to fair competition. Technological advances have changed dramatically the way that the securities business is conducted and promise to change it further. Many of the innovations in the markets during the past 20 years have been generated by competition. It is not surprising that the introduction of new technologies which benefit investors has been the product of competition between and among markets and market participants. Congress recognized this in principle in 1975 when it instructed the Commission to facilitate, but not design, the national market system. It is as important today as it was in 1975 that the Commission cultivate an atmosphere in which innovation is welcome, without dictating a particular structure. The current configuration of the markets shows how successful this policy has been: trading venues a thousand miles apart but linked electronically are as much a single market today as were broker-dealers across the room from each other yesterday. The market they comprise cannot be described as fragmented.

Some of the recommendations proposed in the study will be controversial. Some recommendations call for significant changes in the way business is conducted. Other recommendations have been long anticipated, but still raise tough issues. In addressing the concerns of competitors, the Division necessarily has made choices among less than perfect alternatives. In reaffirming the efficacy of past Commission policies, and the principles on which they were based, the study provides a basis for the Commission and the markets to move forward.

Many of the recommendations request the self-regulatory organizations to initiate action. We would expect them to address these recommendations promptly. Over the coming months, the Commission will prepare specific proposals for release and comment, and expects to move expeditiously in considering them.

Genius, entrepreneurial spirit and hard work were needed to achieve the successes of our markets, but substantial credit is due also to the integrity and efficiency of the system. The protection and maintenance of market integrity and efficiency were and are the charge of the Commission. It is in this light that the Commission will review the recommendations of the Market 2000 Study. The information compiled by the Division of Market Regulation and the recommendations that flow from it will provide valuable guidance as we use the wisdom and experience of the past to move toward the markets of the future.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

DIVISION OF
MARKET REGULATION

January 27, 1994

Dear Mr. Chairman and Commissioners:

I am pleased to submit the Division of Market Regulation's study *Market 2000: An Examination of Current Equity Market Developments*. Former Chairman Breeden asked the Division to undertake a study of the structure of the U.S. equity markets and the regulatory environment in which those markets operate. In July of 1992, the Division issued a concept release describing the study and soliciting comment.

The Division devoted considerable effort to the study and many members of the staff contributed to the project. In particular, Howard L. Kramer provided indispensable leadership and expertise for the study. Ivette Lopez and Janet Angstadt also deserve special commendation for their outstanding work as members of the study team. Finally, I would like to thank my predecessor, William H. Heyman, then Director of the Division, who conceived the study and guided it to an advanced stage before he left the Commission.

Without preconceived notions concerning potential findings or recommendations, the Division gathered data on equity trading and analyzed the comment letters submitted in response to the concept release. The Division sought the opinions of market participants including investor groups, the brokerage industry, the organized markets and academic researchers.

The Division concludes that the equity markets operate efficiently within the existing regulatory structure. Accordingly, radical reform of how equity trading is conducted or regulated is not necessary. Nevertheless, the Division identifies areas where regulation has not kept pace with changes in the existing market structure, and offers recommendations for action in those areas. Specifically, the Division believes more can, and should, be done to ensure fair treatment of investors, increase market transparency, foster competition and expand market access.

Our recommendations will promote investor protection, encourage capital formation and facilitate fair competition. The resulting changes will allow the financial markets to continue to provide United States investors with fair, efficient and competitive markets.

Sincerely,

Brandon Becker

Brandon Becker
Director

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This study was only possible because of the able assistance and unfailing dedication of many members of the Commission staff. In particular, Howard L. Kramer, Ivette Lopez and Janet Angstadt coordinated the study for the Division of Market Regulation ("Division"). They deserve special recognition for their ceaseless efforts to produce a professional work product.

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Introduction and Executive Summary

The U.S. equity markets are an important national asset. They enable the nation to raise capital, provide investment opportunities, and promote entrepreneurship. For 60 years the Securities and Exchange Commission ("Commission") has worked to ensure that equity market regulation protects investors, aids capital raising, and keeps pace with the changing dynamics of the secondary markets. The Market 2000 Study, prepared by the Commission's Division of Market Regulation ("Division"), is another step in this process.

Over 20 years ago, the Commission undertook a similar examination of the equity markets. Questions had arisen as to the fairness, competitiveness, and efficiency of U.S. markets. As a result of the Commission's examination, in 1975 Congress enacted legislation that provided a new framework for establishing a "national market system" ("NMS") for the U.S. securities markets. It was expected that in the NMS, competition would generate the best prices, comprehensive disclosure of market information would foster best execution of customer orders, and broker-dealers would place the interests of their customers first. Subsequent action by the Commission and the markets to advance the NMS have made the U.S. markets the most efficient and liquid in the world.

Since 1975, the markets have changed dramatically in response to advances in technology, new product developments, and global economic expansion. These changes have led market participants once again to raise questions regarding whether the existing regulatory framework has kept pace with market developments. Specifically, Congress, investors, and the markets have raised concerns about possible market fragmentation, inadequate disclosure of market information, and uneven regulation among competitors.

In response to their concerns, the Division undertook the Market 2000 Study to address these issues and ensure that the U.S. equity markets remain vibrant and efficient. The Division began the Market 2000 Study in July 1992 with the issuance of a concept release on "the overall structure of equity market regulation."[1] The Division gathered data on equity trading and analyzed the comment letters submitted in response to the concept release. In addition, the Commission published a proposed rule to increase disclosure of payment for order flow.[2] Concurrent with the Market 2000 Study, Congress held hearings in 1993 on many of the issues in the Study,[3] and the U.S. General Accounting Office ("GAO") released a report on market structure.[4]

The Division's basic finding is that today's equity markets are operating efficiently within the existing regulatory structure. Record amounts of trading activity are processed smoothly and efficiently. The equity markets continue to perform effectively their primary function of raising capital for public corporations. Investors have a wide range of alternative trading mechanisms from which to select. Although trading of major U.S. equities has become dispersed among the various markets and participants, this development has not impaired market quality. Accordingly, the Division does not believe that a major revision of equity market regulation is needed. The Commission should, however, concentrate on the improvements that are needed to make the markets work better for investors and to make competition work better for the markets. The Division believes that improvements are possible in four areas.

The first area involves the *fair treatment of investors*. The broadest possible investor participation, both retail and institutional, is vital to the health of the market. If the market structure works to the disadvantage of customers, they ultimately will lose confidence in the integrity and fairness of the market. To protect customers, professionals should seek to secure the best prices for their customers and should disclose relationships that could interfere with the customers' interests. Market practices such as payment for order flow, soft dollar arrangements, and certain order handling procedures raise concern as to whether investors are being treated fairly.

Second, *market information* should be disclosed in a timely and comprehensive manner. Information on quotations, trading volume, and trading prices is essential to the effective operation of the markets. Selective or partial disclosure of information impairs the secondary market pricing mechanism, weakens the ability of markets to compete, and prevents customers from monitoring the quality of their executions. Although U.S. markets are the most transparent in the world, the markets should redouble their efforts to ensure that full market information is being comprehensively disclosed in a cost-effective manner.

Third, *fair competition* among markets and market participants should be promoted. Over the past several years a variety of new market participants have emerged. Proprietary trading systems ("PTSs") have developed and over-the-counter ("OTC") market making in listed stocks ("third market trading") has grown. Although competition among market participants for order flow is healthy and leads to better markets, some participants believe that the existing competitive field is not level because of different regulatory obligations imposed on their competitors. To promote fair competition as well as investor protection, the Commission must ensure that the regulatory responsibilities of the various market centers are rationally allocated without stifling the ability of alternative markets and services to emerge. In some instances, this goal will require more vigorous oversight of new trading systems. In other instances, this goal will justify different regulatory guidelines for the organized markets.

Fourth, *open market access* needs to be expanded. Restrictions on where the users of the markets can transact business limits the ability of competition to provide better markets and services. Several exchange rules and proposals act to restrict market access. These restrictions need to be examined to determine if they serve valid regulatory purposes.

The Division recommends specific action in each of these areas. The most significant recommendations involve Commission rulemakings on payment for order flow and soft dollar practices; proposals to narrow spreads and expand transaction reporting; and increased oversight of automated trading systems and third market makers. In addition, the Division recommends action to improve order handling practices for securities quoted on the National Association of Securities Dealers Automated Quotation ("NASDAQ") system and to improve the overall quality of the OTC market.

The Division believes that the recommendations in this Report will address existing obstacles to enhancing investor protection and promoting fair competition. The Study is not a final analysis; new issues inevitably will arise as the markets evolve. Indeed, the Study is designed to encourage changes resulting from market evolution. The recommendations are intended to build on the strength of our markets -- their fairness, competitiveness, and openness -- and to make them even more attractive as a means of raising capital and providing investments in the future.

Study Organization

The Study is organized as follows: in the first half of the Report, the Division reviews the current state of the equity markets and presents a framework for regulating these markets at this stage of their development. The framework is followed by specific recommendations in the four areas identified above. Next, seven studies discuss the issues and recommendations in more detail. Data used in the Division's analysis are presented in exhibits to the Report. Finally, several appendixes describe various features of the equity markets.

U.S. EQUITY MARKETS TODAY

Historical Development of the Current Equity Market Structure

The U.S. equity markets are larger, faster, and more complex than at any point in their history. This development reflects changes in the composition of market users (both customers and professional intermediaries) as well as in the structure of the markets themselves. The markets and users continue, however, to operate within the framework of a regulatory structure that was created 20 years ago under very different market conditions. Whether this structure still works is the primary focus of the Market 2000 Study.

The development of the current regulatory structure was triggered by the Commission's 1971 Institutional Investor Study.[5] In that study the Commission found that the securities markets had become increasingly active, complex, and susceptible to various practices that raised structural and efficiency questions. For example, by 1972, New York Stock Exchange ("NYSE") volume had more than quadrupled over the past decade to the then dizzying figure of 16 million shares per day. The growing presence of institutional investors was reflected by the increase in block volume in NYSE stocks from 1% to 18.5% of trading during the same period. In the OTC market, the National Association of Securities Dealers ("NASD") had modernized trading with the introduction of NASDAQ a year earlier. The markets were only a few years past the "paperwork crisis" during which a surge of volume nearly overloaded the securities processing capabilities of the major broker-dealers. Perhaps most importantly, institutional investors had developed arrangements and relationships with brokers on the regional exchanges and OTC market to avoid paying the NYSE's fixed commission schedule. These relationships raised the specter of a fragmented market structure in which multiple markets offering limited access traded the same securities without publicly disseminating quote and trade information.

In response to these developments, in 1972 the Commission issued its Statement on the Future Structure of the Securities Markets ("Future Structure Statement").[6] The Commission concluded that trading should be concentrated in a central market system where competing market makers would generate the best prices, comprehensive disclosure would show where and how to obtain best execution for orders, all qualified broker-dealers would have access, and professionals acting as agents would put their customers' interests before their own.[7]

Three years later Congress adopted the Securities Acts Amendments of 1975 ("1975 Amendments")[8] to enact the goals of the Future Structure Statement and to preserve and strengthen the U.S. securities markets. With these Amendments Congress directed the Commission, with due regard for the public interest, the protection of investors, and the maintenance of fair and orderly markets, to facilitate the establishment of the NMS for securities.[9] The Commission would not dictate the design of the NMS; that would be left to competition. Instead, the Commission would work with the markets to achieve the NMS goals.

The phrase "national market system" is not defined in Section 11A of the Securities Exchange Act of 1934 ("Exchange Act") because Congress believed that it was essential to provide the Commission with "maximum flexibility in working out specific details" of the system.[10] Nevertheless, Congress established goals for the NMS. Section 11A states that new data processing and communications techniques create the opportunity for more efficient and effective market operations and that it is in the public interest and appropriate for the protection of investors and the maintenance of fair and orderly markets to ensure:

(i) economically efficient execution of securities transactions;

(ii) fair competition among brokers and dealers, among exchange markets, and between exchange markets and markets other than exchange markets;

(iii) the availability to brokers, dealers, and investors of information with respect to quotations for and transactions in securities;

(iv) the practicability of brokers executing investors' orders in the best market; and

(v) an opportunity, consistent with the provisions of clauses (i) and (iv), for investors' orders to be executed without the participation of a dealer.[11]

The efforts of the Commission and the markets to facilitate the establishment of the NMS led to significant improvements in market operations. For example, the Commission abolished fixed commission rates, and the markets established a consolidated quotation system, consolidated transaction tape, and the Intermarket Trading System ("ITS") to link markets for listed securities. Investors benefited directly from these efforts: trading costs were reduced, particularly as fixed commission rates were eliminated, and increased market transparency enabled investors to monitor the quality of trade executions. In addition, investors benefited as higher levels of transparency and lower costs contributed to greater liquidity.

The U.S. equity markets have changed dramatically, however, since the adoption of the 1975 Amendments. The changes include growth in trading volume, advances in trading technology, the increasing prominence of institutional investors, the introduction of derivative products, and the globalization of securities markets (among other changes). These changes have resulted in an increasing array of markets, dealers, and products to trade securities. Many of these alternatives operate outside the exchanges and NASDAQ. Some industry participants are concerned that the splintering of trading among various markets and dealers has fragmented the equity markets and frustrated the achievement of the NMS. In addition, various market participants have complained that the regulatory structure has not kept pace with market developments. As a result, many believe that issues such as payment for order flow, proprietary trading systems, the growth of third market trading, and changes in NASDAQ warrant an evaluation of the viability of the NMS as envisioned by Congress in 1975.

An analysis of these and related issues, however, first requires an understanding of the current state of the equity markets. The various markets and their users are described next.

Developments in the Users of the Markets

The predominant trend during the past 20 years has been the growth in number, size, and diversity of equity market users. This trend is best illustrated by changes in the investor base. Individual investors continue to be active and are increasing in number. From 1975 to 1990, the number of shareholder accounts increased from 25 million to 51 million. Although individual investor participation in the markets is still widespread, instead of directly purchasing stocks, retail investors often participate indirectly through an institution, such as a mutual fund, public pension plan, private pension plan, or insurance company.

Institutions representing millions of individual investors now own over $2.3 trillion of U.S. equities. The "institutionalization" of the market has accelerated since the 1970s, although it may now be leveling off.[12] In 1975, institutions owned 30% of the shares of U.S. equities; by 1992, they owned slightly over 50% (Exhibit 1).

The growth of mutual funds illustrates the widespread extent of indirect participation by individual investors.[13] Between 1975 and 1992, mutual funds' share of U.S. equities more than doubled (Exhibits 1 and 2). During roughly the same period, the number of equity funds grew from 276 to 1,232; the number of accounts in equity funds tripled from 8.9 million to 26 million; and the dollar value of assets in equity funds soared from $34 billion to $585 billion (Exhibits 3, 4, and 5). In addition, hedge fund activity increased substantially.

Pension plans, too, have grown. From 1975 to 1992, the amount of U.S. equities held by private and public pension plans grew from $132 billion to $1.3 trillion (Exhibit 1). The equity holdings of one of the largest public pension plans are almost equal to the combined equity holdings of all the public pension plans in 1975.[14] The growth of pension plans has been accompanied by a marked rise in equity assets committed to passive management. From 1975 to the beginning of 1992, the amount of passively managed U.S. equity assets grew from under $2 billion to $231 billion.[15] During this period the percentage of total assets indexed by the top 200 pension plans increased from 2.5% to 14.4%.[16]

As the size and activity of institutional customers grew, so did market intermediaries. Equity trading by the larger broker-dealers has increased significantly over the past 20 years. In 1975, the amount of revenues that broker-dealers derived from trading amounted to $1.3 billion. By 1992, this amount had grown to $22.5 billion.[17] Aided by telecommunications and computer technology and the growth of institutional assets, the equity trading desks of large broker-dealers are now influential forces in the equity markets. They have facilitated the growth in global trading. Together with the pension funds, they also have sparked the growth in stock index derivatives.

Another trend over the past 20 years has been the change in the handling of individual investor accounts. Technology has enabled broker-dealers and the markets to automate the handling and processing of customers' orders. Automation of the order entry, routing, execution, and reporting functions allows broker-dealers and the markets to handle an exponentially greater volume of order flow than existed 20 years ago.[18] For example, a customer's order to buy 100 shares of a stock at the market price in 1975 could have taken up to an hour to travel from the branch office to the firm's trading desk, to the firm's broker on the floor of the exchange, to the specialist post, and back through the firm to the customer. Today the entire process -- from the entry of the order to notification of the execution -- can take less than a minute and is often completed while the customer is still on the telephone.

Whether handled by a discount or a full-service broker, a customer's retail order rarely receives personalized handling. Instead, the order usually is routed to a specific market or market maker through a predetermined routing algorithm employed by the broker-dealer. The customer's order is viewed by the broker-dealer as part of its overall order flow, which is packaged and distributed to specific locations.[19] Rather than determining for each individual order the best possible market or market maker, most retail firms automatically route their flow of small orders (*i.e.*, orders under 3,000 shares) to a specified market or market maker. Apart from the particular stock and the type of order, a variety of other factors influence the routing decision for small orders. For example, broker-dealers may route orders to an affiliated specialist unit on a regional exchange or to their OTC market making desks for NASDAQ stocks. Some order flow is routed based on payment for order flow or reciprocal order flow arrangements. Other firms route orders only to the primary market. A few large broker-dealers internally cross their order flow, then route the resulting trades to a regional exchange. Regardless of their method of selecting a marketplace, retail firms believe that it is too expensive and inefficient to make individual order routing decisions.

Developments in the Equity Markets

The equity markets have changed in response to users' desires for better services, greater efficiency, and more competitive prices.[20] Users have pressed the organized markets and entrepreneurs operating independently of the markets to improve traditional trading services. The result has been a multitude of new services and products. Users are so different, however, that it is difficult for one particular market to accommodate them all. Consequently, the U.S. equity market has evolved into a multifaceted structure, with the primary markets -- the NYSE, the American Stock Exchange ("Amex"), and NASDAQ -- attempting to accommodate as many users as possible but losing some market share to competitors that provide a specialized service that the primary markets do not replicate (or do not replicate as competitively).

Trading in U.S. equities is discussed below.

Listed Stocks. There are approximately 2,900 stocks listed on exchanges in the United States. Companies on the NYSE account for 97% of the market value of listed companies; Amex companies account for 2%; and regional exchanges' companies account for under 1%. The NYSE and Amex provide an important price discovery function.[21] They also serve as the markets of last resort during times of market stress. In volatile market conditions, normal liquidity in the index derivative markets often diminishes, prompting market participants to channel their stock orders to the NYSE and Amex.[22]

The NYSE receives the majority of orders in NYSE-listed stocks. Although the NYSE market share in these stocks has declined over the past decade, the NYSE accounted for 70% of the total orders and over 79% of the volume in its stocks (Exhibit 11) in the first six months of 1993. Block transactions, which often are negotiated off the floor of an exchange, account for half of NYSE volume and a third of Amex volume.

As can be seen in Exhibit 11, orders for NYSE stocks also are executed in several other markets. For example, some blocks are sent to regional exchanges for execution, and blocks accounting for over two million shares a day are executed off the exchange after the close of regular trading hours. A portion of small orders for public customers is sent to the regional exchanges or third market dealers for execution. Together these two markets handle 29% of the total orders and 16% of the volume in NYSE stocks. PTSs handle 1.4% of the volume in NYSE stocks, usually in the form of portfolio trades or block trades. Crossing of portfolio orders internally between accounts by large institutions or money managers can amount to a million shares on any given day. Ten million shares a day (3% of NYSE volume) are executed as program trades after the NYSE close, either on the NYSE's after-hours crossing session or through the foreign desks of U.S. broker-dealers. Other overseas trading by U.S. firms in NYSE stocks takes place primarily in London, either through the London Stock Exchange's Stock Exchange Automated Quotation ("SEAQ") system and SEAQ International system markets (under one million shares per day), or through the U.S. firms' foreign desks (almost two million shares per day).

The five regional stock exchanges (the Boston, Chicago, Cincinnati, Pacific, and Philadelphia Stock Exchanges) compete for order flow with the NYSE and Amex. The overwhelming percentage of regional stock exchange business is in NYSE and Amex securities that the regional exchanges trade pursuant to grants of unlisted trading privileges ("UTP") from the Commission.[23] The regional exchanges captured 20% of the orders in NYSE stocks and 16% of the orders in Amex stocks in the first six months of 1993. Most of this market share comes from small customer orders. During the 1970s and 1980s, the regional exchanges built automated systems that enabled member firms to route small public customer orders to the specialist posts at the regional exchanges. An order routed over these systems is exposed for a brief period to other markets; if no other market expresses an interest, the order is executed automatically at the ITS best bid or offer, regardless of the quote of the particular regional specialist. In recent years the regional exchanges have further solidified their share of the small order business by allowing their specialists to affiliate with firms with a broad retail customer base.

The regional exchanges also attract some block trades in listed stocks. A few regional specialists make markets in blocks, but most of the regional block trades are routed to regional exchanges to avoid the primary market's limit order book. Although the regional exchanges do not compete for order flow consistently on the basis of quotes, they have provided vigorous competition to the NYSE through lower transaction fees[24] and new services and products.[25]

Another competitor for trades in listed stocks is the so-called third market, which is OTC trading of exchange-listed securities. Third market transactions include, for example, executions of block trades off an exchange and transactions executed by third market makers who are not members of an exchange. The third market makers act much like NASDAQ market makers, seeking orders of a few thousand shares or fewer in the most active listed stocks from retail firms or discount brokers.[26] In 1989, the third market garnered 3.2% of reported NYSE share volume and 5% of reported trade volume. By 1993, third market volume had more than doubled to 7.4% of reported NYSE share volume and 9.3% of reported trade volume. A few third market makers have accounted for most of the increase in third market trading over the past several years.[27]

The competition for small order flow by the regional exchanges and the third market reveals the value of these orders in today's securities markets. Small customer order flow is desirable to markets because the transaction volume (1) allows market makers to profit by capturing the bid-ask spread, (2) facilitates market making by specialists and dealers, and (3) provides revenue for the markets through consolidated tape fees. To draw small orders, the market centers offer brokers routing small retail orders a variety of inducements to ensure a constant stream of such orders. For example, the regional exchanges advertise their lower fees, speed of execution, and guarantee of primary market price protection. The regional exchanges also have facilitated the affiliation of regional specialists with large broker-dealers that have a retail customer order flow. Third market makers offer fast, inexpensive service and often provide cash rebates to firms with customer order flow. Similarly, the primary markets have promoted their ability to provide liquidity and to obtain executions between the spread. Recently, the NYSE began offering transaction fee credits.[28]

NASDAQ. The evolution in the markets for OTC stocks has been even more dramatic than in the exchange markets because of the growth of NASDAQ, an interdealer quotation system for the OTC market operated by the NASD, a national securities association registered under Section 15A of Exchange Act.[29] Since the beginning of its operation in 1971, NASDAQ has made tremendous strides in automating OTC market making and increasing the efficiency and transparency of the OTC market.

NASDAQ electronically links market makers around the country for over 4,000 issues.[30] In 1992, NASDAQ trading represented 42% of share volume and 29.2% of dollar volume of the U.S. equity markets. Its share volume makes NASDAQ the second-largest securities market in the world after the NYSE. Occasionally, NASDAQ's share volume exceeds that of the NYSE. In 1993, NASDAQ's dollar volume equaled 43% of the NYSE dollar volume.

It has been estimated that over 1,000 of the companies quoted on NASDAQ meet the financial listing standards for the NYSE; over 2,000 meet the equivalent Amex standards. These companies are aggressively recruited by the NYSE and Amex. Although most of the large capitalization companies are listed on the NYSE, a significant portion of the younger widely held companies remain on NASDAQ.[31] Over 52,000 market making positions are held by 472 active NASDAQ market makers. An average 11.5 market makers quote the typical NASDAQ security. For NASDAQ securities designated as NMS ("NASDAQ/NMS"), this average increases to 12.3 market makers.

NASDAQ automates the display of dealer quotations. With the exception of its Small Order Execution System ("SOES") and the SelectNet system, which allows market makers to use NASDAQ terminals to display and execute orders, executions for NASDAQ stocks still occur by telephone. PTSs, which offer automated executions and display of limit orders, have captured 13% of the volume (mostly institutional) in NASDAQ stocks (Exhibit 12).

As in the listed markets, the order flow of retail customers has become a valuable asset in the NASDAQ market. NASDAQ market makers offer a range of inducements, including cash rebates and automated services, to attract small-sized order flow. Most large broker-dealers execute as principal their customer orders in NASDAQ stocks in which they make a market.

Automated Trading Systems. Several types of automated trading systems offer institutions and broker-dealers the opportunity to trade off the exchanges and NASDAQ. The first are PTSs, which are screen-based trading systems used by institutions and broker-dealers. The sponsors of PTSs designed them to fulfill the needs of institutional investors not satisfied by traditional markets. Although use of these systems is growing, their market share is only 1.4% of NYSE share volume; they have, however, captured 13% of NASDAQ share volume. Almost all PTSs are regulated as broker-dealers.

A second type of automated trading systems is internal systems operated by large broker-dealers that cross their customers' orders and, in some cases, orders from other broker-dealers. The crossed orders for listed stocks are sent to an exchange for execution. Orders for NASDAQ stocks are submitted to the NASD for trade reporting.

Foreign Markets. Over the past 20 years it has become easier to trade securities around the world because of advances in telecommunications. The larger broker-dealers have established trading desks at the major securities markets around the world. As a result, hundreds of U.S. equities are traded on foreign stock exchanges, and the larger broker-dealers have the ability to route orders in U.S. equities around the world.

Available data indicate that trading of U.S. equities on foreign exchanges amounts to a few million shares a day. Otherwise, trading of U.S. equities abroad is not initiated in foreign markets but results from orders telephoned or faxed by U.S. broker-dealers to their foreign desks. These orders are typically for a large block in a single stock or a large basket of multiple stocks.[32] Based on available data, it appears that this "fax" trading currently amounts to approximately seven million shares per day in NYSE stocks.

Derivatives Markets. The derivatives markets, small in 1975, are now large markets that surpass the NYSE in terms of dollar trading volume. The equity derivatives market has evolved from a market primarily used for the hedging of market risks for institutional stock portfolios into a sizable market for trading by professional and institutional accounts.[33] It is well established that the stock, options, and futures markets are linked via market participants and the strategies they use.[34]

The Commission has examined the derivatives markets in a variety of contexts and has made recommendations regarding the regulation of these markets.[35] The Commission continuously assesses the adequacy of regulation of derivative products. As a result of the separate attention that the derivatives markets receive from the Commission and other regulators, the Division has not specifically included derivative product regulation in the Market 2000 Study. Nevertheless, when examining the issues addressed in this Report, the Division was mindful of the growing importance of the derivatives markets and the fact that the stock index futures market now sometimes functions as a price discovery mechanism for the equity market.

Analysis of Equity Market Developments

The market for major U.S. equities has become somewhat dispersed among various competitors as users have sought alternatives to the NYSE, Amex, and NASDAQ when these markets would not or could not meet their needs. The resulting increase in market competition has created a veritable "menu" of systems in the equity markets.[36] This competition also has improved the efficiency and quality of the markets.

As the markets improved systems for trade routing, execution, reporting, and processing, the resulting efficiencies have translated into lower costs as commission rates have decreased and transaction fees have declined. New services have expanded the choices available to investors and professionals. Market participants no longer are limited to the primary markets but can select from numerous alternatives to satisfy their needs. To compete, the primary markets have improved their operations.

Technological innovations spurred by competition have contributed to increased market capacity. As a result, the substantial growth in trading volume can be handled efficiently. The equity markets are currently able to handle volume on a consistent basis that only several years ago could have strained the markets severely. Nonetheless, the market breaks of October 1987 and 1989 are a sobering reminder that volume can explode beyond predictable levels.

Market quality has improved substantially within the existing competitive environment. For instance, over the past several years, spreads for NYSE stocks have narrowed and depth has increased (Exhibits 30-37). This is true both for Standard & Poor's ("S&P") 500 stocks and non-S&P 500 stocks. Although the percentage of volume and trades captured by the NYSE in stocks listed on that exchange has declined somewhat during the past eight years, the market quality of NYSE stocks has not been affected negatively. Similarly, the growth of NASDAQ has improved the liquidity and efficiency of the OTC market over the past 20 years.

Although alternative markets have provided a vigorous competitive challenge to the primary markets, the economic viability of the latter has not been jeopardized. The NYSE has announced record revenues for the first three quarters of 1993. The NASD also expects record revenues. This is due in part to record trading volume but also reflects the economic benefits that the NYSE and NASD receive from their primary market status. In 1992, the NYSE derived 40% of its revenues from listing fees, 13% from the distribution of market data to vendors, 11% from regulatory fees, and 16% from facilities fees, membership dues, and investments. Trading fees amounted to only 20% of the NYSE's revenues (Exhibit 42). Similarly, the NASD received 64% of its revenues from sources unrelated to trading volume (Exhibit 44). Although competition has reduced the NYSE's and NASD's respective market shares, it has not prevented them from operating successfully. Indeed, the NYSE's 70% share of orders and 79% share volume and NASDAQ's 90% market share of orders and 87% market share of volume would be envied in any other industry.

The competition for trading volume among markets has been beneficial to these equity markets; certain aspects of the markets, however, give rise to concerns. For instance, the profitability of retail orders that attracts such competition may stem in part from inefficiencies that keep spreads artificially wide and that prevent customers from receiving the best price for their orders. Similarly, the growing significance of NASDAQ raises questions as to whether a market designed for competing dealers in thinly traded OTC securities needs adjustments now that it includes widely held, actively traded securities. In addition, the growth in trading activity by institutional investors has made it more difficult for markets and regulators to balance the interests of retail, institutional, and professional participants. Finally, the ability of technology to blur the regulatory distinctions between exchanges, dealers, and brokers calls into question whether competition is being conducted on a level playing field. These problems are not yet serious, but they warrant resolution.

In summary, the Division believes that the U.S. equity markets are healthy and operating efficiently. The Division also believes that the alternative markets provide benefits that should be preserved. At the same time, regulatory attention is needed to address issues affecting market fairness and competitiveness. The next section describes the Division's framework for achieving these aims.

EVOLVING FRAMEWORK FOR EQUITY MARKET REGULATION

The strength of the U.S. equity markets are evidence of the effectiveness of the markets' and Commission's efforts since 1975, and the viability of the standards embodied in the 1975 Amendments. The challenge in 1975 was to correct a market structure that could not accommodate the increase in institutional activity or technological change. The Commission and Congress met that challenge with the 1975 Amendments. As a result, the markets now fulfill the needs of an ever-expanding universe of investors. The current problems of the U.S. equity market present a different challenge: maintaining the benefits of competition by accommodating as many classes of users as possible while simultaneously preserving investor protection and reliable and efficient price discovery.

These goals -- accommodating different users, preserving core investor protections, and ensuring reliable and efficient price discovery -- are consistent with the principles contained in Section 11A of the Exchange Act and reflect the Congressional intent embodied in the statute. These goals also represent a pragmatic evolution of the Commission's vision for the equity markets in the Future Structure Statement. Given the strength of the U.S. equity markets, the Division perceives no need to revise the statutory mandate for the NMS.[37] Instead, the Commission should work within the existing statutory scheme to address new problems in what is, on balance, a healthy equity market.

Role of the Commission in Guiding the Development of Market Structure

Commentators to the Market 2000 Study have advised the Commission to fulfill its statutory mandate in various ways. Some would have the Commission take a more aggressive approach toward stronger government involvement in creating a comprehensive, unified market. Others would have the Commission concentrate on substantially reducing government regulation of the equity markets. The Division believes that neither approach is warranted.

At one end of the spectrum is the "single-market approach." The Commission would drive trading interest from competitors in a security into a single interactive "market" with identical trading rules and protections applicable to all competitors. The Commission would also impose identical regulatory obligations on the NMS participants: self-regulatory organizations ("SROs"), third market makers, and PTSs.

This approach has some advantages. Primarily, a single market would enhance linkages among markets and dealers and improve best execution opportunities. The Division is reluctant, however, to recommend that the Commission adopt this approach for three reasons. First, a single market could stifle innovation and competition. Since at least the Special Study of the Securities Markets in 1963,[38] the Commission consistently has stated that the benefits of competition should not be lost in an attempt to capture the advantages of uniformity. Forcing all order flow into a single market would reduce the incentive of system operators to respond to system users. Many market innovations of the past 20 years originated either outside of the primary markets or in response to competitive pressure from alternative markets, such as third market makers or PTSs. Second, the U.S. equity markets are not fragmented to the point that price discovery and liquidity have been adversely affected. The data examined by the Division does not indicate that market quality has been affected negatively. In addition, experience in both the stock and options markets indicates that a critical mass of trading tends to gravitate to the primary market.[39] With all the alternatives available, the fact that most trading still occurs on the primary markets or through markets linked by ITS demonstrates the limited effect of fragmentation.

In rejecting a single market approach, the Division does not minimize the benefits of market linkages. Substantial linkages already exist among the equity markets, and the SROs should be encouraged to develop further proposals for pro-competitive linkages. Increased transparency (*i.e.*, disclosure of market information) and technology will, however, help link markets without the drawbacks of a government-imposed design.

At the other end of the spectrum of approaches is deregulation. Under this approach, the Commission would reduce the regulatory burdens on market participants in a technologically driven market dominated by sophisticated institutions. Some commentators would remove all restraints against making markets in listed securities, so that competition would be intensified and more capital committed to providing liquidity. In part, this would involve removing NYSE Rule 390, which prohibits certain off-floor dealing by members. Others would relax regulations on transactions among "sophisticated" entities such as institutions and large dealers.[40] These commentators find it burdensome for institutions and large dealers operating directly and globally via desktop computers to transact in a marketplace governed by SRO and Commission rules that were designed for a market dominated by individual investors. Finally, some commentators suggest removing all regulation of PTSs as an incentive to apply technological advances to novel trading structures.

The Division believes that, although some existing restraints on competition should be reduced, an aggressive deregulatory approach is not warranted at this time. The strength of the U.S. equity markets derives partly from their ability to accommodate the needs of both retail and institutional investors. The demands of different types of investors have given rise to many innovations since the Institutional Investor Study. For example, the NYSE in the 1970s adopted special procedures for handling block trades, and in 1991 implemented two after-hours crossing sessions. PTSs have enabled institutions to interact directly without professional intermediation. Exchanges developed automated, small-order routing systems to expedite the handling of retail orders. Clearly, the equity markets can adhere to the existing regulatory standards that preserve the integrity of the market and at the same time meet the service needs of market users. It is unnecessary and unwise to upset this carefully maintained equilibrium.

The Division also believes that it would be difficult to provide different tiers of regulation for retail and institutional participants and still maintain fair and orderly equity markets. The knowledge that U.S. markets offer a sound environment in which to transact business enhances U.S. competitiveness, thereby benefiting all market participants. Irreparable harm to the well-deserved reputation of the U.S. markets could result from, for example, allowing frontrunning of institutional trades, allowing institutions to trade through preexisting market interest during regular trading hours, or reducing transparency for institutional trades. Moreover, the increased trading activity of large institutions and broker-dealers makes it imperative to consider market-wide mechanisms (such as circuit breakers) to prevent disorderly markets. The Division is not suggesting that a distinction should never be made for institutional activity. Rather, any distinction should balance the costs and benefits to the NMS, investor protection, and the maintenance of fair and orderly markets.

The determination to refrain from imposing a single structure on the equity markets or from undertaking a broad deregulation is, in many respects, the same judgment the Commission made following enactment of the 1975 Amendments. The Commission could have required the creation of a single order-execution facility or the abrogation of all restraints on competition. Implicitly, the Commission rejected both approaches and, instead, pursued discrete, incremental market improvements. The strength and size of the U.S. equity markets today are testament to the fundamental soundness of the Commission's judgment at that time. The Division continues to believe that the vitality and variability of private-sector solutions to market structure issues justifies a limited Commission role.

The Division believes the Commission best fulfills its statutory mandate when it concentrates on protecting investors, facilitating fair competition, and promoting full disclosure. The Commission should use its scarce governmental resources to focus on those instances where concrete action can achieve defined results. The equity markets are too dynamic to conclude that the government could once and for all establish the "ideal" way to trade equity securities. The Commission should continue to provide guidance on where improvements are needed in certain areas. In most instances, responsibility for action should be left to the markets.

The Division recommends that the markets pursue improvements in four areas: transparency, fair treatment of investors, fair market competition, and market access. The next section discusses the Division's specific recommendations for improvement. This evolutionary approach is well-suited to a mature but dynamic market that is not in crisis. "The steps spelled out . . . are designed to put competition to work for the investor . . . . We believe that investor confidence will be strengthened as professional attention is reconcentrated on finding the best market, providing information and judgment for the investor, and getting [the investor] the best net result . . . ."[41]

PROPOSALS FOR ACTION

The Division believes that specific adjustments in four areas are needed to address equity market developments. First, the public dissemination of quotations and transactions can be improved to provide better execution for customers, stimulate competition between markets, and link activities of retail customers, institutional investors, and professional intermediaries. Second, better disclosure of certain order handling practices and soft dollars would ensure that professionals put their customers' interests first. For some dealer practices, disclosure may not be sufficient and the markets should set standards to ensure that customers are treated fairly. Third, to maintain a fair competitive environment, the regulatory responsibilities of the various markets and market participants should be rationally allocated, with care taken not to stifle the ability of alternative markets and services to emerge. Finally, unnecessary restrictions on access by investors, professionals, and issuers to the wide array of equity markets should be removed.

The Division's recommendations are designed to improve the fairness, competitiveness, and efficiency of both the stock exchanges and OTC markets. Some of the recommendations apply equally to the exchanges and NASDAQ; some apply only to one or the other. The recommendations reflect the Division's belief that NASDAQ's role as the second largest market for actively traded securities requires that its operation incorporate more fully the principles that Congress chose as the basis for the NMS. Similarly, where necessary, exchange practices should be modified to reflect these principles more fully.

The Division recognizes that, historically, the exchange and NASDAQ markets have operated very differently. Over the years, however, the exchanges have adopted certain features of the dealer market, such as block positioning, and NASDAQ has incorporated auction-like elements, such as its small order execution system. The Division's recommendations are not intended to force a homogenization of the two markets. They simply reflect the development of NASDAQ since its creation in 1971. NASDAQ began as a means of improving a widely dispersed, illiquid, and inefficient market for stocks that could not list on the NYSE or Amex. Over the first decade of its existence, the NASD succeeded in creating a technologically based system to display nationally the quotations of market makers. NASDAQ vastly improved the efficiency, liquidity, and fairness of the OTC market. The NASD spent much of the next decade enhancing various NASDAQ systems and services so that NASDAQ could become a major market. This has been accomplished. NASDAQ is now an alternative market to the stock exchanges for the trading of dozens of widely held companies and is a competitor for new listings.

The Commission's regulatory approach to NASDAQ has been consistent with this development. The priority during NASDAQ's first decade was to increase the public disclosure of NASDAQ quotations, prices, and volume. The Commission then oversaw the development of NASDAQ services to ensure that they improved the operations of a quickly developing market. NASDAQ's current role as a large, active trading market warrants the same type of scrutiny that the Division applies to the exchange markets. This does not mean that NASDAQ's competing dealer market should become an auction market, or that the exchanges should lose their auction characteristics; rather, the Commission should follow the same investor protection and information disclosure goals for the two markets.

The Division's recommendations for the exchange and OTC markets follow. Most recommendations are accompanied by a reference to a more comprehensive discussion of the topic in the seven studies accompanying the main report.

TRANSPARENCY

Transparency refers to the real-time dissemination of information about prices, volume, and trades. The Division believes that transparency plays a fundamental role in the fairness and efficiency of the secondary markets. Transparency ensures that stock prices fully reflect information and lowers trading costs by improving investors' ability to assess overall supply and demand. It also contributes to the fairness of the markets by offering all investors timely access to market information.

The high level of transparency in the U.S. markets today can be attributed largely to Commission action that resulted in the creation of a consolidated quotation system, the consolidated tape, and last-sale reporting for NASDAQ securities. The Commission has ensured that data concerning trading interest, volume, and prices are available to investors, analysts, and all other participants in the U.S. equity markets so that they may have a full picture of trading activity.

The Division believes that the Commission must lead the markets again to enhance transparency. Greater transparency would unite the various market segments by enabling market participants to assess overall supply and demand. Moreover, greater transparency would promote fair competition between markets and preserve an efficient price discovery mechanism. The Division's recommendations in this area focus on the display of customer orders, the stock pricing system, and after-hours trading.

1. Intramarket Transparency Could be Improved by Display of Limit Orders (Study IV).

Questions have arisen as to whether specialists and third market dealers in listed stocks are displaying limit orders entrusted to them. Specialists and dealers that do not represent limit orders in the quotations may not be displaying the real quotation spread. The failure to display limit orders that are priced better than the best quotes displayed on ITS could present an inaccurate representation of trading interest to other markets, thus contributing to fragmentation. In addition, because the execution of small orders often occurs at the bid or ask price, the failure to display the real spread can enrich market makers at the expense of public customers. As a result, the Division recommends that the SROs consider whether to encourage the display of all limit orders in listed stocks priced better than the best intermarket quotes (unless the ultimate customer expressly requests that an order not be displayed).[42]

The Division also recommends that the NASD consider whether to encourage the display of limit orders in NASDAQ stocks when the orders are at prices that are better than the best NASDAQ quotes (unless the ultimate customer expressly requests that an order not be displayed). The Division recognizes that NASDAQ operates as an automated display of market maker quotes and not as an auction market. Nevertheless, increased transparency in NASDAQ could tighten spreads and enhance investors' ability to monitor the quality of execution received on trades. The successful capture of NASDAQ volume by PTSs, which do display customer limit orders, demonstrates the appeal of limit order book display. Because access to PTSs is limited, as a practical matter, to institutions, retail investors cannot use PTSs to display limit orders.

It is noteworthy that display of limit orders by the PTSs does not preclude active participation by market makers, as is evidenced by the substantial percentage of PTS trades by NASD dealers. On the other hand, requiring all NASDAQ limit orders to be fully displayed may discourage the entry on NASDAQ of large limit orders by institutions and reduce the ability of a block positioner to work a large order. Accordingly, it may be reasonable for the ultimate customer to retain the right to exclude an order from being displayed. Nevertheless, although the Division recognizes that the precise terms and conditions for the display of limit orders should be considered by each market, more can, and should, be done to enhance their display.

2. Intramarket Transparency Could be Improved by Eliminating the One-Eighth Pricing System (Study IV).

The Division believes that the current pricing system for stocks needs revision. The markets set the minimum variation permissible for bids and offers at one-eighth (12.5¢).[43] The minimum variation can cause artificially wide spreads and hinder quote competition by preventing offers to buy or sell at prices inside the prevailing quote. It also may contribute to the practice of payment for order flow by ensuring a dealer's spread that is large enough for a market maker to pay profitably a penny or two a share for order flow. Therefore, the Division recommends that the SROs develop proposals to reduce the minimum variation. For example, the SROs could reduce the variation to one-sixteenth, which is the current variation for Amex stocks under $5. They also could adopt a decimal pricing system, where prices are set in pennies. Many foreign equity markets use decimal pricing, as do the derivatives markets.

The Division believes that decimal pricing is preferable and may be inevitable at some point in the future. The Division realizes, however, that the markets and their participants would incur expenses in converting to a decimal system. It is unclear how extensive these costs would be. In contrast, a transition to sixteenth pricing would not present major technical difficulties. Thus, the Division recommends that the SROs convert to a minimum variation of one-sixteenth as soon as possible.

In a release proposing new disclosure requirements regarding payment for order flow practices, the Commission solicited comment on whether decimal pricing should be adopted.[44] The Commission and SROs should examine carefully the commentators' views on this issue. In particular, the SROs should consider whether adoption of decimal pricing would benefit investors and strengthen the competitive posture of the U.S. equity markets as they position themselves in a global market.

In making these proposals, the Division recognizes that a legitimate function of minimum variation in prices is to limit the extent of price negotiation. Both parties to the trade may save time and energy as a result of minimum price variation. In virtually all public auctions there are minimum increments for the same reason. The Division notes, however, that much of the trading in stocks on PTSs is done in stocks quoted in eighths, by parties who trade inside the quotes at prices of one-sixteenth or finer. This causes the Division to believe that the current minimum increment is too wide.

As a corollary, the Division recommends that the Consolidated Tape Association ("CTA") and NASDAQ amend tape reporting procedures to allow a market or dealer to report trades in increments smaller than one-eighth. Currently, only Amex stocks priced under $5 and NASDAQ stocks priced under $10 are reported in sixteenths. Some PTSs and dealers effect transactions in sixteenths or decimals, but must round the reported price to the nearest eighth. This situation presents an inaccurate indication of the trade price and prevents PTSs and dealers from competing effectively. The CTA and NASDAQ should, at a minimum, begin reporting trades in all stocks in sixteenth increments. The Division believes that the benefits of reporting in sixteenths will outweigh any incremental costs. The CTA and NASDAQ also should consider reporting trades in decimals from markets or dealers that use decimal pricing. The Division acknowledges that the costs of reporting in decimals must be balanced against the benefits to be obtained.

3. Intramarket Transparency Could be Improved by Display of SelectNet Interest (Study IV).

SelectNet is a screen-based trading system on NASDAQ workstations, offered to NASD members to facilitate negotiation of securities transactions through computer automation. Broker-dealers may enter orders directed either to one broker-dealer or to all market makers in a security, and negotiate the terms of the orders through counteroffers entered into the system. SelectNet orders are not disseminated over all NASDAQ terminals. Instead, market makers using SelectNet may "preference" (*i.e.*, display selectively) orders to other market makers, or may broadcast orders to other market makers or to all NASD members.

The Division is concerned by the limited availability of information regarding SelectNet orders. As with undisplayed limit orders in exchange markets, the failure to display publicly the SelectNet interest in an NMS security frustrates competitive pricing of that security. Accordingly, the Division recommends that the NASD examine how to improve access to information regarding orders entered into SelectNet. For example, the NASD could modify SelectNet so that information is broadcast to NASDAQ subscribers on an equal basis, without differentiating among market makers, order entry firms, and investors. Whatever approach the NASD takes, it should modify SelectNet's preferencing feature so that the feature is more consistent with increased transparency. Finally, the NASD has proposed to add listed securities to those securities eligible for trading through SelectNet. The Division believes that SelectNet should not be extended to listed securities until the NASD has considered how to enhance the public dissemination of SelectNet orders.

In making these recommendations, the Division recognizes that public display of some SelectNet trading interest may not be consistent with the nature of that trading interest. Although individual investors clearly benefit from display of their orders, customers with very large orders, such as institutions, may prefer that their orders be "worked" by a market maker who will attempt to find contra-side interest from other market makers or institutions. In working the order, the market maker will limit the solicitation of contra-side interest so as not to inform the market generally that a large trading interest exists. Otherwise, the customer may have to pay a larger premium for buying or selling the block. The mandatory systemwide display of all SelectNet orders could discourage the use of SelectNet for larger orders. This is a factor for the NASD to consider in determining how best to increase disclosure of SelectNet orders.

4. The SROs Should Enhance Transparency for After-Hours Trades and Trades in U.S. Equities Nominally Executed Abroad (Studies IV and VII).

Although most trading activity occurs during regular trading hours and therefore is captured by public trade reporting, a growing amount of trading is occurring after regular trading hours in the United States ("after-hours trading") and on foreign markets ("off-shore trading").[45] The growth in after-hours trading is due largely to the rise in the use of after-hours crossing networks by large institutions and the use of off-shore OTC markets by broker-dealers to avoid Commission or SRO rules.[46] Most trades effected after the hours of operation of the consolidated reporting system are reported to SROs, but only for regulatory purposes.[47] Many commentators have suggested that the Commission consider requiring greater transparency for the after-hours market.

In the first six months of 1993, approximately 17 million shares per day in NYSE and NASDAQ/NMS securities were executed after regular trading hours (half of which were faxed to off-shore trading desks for execution). Because full and accurate reporting of trades contributes to market efficiency and fairness, the Division recommends that the SROs develop a transaction reporting system to capture trades in U.S. equities executed outside regular trading hours. This reporting mechanism would include all securities subject to last sale reporting (*i.e.*, all exchange-listed and NASDAQ stocks). The specific mechanism could be designed in several forms: real-time reporting of trades; periodic reporting after-hours; or batch reporting before the opening of regular trading hours.

In constructing an after-hours reporting mechanism, the SROs should capture trades in U.S. equities that are nominally executed abroad. U.S. broker-dealers often book after-hours trades with U.S. customers through their foreign desks or foreign affiliates. For example, a U.S. broker-dealer acting as principal with its customer may negotiate and agree to the terms of a trade in the United States, but telephone or fax the terms overseas to be "printed" on the books of its foreign office. The broker-dealer may treat these transactions as executed abroad, but in reality, price discovery occurs in the United States. At minimum, these trades should be subject to the same type of transaction reporting as "domestic" after-hours trades.[48]

There are two possible disadvantages to the proposals for reporting after-hour trades. The first is cost. Although the cost of more accurate price reporting on the tape is surely de minimis, the cost of running the tape for 24 hours may not be. For that reason, the Division is proposing less comprehensive alternatives, such as batch reporting, which may offer similar benefits at a lower cost than 24-hour reporting. A second disadvantage is that some trades are executed after hours to avoid transaction reporting. If domestic reporting requirements are extended to 24 hours, brokers may try to avoid these requirements by shifting their transactions overseas. To prevent this result, the Division has recommended that trades nominally executed abroad be subject to the after-hours reporting mechanism.

5. The SROs Should Consider the Feasibility of an Order Exposure Rule (Study IV).

Customer orders that do not improve the existing ITS quotes generally will be exposed only to the market that receives those orders. In 1982, the Commission proposed the adoption of an order exposure rule that would have required a market maker to stop (*i.e.*, guarantee execution of) a customer order at the proposed price, and through the Consolidated Quotation System, to publicly bid or offer the order at a better price before executing the order as principal.[49] More than 450 comment letters were received, with commentators divided on the issue of whether a need existed for the rule. For various reasons, the rule was never adopted.[50]

Both the NYSE and GAO have recommended that the Commission reconsider an order exposure rule.[51] The Division recognizes that an order exposure rule could increase visibility of orders. At the same time, the rule could impose substantial costs on market participants. Because the NYSE has indicated an interest in such a rule, the NYSE, together with the other SROs, could coordinate the development of an order exposure rule for Commission consideration once the other transparency recommendations in this Report are implemented.[52]

In developing an order exposure rule, it will be important that the SROs bear in mind that order exposure rules may change the pricing of market making services with no specific benefit to customers on a transactional basis. Market makers earn most of their income by making a spread, and charge low or no commissions. If they earn less income because they expose orders and execute fewer trades at the quotes, they can be expected to begin charging higher commissions. Thus, in return for (sometimes) better executions, customers may pay (generally) higher commissions. But even if customers are neither worse nor better off in the end, the marketplace generally may benefit from better information about the flow of trading interest.

FAIR TREATMENT OF INVESTORS

A broker-dealer has a duty to seek to obtain the best execution for its customer orders. This is understood to mean that a broker-dealer must seek to obtain the most favorable terms under the circumstances for a customer's transaction. This obligation constitutes one of the cornerstones of market integrity. Market developments since the 1975 Amendments have raised concern whether certain broker-dealer and market practices are consistent with the duty of achieving best execution. For example, the automatic routing of small customer order flow to markets providing only quote-based execution raises the issue of whether the customer has received the best price. Similarly, best execution concerns arise when payment is received in return for order flow in the retail context or when soft dollars are provided for institutional order flow. Finally, the size and volume of NASDAQ trading makes it appropriate to examine how its market makers handle customer orders.

1. The Commission Should Require Greater Disclosure of Payment for Order Flow and Broker-Dealer Order Handling Practices.

In its purest sense, "payment for order flow" refers to the payment of cash by dealers and specialists to brokers to induce them to send aggregated small orders to purchase or sell securities to the dealers for execution. It is argued that this practice causes the broker to violate its fiduciary duty to the individual customer and, by influencing the broker's order-routing decision, diminishes the likelihood that best execution will be obtained for that order. Cash payment, however, is only one of many inducements for order flow raising significant policy and legal issues. Many order handling practices derive from business relationships between firms, and the connection between order flow practices and overall business interests is not always direct.

The Division believes that payment for order flow exists, in part, because it is difficult for markets to compete for order flow on the basis of quotations. As discussed above, many small orders are executed through automated systems at the prevailing intermarket best bid or offer. Brokers find that manual routing of each small customer order to the market actually displaying the best quotation simply is not cost effective.

The lack of quote competition enables a specialist or dealer to acquire a flow of small orders without having to adjust its market making quotation. The order flow that is paid for, however, comprises only individual retail orders, which are easy trades for the market maker to handle. The market maker can afford to pay these "low-cost" customers.

Effective quote competition for retail orders could be achieved in a market system in which an order is sent to the market that first displays the best quote. As discussed in the first half of this Report, the Division does not believe that there is sufficient reason to impose a uniform market design. Instead, the Division makes several transparency recommendations in this Report that are designed to narrow spreads and could result in some increased quote competition. These recommendations might diminish payment for order flow by reducing spreads, but they probably will not eliminate the practice. As a result, questions regarding payment for order flow must be addressed through other means.

The Division believes that, at a minimum, customers need more information so they can monitor execution quality more closely where payment or inducement is provided. In most cases, a retail customer has little or no idea how or where his order is being routed or what arrangements are in place to handle the order. The Division believes that disclosure should be improved to make customers aware of a broker's order handling procedures in clear and certain terms. As a result of the Market 2000 Study, the Commission in October 1993 proposed to increase disclosure of payment for order flow on the customer confirmation and annual account statement.[53] In the proposing release, the Commission also requested comment on alternative approaches, such as passing the payments through to customers, adopting a decimal-based pricing system, or banning the practice. The Division is currently reviewing the comments received on this proposal and will submit a recommendation to the Commission in the near future.

2. Disclosure of Soft Dollar Practices Should be Improved (Study V).

In a relationship involving the use of soft dollars, an investment adviser typically has an arrangement with a broker whereby the broker, in return for brokerage commissions generated by the orders from the adviser, provides a portion of the value of the commissions to the adviser in the form of research or other services. Unlike payment for order flow, automated order routing, and NASDAQ limit order practices, soft dollars are used primarily for institutional accounts. The use of soft dollars raises concerns about whether the recipient is obtaining best execution for its advisory clients.[54]

The Commission consistently has emphasized the need for adequate disclosure of soft dollar arrangements to the advisory clients whose commissions are the subject of such arrangements.[55] Full disclosure does not diminish the obligation of a money manager and broker-dealer involved in the soft dollar arrangement to obtain the best execution of their client's trade. Increased disclosure could provide the client with an explanation of how its commissions are being used and better alert it to potential conflicts of interest. Consequently, the Division believes that adviser disclosure of soft dollar arrangements should better inform advisory clients of the use of their commission dollars.

The Division believes it is appropriate to require advisers to disclose quantifiable information about soft dollar arrangements to their clients, including specific information regarding the research and other services an adviser receives. Additional disclosure requirements should include explicit statements regarding the conflicts of interest created by an adviser's soft dollar arrangements. Most importantly, the Division believes that any new disclosure requirements should apply evenhandedly; whether obtained from "in-house" firms or from third-party firms, research and other services should be subject to disclosure. In addition, the appropriate regulators should give consideration as to whether increased disclosure should apply to banks acting as investment advisers.

3. Broker-Dealers Using Automatic Routing Procedures Need to Assess Market Quality on a Periodic Basis (Study V).

Currently, most small order flow routing decisions are predetermined. Because the various markets guarantee the intermarket (or interdealer) best bid or offer, regardless of where the best quote resides, broker-dealers use criteria other than quotes for their order routing algorithms, including speed of execution, market fees, and affiliations with specialists or market makers. The mere use of automated routing procedures does not relieve a broker-dealer of its obligation to send orders to the best market.

The Division recommends that broker-dealers regularly examine the quality of competing markets to verify that order flow is directed to markets providing the most advantageous terms for customer orders. Such an examination should focus on whether a market is providing the best prices, but other factors, such as speed of execution, also may be relevant to best execution. The broker-dealers who bear the cost of this examination likely will pass it on to their customers. Customers, however, will benefit from broker-dealers' increased attention to providing best execution.[56]

4. Markets and Market Makers in Listed Stocks Should Offer Price Improvement (Study V).

Auction principles dictate that trades in exchange-listed securities will be effected so that the orders will be exposed to other public orders or interest in a trading crowd, with the possibility that the order may receive a price that is better than existing quotations. Automated, quote-based executions for listed securities discard the possibility of price improvement for speedier executions. Some regional exchanges and third market dealers have incorporated order exposure and price improvement features into their small order execution systems to address this concern. The Division recommends that a market or market maker trading a listed stock offer some possibility of price improvement.

5. NASDAQ/NMS Limit Order Handling Practices Need Revision (Study V).

Generally, a customer limit order to sell (or buy) a NASDAQ stock is not executed until the inside bid (or offer) equals the limit order price. Moreover, the broker-dealer that accepts the limit order may trade for its own account at prices better than the customer's limit order price without executing the customer's order ("trading ahead") so long as the customer is informed of this practice. The Division believes that broker-dealers should meet a higher standard of conduct given the development of NASDAQ. With the liquidity available for NASDAQ/NMS securities, there is no reason why market makers should be able to trade ahead of customers' orders. Most customers would clearly prefer that a broker-dealer not trade for its own account at prices equal to or better than the customer's own limit order price until the customer's order has been executed. In addition, the practice of trading ahead of a customer impairs price discovery by delaying execution of limit orders, thereby providing investors with an inaccurate indication of the buy and sell interest at a given moment.

The NASD has submitted a proposal to the Commission to prevent a NASDAQ market maker from trading ahead of its own customers' limit orders. This proposal does not, however, protect customers from the practice when their orders are routed from the first market maker to another for order handling. As a preliminary matter, the Division believes that the NASD proposal should be modified to prohibit the practice entirely. Accordingly, the NASD should amend its rule proposal to prohibit broker-dealers from trading ahead of customer limit orders for NASDAQ/NMS securities.

If the NASD were to adopt a rule against trading ahead, it is possible that dealers might earn less income from market making. Even if the dealers attempt to compensate such loss through larger commissions or spreads, customers still would benefit because it would be easier for them to evaluate the cost of trading securities. They would be paying for the execution directly through commissions and spreads instead of indirectly through costs caused by dealers trading ahead. Thus, even if the total cost to customers does not change, the cost and execution quality will be easier to evaluate.

Institutional customers may be an exception to the above analysis. Institutions often prefer to trade "net" for a large order (*i.e.*, a single price for the securities, with no commissions) and may be willing to give the market maker the option to trade ahead as it works the institution's order or provides a single price execution. Thus, it may be reasonable to allow institutional customers to retain the option to negotiate their own arrangements with market makers.

FAIR MARKET COMPETITION

Alternative markets and services for equity trading have developed in response to investors' needs. It is important to recognize that most of the alternative markets utilize prices discovered in the primary markets. The primary markets derive benefits from their primary status (*e.g.*, listing fees, majority of order flow, membership, and information fees), and they also bear many of the regulatory costs. Moreover, they are the markets of last resort in times of crisis.[57] Some commentators have suggested that the primary markets be compensated for the provision of price discovery by charging for transaction and quote information.[58] This suggestion ignores the substantial revenues and benefits that the primary markets currently receive, and would force market structure regulation into a series of ratemaking procedures. Instead, the Division believes that fair market competition can be promoted by fairly allocating regulatory responsibilities among the various market centers without stifling the ability of alternative markets and services to emerge. The Division recommends the following measures to achieve that end.

1. Surveillance and Order Handling Responsibilities for Third Market Trading Need to be Strengthened (Study III).

The markets, academicians, and regulators have engaged in vigorous debate about whether the auction or dealer system is better, in terms of liquidity, stability, or fairness. Each system offers specific advantages and disadvantages, and it would be contrary to the Commission's mission to impose one particular design.[59] Nevertheless, third market trading of listed stocks challenges the Commission to accommodate both systems.[60]

Third market makers and firms executing their own order flow off the exchanges currently handle almost 10% of the orders in listed stocks. The third market is regulated under rules designed for OTC trading.[61] As a result, third market makers are treated as competing dealers. In reality, they can function as a competing market. Accordingly, they should be subject to certain regulatory safeguards designed to ensure the integrity of their operations and to preserve the accuracy of the price discovery process.

The first safeguard is adequate oversight of third market makers' operations as a market, not merely as broker-dealers. The NASD should provide a minimum oversight program of third market activity.[62] Accordingly, the Division recommends that the NASD develop a comprehensive program for examining third market activity and submit it to the Commission.[63]

The second safeguard is the application of trading principles to ensure that third market trading does not affect adversely the integrity or fairness of the price discovery process. The Division proposes five trading principles to which third market dealers should adhere: (1) display of customer limit orders that are better than the existing ITS best bid or offer (to the same extent that the exchanges impose such an obligation on their specialists); (2) customer limit order protection; (3) crossing of customers' orders, if possible, without dealer intervention; (4) fixed standards for queuing and executing customer orders; and (5) compliance with ITS trade-through and block policies. The first four principles address the potential for self-dealing when making a market and acting as agent in an auction system. The fifth principle currently applies to the primary and regional exchanges and market makers on the ITS-Computer Assisted Execution System ("CAES") linkage, and is a key safeguard against fragmentation; it should apply to all third market trading.

The five principles should be adopted as SRO standards and monitored and enforced by the SROs. At present, the exchanges have rules that comport with most of these standards. The NASD's rules governing third market trading do not include most of them. Accordingly, the Division recommends that the NASD submit a rule change to the Commission to incorporate these standards into the NASD by-laws. Likewise, the exchanges should review their rules to ensure that specialists are held to the same standards.

2. The Commission Should Continue a Flexible Approach to Automated Trading Systems but Should Propose Recordkeeping and Reporting Requirements for These Systems (Study III).

To date, most PTSs are regulated as broker-dealers rather than as exchanges, which subjects them to both Commission and SRO oversight. Although a PTS most resembles a highly automated broker, the exchanges argue that many PTSs compete with them for order flow and should be subject to comparable regulation. The Division disagrees with this assessment, and believes that most PTSs do not function as exchanges. The Division believes that regulatory treatment as broker-dealers continues to be appropriate given the nature of PTSs activities, but that additional information should be provided to the Commission to monitor their activities.

Because of earlier concerns about the proper regulatory approach to these novel trading systems, the Commission proposed Rule 15c2-10 in 1989 to provide enhanced oversight of PTSs.[64] Under that proposal, a PTS would have been required to file a plan with the Commission describing its proposed operations and would have been subject to regulatory undertakings that went beyond existing requirements applying to broker-dealers, and that instead somewhat resembled SRO regulations. The Division's experience since 1989 in overseeing these systems does not lead it to believe that such an extensive regulatory structure is appropriate for PTSs at this time.

The Division recognizes, however, that PTSs use technologies for order execution that differ from traditional broker-dealers. In addition, several large broker-dealers operate internal trading systems that function in a manner similar to systems operated by PTSs. The proliferation of PTSs and other broker-dealer trading systems may have effects on the NMS that should be closely monitored to determine whether additional regulation is warranted. This will be especially true in the future as technology enables customers to interact globally through computer linkages. For effective monitoring, the Commission needs better information on the operation of these trading systems. Accordingly, the Division recommends that the Commission propose for comment a new record-keeping and reporting rule for broker-dealers that operate certain automated trading systems, including PTSs and many other internal systems.

The Division believes that a recordkeeping and reporting rule would provide the Commission and the appropriate SROs with better regulatory oversight of the market aspects of automated trading systems without burdening the systems with unnecessary regulations. Such a rule should cover broker-dealers that operate trading systems that permit customers or other broker-dealers to effect transactions with the sponsor of the system or permit trading directly between customers. The rule would enlarge the Commission's access to consolidated information regarding the sponsorship, participant base, operations, trading, clearing activity, and other material aspects of these systems.[65]

3. Transaction Fees Should Apply Equally to Listed and NASDAQ Securities (Study VI).

Section 31 of the Exchange Act imposes a transaction fee on all national securities exchanges, based on a fixed percentage of the aggregate dollar value of executed trades.[66] Section 31 imposes an equivalent fee on broker-dealers effecting OTC trades in exchange-listed stocks. One of the purposes of the Section 31 fees is to require the markets to pay the cost of regulation and oversight. Because Section 31 by its terms only applies to transactions in exchange-listed securities, the fee is not imposed on transactions involving NASDAQ securities.

The Division believes that this distinction between exchange and NASDAQ securities is anachronistic. The Commission uses the same resources to oversee and regulate the OTC market as it does for the exchange markets and it is appropriate to charge both markets for the costs incurred in performing these functions. In addition, NASDAQ is now the second largest market in the world after the NYSE. Given the intense competition for listings among the OTC and exchange markets, disparate application of such fees provides the OTC market with an unintended competitive advantage that is not justifiable. Accordingly, the Division recommends that Section 31 be amended by legislation to extend transaction fees to NASDAQ securities.

In recommending that Section 31 fees apply to NASDAQ securities, the Division does not believe that the fee will impose a significant burden on NASDAQ trading because the fee is *de minimis* when applied individually to transactions. When aggregated, the fees will help to defray the costs of regulating NASDAQ trading.[67]

4. The Commission Should Expedite the Process of Reviewing SRO System Changes (Study VI).

Section 19(b) of the Exchange Act requires SROs to file with the Commission all proposed rule changes.[68] These filings must be accompanied by a concise general statement of the basis for and purpose of the proposed rule change.[69] Section 19(b) of the Exchange Act requires the Commission, upon the filing of a proposed rule change, to publish notice of the proposed rule change so that the public may submit written comments. A proposed rule change may not take effect unless approved by the Commission.

The SROs have argued that the process is too lengthy and hampers their efforts to provide prompt, flexible, and innovative order-entry and trading services to their members and to the investing public. They also claim that the rule filing process places them at a competitive disadvantage to PTSs, which are not subject to Section 19(b). The SROs point out that PTSs may add new services or procedures to their systems instantaneously without government approval. In addition, the exchanges suggest that the disparity extends to third market dealers, who do not need Commission approval to implement changes to their systems. The SROs believe that their competitors should be subject to the same review process as they are, or alternatively, that the SROs should be relieved from the review requirement.

The Division disagrees with the SROs' assertion that they suffer a competitive disadvantage regarding PTSs. In many respects, PTSs do not perform the same functions as SROs and do not need a commensurate level of regulation. Thus, in the Division's opinion, there is no need to impose the Section 19(b) requirements on PTSs. The Division believes that adoption of enhanced recordkeeping rules for automated trading systems would ensure reasonable Commission oversight over PTSs without imposing on them the SRO rule filing process. Nonetheless, the Division agrees that the SRO rule review process should be expedited for routine procedural and administrative modifications to existing order entry and trading systems. Accordingly, the Division recommends that the Commission amend Rule 19b-4 under the Exchange Act to accelerate review of these routine procedural and administrative modifications. Modifications that present restrictive or anticompetitive concerns or raise investor protection issues, however, would should still be considered in detail after a notice and comment period. The Division also will consider whether other types of SRO proposals can be subject to an expedited review process.

OPEN MARKET ACCESS

As competition for order flow increases, it is likely that the different marketplaces will act in ways that may restrict the activities of their competitors. Past experience has shown that competitive interests can cause an SRO to take actions to disadvantage competitors, while cloaking these actions with regulatory purposes.[70] Regulatory and self-regulatory proposals must be examined with this in mind. At a minimum, the Commission must ensure that proposals by the markets do not impose restrictions on where the users of the markets can conduct transactions, and that restrictions on professionals are consistent with notions of fair competition. Several exchange rules now keep participants from accessing all markets. These rules should be modified to ensure that the limitation is the minimum necessary for valid regulatory purposes.

Another aspect of open market access involves international trading.[71] The growth in global trading will raise issues for the Commission in implementing the Report's recommendations. Although various groups, such as the International Organization of Securities Commissions, are examining some of the pertinent issues, in the short term the Commission should address the issues raised by the desire of foreign exchanges to place order routing terminals in the United States.

Finally, intermarket access also involves the trading of OTC stocks on exchanges pursuant to UTP.[72] Currently, the Amex, Boston Stock Exchange, Chicago Stock Exchange, and Philadelphia Stock Exchange may trade up to 100 OTC stocks under two UTP pilot programs. The Division will examine the pilot programs when they expire to determine whether further expansion of exchange trading of OTC stocks is appropriate.

The Division recommends opening market access in the following areas: after-hours off-board trading restrictions, issuer delisting, and extension of ITS.

1. Off-Board Trading Restrictions Should be Removed for After-Hours Trading (Study III).

NYSE Rule 390 prohibits NYSE members from effecting certain transactions off an exchange in NYSE-listed stocks.[73] The prohibition does not affect the NYSE members' ability to effect transactions on any other exchange. Rule 390 also allows NYSE members to trade as principal or agent in any listed stock on an organized exchange in any foreign country at any time, and in a foreign OTC market after NYSE trading hours. The scope of Rule 390 is narrowed by Exchange Act Rule 19c-1, which prohibits the application of off-board trading restrictions such as Rule 390 to trades effected by a member as agent,[74] and by Exchange Act Rule 19c-3, which prohibits the application of any off-board trading restrictions to securities listed on an exchange after April 26, 1979.[75] As a result, the practical effect of Rule 390 is limited to preventing NYSE member firms from directly internalizing order flow during exchange hours in stocks listed before April 26, 1979, and encouraging such members to effect transactions overseas in these stocks after the NYSE is closed ("after-hours trading").

The Division cannot identify a convincing justification for maintaining off-board trading restrictions as applied to after-hours trading.[76] They force NYSE member firms desiring to act as principal to trade with U.S. customers overseas, losing the protection offered by the Commission's oversight of the markets.[77] Moreover, the anticompetitive effect of the after-hours restriction within the United States is absolute. NYSE member firms simply have no choice: they must trade overseas or be forced to use the NYSE's crossing sessions, which are limited in time and scope.[78] As a result, NYSE members send orders after hours via fax or telephone to their overseas trading desks. The Division recommends that the NYSE submit a proposed rule change to lift the off-board trading restrictions as they apply to after-hours trading. If the NYSE were to develop a viable after-hours trading session that operates after the NYSE crossing sessions, the Division would be willing to reconsider whether off-board trading restrictions could apply during the session's operation.

With respect to off-board trading restrictions during regular trading hours, the Division believes a different conclusion is warranted. The actual effect on NYSE members of off-board trading restrictions during regular trading hours is somewhat less constraining than it appears. Numerous regional specialists have become affiliated with large NYSE member firms, which generally route small order flow to their regional affiliates. In practice, these alternatives allow a NYSE member firm to, in effect, execute its order flow as principal without running afoul of off-board trading restrictions. Furthermore, the anticompetitive effect of Rule 390 has been somewhat reduced to the extent that NYSE members can act as agents and route orders to third market makers for executions.

Although the circumstances just described do not remove the anticompetitive nature of off-board trading restrictions, in the Division's view, they reduce the urgency with which off-board trading restrictions have to be addressed. At the same time, the changing market structure has created other regulatory issues that should be considered immediately, such as the regulatory treatment and surveillance of market activity both by third market makers and by exchange members internalizing order flow in listed stocks.

2. NYSE Rule 500 and Amex Rule 18 Should Provide Companies with a Reasonable Opportunity to Move to Another Market (Study VI).

NYSE Rule 500 requires an issuer wishing to withdraw its securities from the NYSE to submit the proposal to its shareholders.[79] The rule requires that the proposal be approved by 66.6% of the outstanding shares of the particular security, together with a failure of 10% of the individual shareholders to object. The Amex's analogous rule, Amex Rule 18, requires an issuer wishing to withdraw a listed security to file with the Amex a copy of the board resolution authorizing withdrawal along with a statement setting forth the reasons for the proposal. After receipt, the Amex notifies the issuer whether the reasons warrant such action and whether the issuer will be required to send notification to its shareholders at least 15 days in advance of filing with the Commission under Section 12(d) of the Exchange Act.[80] In contrast, the NASD's rules for NASDAQ/NMS issuers allow an issuer to terminate its NASDAQ/NMS designation voluntarily, upon written notice to the NASD.[81]

The NYSE believes that Rule 500 is an investor protection rule, and that shareholders take comfort in purchasing securities of a listed company knowing that the issuer cannot delist the securities without overwhelming support from shareholders. Other commentators view Rule 500 as an anticompetitive rule that makes it extremely difficult for an issuer to withdraw securities from listing on the NYSE.

The Division recognizes that, at some point in the past, NYSE Rule 500 may have been justified given the differences in the standards between the NYSE and OTC markets. This is no longer the case with respect to NASDAQ/NMS. Accordingly, the Division cannot identify any justification for the stringent approval requirements built into NYSE Rule 500. The Division, however, is not proposing that the NYSE rescind Rule 500 in its entirety. The Division recognizes that withdrawing securities from listing is an important corporate decision, and that it is reasonable to ensure that careful management consideration is given to this decision. The standards embodied in Rule 500, however, represent a barrier to delisting that is too onerous, and the standards embodied in Amex Rule 18 are too vague. Accordingly, the Division recommends that the NYSE submit a proposed rule change to modify the requirements of NYSE Rule 500. Likewise, the Amex should submit a proposed rule change identifying objective criteria to be met by issuers seeking to delist securities from that exchange. The new standards should rely on a determination by an issuer's board of directors rather than shareholder approval. For example, the new standards could require approval by the board of directors and a majority of the independent directors, or it could require a review of the delisting decision by the board's audit committee.

3. The ITS-CAES Link Should be Extended to All Listed Stocks (Appendix II).

ITS facilitates intermarket trading in exchange-listed equity securities by allowing a broker-dealer in one market center to send orders to another market trading the same security. The system links the eight national securities exchanges and NASDAQ. More than 2,500 securities are eligible for trading through ITS.

NASDAQ market makers that trade listed stocks are linked to ITS through the NASD's Computer Assisted Execution System ("CAES"). Orders routed to the exchange floors may be sent to the OTC market for execution through the ITS/CAES link. The ITS/CAES link also enables OTC market makers to route orders to the exchanges.

The link between ITS/CAES, however, extends only to securities covered by Rule 19c-3 under the Exchange Act.[82] The NASD has proposed to extend the link to all listed stocks. The Division recommends that the ITS/CAES link be extended to all listed stocks as a means to enhance intermarket access, provided the other recommendations with respect to the third market have been implemented.

CONCLUSION

The Division's proposed regulatory approach for equity market regulation is consistent with the Congressional intent expressed in the 1975 Amendments and reflects the market's evolution since that time. The Division believes that its recommendations will enable the Commission to carry out the goal of ensuring fair and transparent equity markets while providing for an environment where investor protection is enhanced and the needs of individuals and institutions are met. The recommended initiatives also address the competitive concerns expressed by the different market participants and significantly improve NASDAQ.

Although the regulatory framework outlined in this Report responds to market structure issues of current concern, changes in market users and in the markets themselves will present the Commission with new challenges in the years ahead. It will be important for the Commission to understand the evolving market dynamics when determining how best to regulate the equity markets. The Division believes that four trends will continue to drive this evolution.

First, institutional investors will continue to account for a majority of trading volume. As is the case today, it is difficult for established markets to accommodate the variety of institutional and retail investors. Alternative markets are likely to continue to emerge to serve institutions' specialized needs. In addition, the increasing dominance of equity trading by institutional investors and large intermediaries will strain the markets' ability to handle liquidity demands. This could increase systemic risk.

Second, global trading will continue to grow. Capital will move more easily around the world, benefitting the providers and users of capital. At the same time, the United States will face stronger competition as the leading international financial marketplace. Foreign markets may compete by setting differing regulatory standards that offer U.S. market participants the opportunity to avoid U.S. regulatory requirements. The competitive pressure from different foreign standards will affect the Commission's regulatory program. If the Commission is to maintain strong regulatory standards, U.S. market participants will have to be convinced of the attractiveness and benefits such standards bring to U.S. markets.

Third, the derivatives markets will continue to grow. Their growth presents market risks and systemic risks that are being currently evaluated by regulators. Derivative products will challenge the ability of the Commission to control risk and promote fair competition among markets. Derivative products allow users to recreate synthetically virtually any asset or trading strategy. Regardless of whether these products are adequately regulated in their own right, they offer users the ability to avoid regulations that would apply if they had transacted directly in the equity market. In addition, they enable users to avoid regulatory distinctions between the product classes underlying the derivatives.

Fourth, technology will continue to drive the evolution of the equity markets. The Division believes that, at a minimum, technological advances will make it possible for public investors to obtain access to markets and other market participants directly. Technology now allows institutional investors to transact with one another without professional intermediation. This will increase in the future. The Commission at present relies on operational and financial standards imposed on registered entities -- exchanges, clearing organizations, and broker-dealers -- to oversee the markets. The Commission will have to evaluate how these standards can be maintained with direct public access to the markets. In addition, direct public access could lead some of the established markets to reconsider their organizational structure.

These trends will prove challenging for markets, market participants, and regulators. Nonetheless, the markets themselves are not now in a state of crisis; they are simply evolving. The Division believes that its recommendations are appropriate in light of the strength of the equity markets. Market competitors' perceptions of regulatory inequality, coupled with the exponential evolution of market technologies, may cause some to fear the developments that are occurring. As Congress stressed in the 1975 Amendments, the primary responsibility to respond to these developments must rest with the markets themselves. The Commission should continue to focus on enhancing competition and allowing economic forces, interacting within a fair regulatory field, to determine the appropriate variations in market practices and services. Throughout this process, the touchstone for Commission action must remain the protection of investors.

1. Securities Exchange Act Release No. 30920 (July 14, 1992), 57 FR 32587, 32589 (July 22, 1992). A letter, dated July 11, 1991, from Richard Breeden, Chairman, SEC, to Edward J. Markey, Chairman, Subcomm. on Telecommunications and Finance, Comm. on Energy and Commerce, U.S. House of Representatives ("Breedon Letter") is attached to the release.

2. Securities Exchange Act Release No. 33026 (Oct. 7, 1993), 58 FR 52934 (Oct. 13, 1993).

3. *Oversight Hearing on the Future of the Stock Market focusing on the National Market System Before the Subcomm. on Telecommunications and Finance of the House Comm. on Energy and Commerce*, 103d Cong., 1st Sess. (Apr. 14, 1993); *Oversight Hearing on the Future of the Stock Market focusing on Inducements for Order Flow Before the Subcomm. on Telecommunications and Finance of the House Comm. on Energy and Commerce*, 103d Cong., 1st Sess. (May 13, 1993); *Oversight Hearing on the Future of the Stock Market focusing on Proprietary Trading Systems Before the Subcomm. on Telecommunications and Finance of the House Comm. on Energy and Commerce*, 103d Cong., 1st Sess. (May 26, 1993); *Oversight Hearing on the Future of the Stock Market focusing on Soft Dollar Practices Before the Subcomm. on Telecommunications and Finance of the House Comm. on Energy and Commerce*, 103d Cong., 1st Sess. (July 13, 1993).

4. GAO, SEC ACTIONS NEEDED TO ADDRESS MARKET FRAGMENTATION ISSUES (1993) ("GAO Report"); *Oversight Hearings on the Future of the Stock Market Focusing on the Results of a GAO Study on Market Fragmentation Before the Subcomm. on Telecommunications and Finance of the House Comm. on Energy and Commerce*, 103d Cong., 1st Sess. (June 29, 1993).

5. SEC, INSTITUTIONAL INVESTOR STUDY REPORT, H.R. DOC. NO. 64, 92d Cong., 1st Sess. (1971) ("Institutional Investor Study").

6. SEC, Statement of the Securities and Exchange Commission on the Future Structure of the Securities Markets (Feb. 2, 1972), 37 FR 5286 (Feb. 4, 1972).

7. *Id.* at 5286.

8. Pub. L. No. 94-29, 89 Stat. 97 (1975).

9. 15 U.S.C. § 78k-1(a)(1) (1988).

10. S. REP. NO. 75, 94th Cong., 1st Sess. 7 (1975) ("Senate Report").

11. 15 U.S.C. § 78k-1(a)(1).

12. A recent survey indicates that the trend toward the institutionalization of the markets may have leveled off. *See* Leslie Scism, *Institutioinal Share of U.S. Equities Slips*, WALL. ST. J., Dec. 8, 1993, at Sec. C, p.1, col. 4.

13. For a detailed discussion of the growth of mutual funds, see DIVISION OF INVESTMENT MANAGEMENT, SEC, PROTECTING INVESTORS: A HALF CENTURY OF INVESTMENT COMPANY REGULATION (1992).

14. The value of equities held by the state and local retirement funds in 1975 was $25.8 billion. *See* SEC, 42ND ANNUAL REPORT 188 (1976). In contrast, in 1992 the California Public Employees Retirement System had $22 billion invested in equities. *See* Letter from DeWitt F. Bowman, Chief Investment Officer, California Public Employees' Retirement System, to Jonathan G. Katz, Secretary, SEC (Oct. 15, 1992).

15. Compiled from various PENSIONS & INVESTMENTS AGE surveys.

16. Josef Lakonishok et al., *The Structure and Performance of the Money Management Industry*, Brookings Papers: Microeconomics 373 (1992).

17. See SEC, 42ND ANNUAL REPORT (1976); SEC, 58TH ANNUAL REPORT (1992).

18. Nevertheless, events such as the October 1987 market break test the limits of the markets' capacity to handle larger volume.

19. Of course, an investor's order that is large in size likely will receive individual handling by the broker-dealer. In addition, an investor has the option (rarely exercised in practice) of asking the broker-dealer to route an order to a specific market.

20. Study III contains a detailed description of the equity markets.

21. The NYSE, the Amex, and regional exchanges have automated many of their functions since 1975. As a result, they are able to handle exponentially greater volume than in prior years. At the point of order execution, however, the NYSE and the Amex largely remain an auction market with specialists handling the auction.

22. DIVISION OF MARKET REGULATION, SEC, TRADING ANALYSIS OF OCTOBER 13 AND 16, 1989, at 1 (1990) ("October 1989 Report").

23. The grant of UTP allows a market to trade a particular security, even though the issuer is not listed on that market. *See* Exchange Act Section 12(f), 15 U.S.C. § 78l(f). An issuer does not pay listing fees to the exchange trading its securities via UTP.

24. As a result, the NYSE now offers transaction fee credits. Securities Exchange Act Release No. 31795 (Jan. 29, 1993), 58 FR 9244 (Feb. 19, 1993) (approving NYSE rule change that decreased transaction charges).

25. For example, the Pacific Stock Exchange operates an after-hours auction market until 4:50 p.m. (EST). Recently, the Chicago Stock Exchange began trading a basket of 20 stocks.

26. Under Rule 19c-1 of the Exchange Act, 17 C.F.R. § 240.19c-1 (1993), the NYSE's off-board trading restrictions do not apply to orders handled by an exchange member as agent (other than agency crosses). This enables members to send such orders to third market makers who execute the orders as dealers.

27. Some third market firms handle institutional block trades.

28. *See supra* note 24. NYSE executives have indicated that new pricing policies for small trades since February have been successful in attracting volume. *See Big Board Market-Share Inched Higher in 1993*, REDEMPTION DIGEST, Dec. 29, 1993, at 1.

29. 15 U.S.C. § 78oA.

30. See 1993 NASDAQ Fact Book & Company Directory. All the statistics cited for NASDAQ were obtained from this source.

31. As of November 11, 1993, 458 of the companies in the S&P 500 Index are NYSE companies, 37 are NASDAQ companies, and 5 are Amex companies.

32. Often the basket trade takes the form of an "exchange for physical" ("EFP"). An EFP involving stocks is the exchange of a long (short) futures position for an equivalent long (short) stock basket position. The EFP normally takes place after the NYSE close and is privately negotiated between the parties. *See generally* DIVISION OF TRADING AND MARKETS, COMMODITY FUTURES TRADING COMMISSION, REPORT ON EXCHANGES OF FUTURES FOR PHYSICAL (Oct. 1987).

33. DIVISION OF MARKET REGULATION, SEC, THE OCTOBER 1987 MARKET BREAK REPORT xiv, 3-6 to 3-9 (1988) ("October 1987 Report").

34. *See, e.g., id.* at 3-4 to 3-9; *Report of the Presidential Task Force on Market Mechanisms*, Fed. Sec. L. Rep. (CCH) No. 1267 (Jan. 12, 1988).

35. *See, e.g.*, Securities Exchange Act Release No. 32256 (May 4, 1993), 58 FR 27486 (May 10, 1993) (Concept Release on derivative products); SEC, REPORT ON INTERMARKET COORDINATION PURSUANT TO THE MARKET REFORM ACT OF 1990 (May 1993, May 1992, May 1991); DIVISION OF MARKET REGULATION, SEC, TRADING ANALYSIS OF NOVEMBER 15, 1991 (Oct. 1992); SEC, Papers Relating to the Capital Adequacy of Securities Firms, Submitted to the Technical Comm. of IOSCO (July 16-17, 1991); October 1989 Report, *supra* note 22; October 1987 Report, *supra* note 33; DIVISION OF MARKET REGULATION, SEC, THE ROLE OF INDEX-RELATED TRADING IN THE MARKET DECLINE ON SEPTEMBER 11 AND 12, 1986 (1987); SEC, ROUNDTABLE ON INDEX ARBITRAGE (1986); SEC, REPORT OF THE SPECIAL STUDY OF THE OPTIONS MARKETS (1978); SEC, 1988 REPORT TO CONGRESS ON ACTIONS BY THE SELF-REGULATORY ORGANIZATIONS SINCE THE 1987 MARKET BREAK (1988); *The Futures Trading Practices Act of 1991: Hearings on Title III of S.207 Before the Senate Comm. on Banking, Housing and Urban Affairs* (1991) (Testimony of Richard C. Breeden, Chairman, SEC); *Hearings on Intermarket Regulation Before the Senate Comm. on Banking, Housing and Urban Affairs* (1990) (Testimony of Richard C. Breeden, Chairman, SEC); *The Stock Market Reform Act of 1989: Hearings on H.R. 1609 Before the House Subcomm. on Telecommunications and Finance of the House Comm. on Energy and Commerce* (1989) (Testimony of Richard C. Breeden, Chairman, SEC); Richard C. Breeden, Address Before the International Swap Dealers Association Annual Meeting (Mar. 11, 1993); Mary L. Schapiro, The Growth of the Synthetic Derivative Market: Risks and Benefits, Address Before the National Options & Futures Society (Sept. 24, 1991).

36. HANS R. STOLL, DEBATE OVER THE ORGANIZATION OF THE STOCK MARKET: COMPETITION OR FRAGMENTATION? 2 (Financial Markets Research Center Policy Paper 92-01, 1992).

37. The Division notes, however, that the concentration of the assets of retail investors into large institutions raises the possibility that the actions of a few institutions can place strains on the ability of the market to handle their demands for liquidity. While the markets have tried to accommodate the greater demand for liquidity by, among other things, developing increasingly more sophisticated derivative instruments, institutions need to understand that instant liquidity has a cost. To regulators, the cost should not be undue systemic risk. In the past, the Division has made several recommendations regarding systemic risk, only some of which have been adopted. The concentration of equity assets and growth of derivatives reinforces the need for the Commission and other regulators to reexamine these pending recommendations.

38. *See* SEC, REPORT OF THE SPECIAL STUDY OF SECURITIES MARKETS, H.R. DOC. NO. 95, 88th Cong., 1st Sess. 138-144 (1963).

39. Memorandum from William Heyman, Director, Division of Market Regulation, to Richard Breeden, Chairman, SEC 16 ("Heyman Memorandum") (attached to Breeden Letter, *supra* note 1).

40. *See, e.g.*, Saul Cohen, *The Death of Securities Regulation*, WALL ST. J., Jan. 17, 1991, at A10; Julian Franks & Stephen Schaefer, *The Costs and Effectiveness of the U.K. Financial Regulatory System*, London Business School 6 (Mar. 1993).

41. Future Structure Statement, *supra* note 6.

42. Customers also could continue to have their floor brokers "work" an order without disclosing it.

43. NYSE Rule 62 provides that bids or offers in stocks selling above one dollar per share may not be made at a variation of less than one-eighth of a dollar or 12.5 cents. Amex Rule 127 allows for one-sixteenth spreads for stocks priced five dollars or less, and one-eighth spreads for stocks over

five dollars. The NASD does not have a minimum spread policy for NASDAQ. NASDAQ, however, is designed to process spreads of one-thirty-second for stocks bid under ten dollars and one-eighth for stocks ten dollars and over.

44. *See supra* note 2.

45. Some of the after-hours trading taking place in the United States occurs on PTS crossing networks such as Portfolio System for Institutional Trading ("POSIT") and Instinet Crossing Network, or the single-price auction of the Arizona Stock Exchange ("AZX").

46. *See* Study VII for a description of after-hours trading.

47. *See* Appendix III for a discussion of trade reporting requirements in the United States.

48. These trades also may be subject to other U.S. regulatory requirements.

49. Securities Exchange Act Release No. 18738 (May 13, 1982), 47 FR 22376 (May 24, 1982).

50. See Study IV for a discussion of the proposals.

51. Letter from William H. Donaldson, Chairman and Chief Executive Officer, New York Stock Exchange, to Jonathan G. Katz, Secretary, SEC (Nov. 24, 1992) ("NYSE Letter"); GAO Report, *supra* note 4.

52. As with the recommendation on limit order disclosure, a customer could request explicitly that the order not be exposed.

53. *See supra* note 2.

54. *See generally* Lee B. Burgunder & Karl O. Hartmann, *Soft Dollars and Section 28(e) of the Securities Exchange Act of 1934: A 1985 Perspective*, 24 AM. BUS. LAW J. 136, 157 (1986).

55. Congress also recognized the importance of disclosure of soft dollar arrangements in granting the Commission authority to implement specific disclosure rules under Section 28(e)(2) of the Exchange Act, 15 U.S.C. § 78bb(e)(2). Some market participants also agree that disclosure of soft dollar arrangements is essential and that no distinction should be made with respect to disclosure of in-house research and third party research. *See Oversight Hearing on the Future of the Stock Market Focusing on Soft Dollar Practices Before the Subcomm. on Telecommunications and Finance of the House Comm. on Energy and Commerce*, 103d Cong., 1st Sess. (July 13, 1993) (statement of Charles Bouvet, Chairman, Thamesway Inc.).

56. *See, e.g.*, Securities Exchange Act Release No. 15671 (Mar. 20, 1979), 44 FR 20360, 20366 (Mar. 27, 1979).

57. *See* Heyman Memorandum, *supra* note 39, at 16-18 (discussing what has been described as the "cherry-picking" or "cream skimming" of the primary markets).

58. *See, e.g.*, CORINNE BRONFMAN & JAMES OVERDAHL, WOULD THE INVISIBLE HAND PRODUCE TRANSPARENT MARKETS? (CFTC Working Paper No. 92-19, 1992).

59. Senate Report, *supra* note 10, at 185; *see also* Milton H. Cohn, *The National Market System -- A Modest Proposal*, 46 GEO. WASH. L. REV. 743, 777 (1978) (stating that the Commission should not force all market makers into a single mold, as long as undue privileges or opportunities are not accorded to a particular group of market makers).

60. Roberta S. Karmel, *The Market 2000 Study*, N.Y.L.J., Oct. 15, 1992, p.3, col. 3.

61. *See* Exchange Act Section 15(c), 15 U.S.C. § 78o-5; Schedule G of the NASD's Rules of Fair Practice, NASD Manual (CCH) ¶ 1917.

62. Letter from David Humphreville, Co-Chairman, and Caroline B. Austin, Co-Chairman, National Specialist Association, to Jonathan G. Katz, Secretary, SEC (Dec. 11, 1992).

63. This program would include exchange member firms that internalize order flow pursuant to Rule 19c-3. 17 C.F.R. § 240.19c-3.

64. Securities Exchange Act Release No. 26708 (Apr. 11, 1989), 54 FR 15429 (Apr. 18, 1989).

65. In the future, the Commission also may seek to obtain access to the larger systems' screens for surveillance purposes.

66. *See* Exchange Act Section 31, 15 U.S.C. § 78ee. The annual fee is equal to 1/300th of one percent (0.003) of the aggregate dollar amount of securities sold. The annual fee does not apply to bonds, debentures and other evidences of indebtedness. In addition, the Commission has exempted certain securities transactions from the imposition of the fee.

67. Section 31 fees are payable to the Commission. The Commission then submits the fees to the U.S. Treasury. In 1992, NASDAQ trading would have generated approximately $29.4 million in Section 31 fees had the fee been applicable to NASDAQ stocks.

68. Under Section 19(b), a proposed rule change includes "any proposed rule or any proposed change in, addition to, or deletion from the rules" of an SRO. 15 U.S.C. § 78s(b)(1). The rules of an SRO include the constitution, articles of incorporation, by-laws, and rules, or instruments corresponding to the foregoing and the stated policies, practices and interpretations of the SRO as the Commission determines by rule to be necessary or appropriate in the public interest or for the protection of investors to be deemed rules. *Id.* § 78c(a)(27), (28).

69. *Id.*

70. Sam Scott Miller, *Self-Regulation of the Securities Markets: A Critical Examination*, 42 WASH. & LEE L. REV. 853, 875 (1985).

71. This issue is discussed in detail in Study VII.

72. *See supra* note 23.

73. Other exchanges impose similar prohibitions on their respective members. *See* Boston Stock Exchange, Section 23 of Chapter II, BSE Guide (CCH) ¶ 2036; Chicago Stock Exchange, Rule 9 of Article VIII, CHX Guide (CCH) ¶ 2054; Pacific Stock Exchange Rule XIII, PSE Guide (CCH) ¶ 5415; Philadelphia Stock Exchange Rule 132, Phlx Guide (CCH) ¶ 2132. The discussion regarding NYSE Rule 390 applies to all other similar rules.

74. Rule 19c-1 under the Exchange Act permits the exchanges to prohibit in-house agency crosses off an exchange. Securities Exchange Act Release No. 14325 (Dec. 30, 1977), 43 FR 1327 (Jan. 7, 1977).

75. Securities Exchange Act Release No. 16888 (June 11, 1980), 45 FR 41125 (June 18, 1980).

76. *See* GAO REPORT, SECURITIES TRADING: SEC ACTION NEEDED TO ADDRESS NATIONAL MARKET SYSTEM ISSUES (1990).

77. NYSE Rule 410B requires NYSE members to submit reports to the NYSE of their transactions in NYSE stocks that occur outside of the national market system (including foreign trades). While this provides some oversight of after-hours trades, it is not a complete substitute for public reporting.

78. In 1991, the NYSE commenced two after-hours crossing sessions, in part, to attract back to the U.S. the order flow currently being executed overseas. Crossing Session I permits the execution of single-stock, single-sided closing-price orders and crosses of single-stock, closing-price buy and sell orders. Crossing Session II allows the execution of crosses of multiple-stock aggregate-price buy and sell orders. Crossing Session II was designed to attract institutional trades now being executed overseas. Securities Exchange Act Release No. 29237 (May 24, 1991), 56 FR 24853 (May 31, 1991). The NYSE's two after-hours sessions together averaged slightly under five million shares per day over the first six months of 1993.

79. The NYSE has enforced this policy since at least a decade before it registered as an exchange with the Commission in 1934. Securities Exchange Act Release No. 2049 (Mar. 22, 1939) (Dominion Stores Withdrawal Petition). The NYSE adopted Rule 500 after the Commission rejected the NYSE's claim in the Dominion Stores Withdrawal Petition that it had a "settled practice" requiring a shareholder vote to withdraw a security from listing. Louis Loss, Securities Regulation 836 n.171 (1961). Other exchanges also have rules governing the withdrawal of securities from listing. Generally, they are not as stringent as NYSE Rule 500. *See* Chicago Stock Exchange Rule 3 of Art. XXVIII, CHX Guide (CCH) ¶ 2183; Pacific Stock Exchange Rule 3.4, PSE Guide (CCH) ¶ 3579; Philadelphia Stock Exchange Rule 804, Phlx Guide (CCH) ¶ 2804.

80. 15 U.S.C. § 78l(d).

81. *See* NASD Manual ¶ 1813, § 6(5).

82. 17 C.F.R. § 240.19c-3.

MARKET 2000 STUDY EXHIBITS

EXHIBIT 1

Ownership of U.S. Equities

	1975	1980	1982	1984	1986
Total Market Value (trillions of dollars)	0.85	1.6	1.7	2.0	2.9
Household %	70.5%	70.7%	68.8%	62.6%	59.4%
Institution %	29.5	29.3	31.2	37.4	40.6
Among Institutions (percent)					
Private Pension	12.7%	14.2%	14.6%	18.1%	18.8%
Mutual Fund	4.0	2.7	2.9	4.0	5.5
Public Pension	2.9	2.8	3.5	4.8	5.1
Foreign	4.2	4.1	4.4	4.8	5.7
Life Insur. Co.'s.	3.2	2.9	3.1	3.0	2.6
Other Ins. Co.'s	1.7	2.1	2.2	2.2	2.1
Others	0.9	0.5	0.5	0.6	0.8

Ownership of U.S. Equities (cont'd)

	1988	1990	1991	1992
Total Market Value	3.1	3.5	4.6	5.13
Household %	54.7%	52.5%	50.7%	49.4%
Institution %	45.3	47.5	49.3	50.6
Among Institutions (percent)				
Private Pension	20.1%	20.1%	20.9%	20.5%
Mutual Fund	6.0	6.7	7.6	9.1
Public Pension	7.0	8.4	8.7	9.1
Foreign	6.4	6.6	6.6	6.4
Life Ins. Companies	2.8	2.8	2.5	2.4
Other Ins. Companies	2.3	2.3	2.4	2.5
Others	0.7	0.6	0.6	0.6

SOURCE: SIA 1993 Factbook

EXHIBIT 2

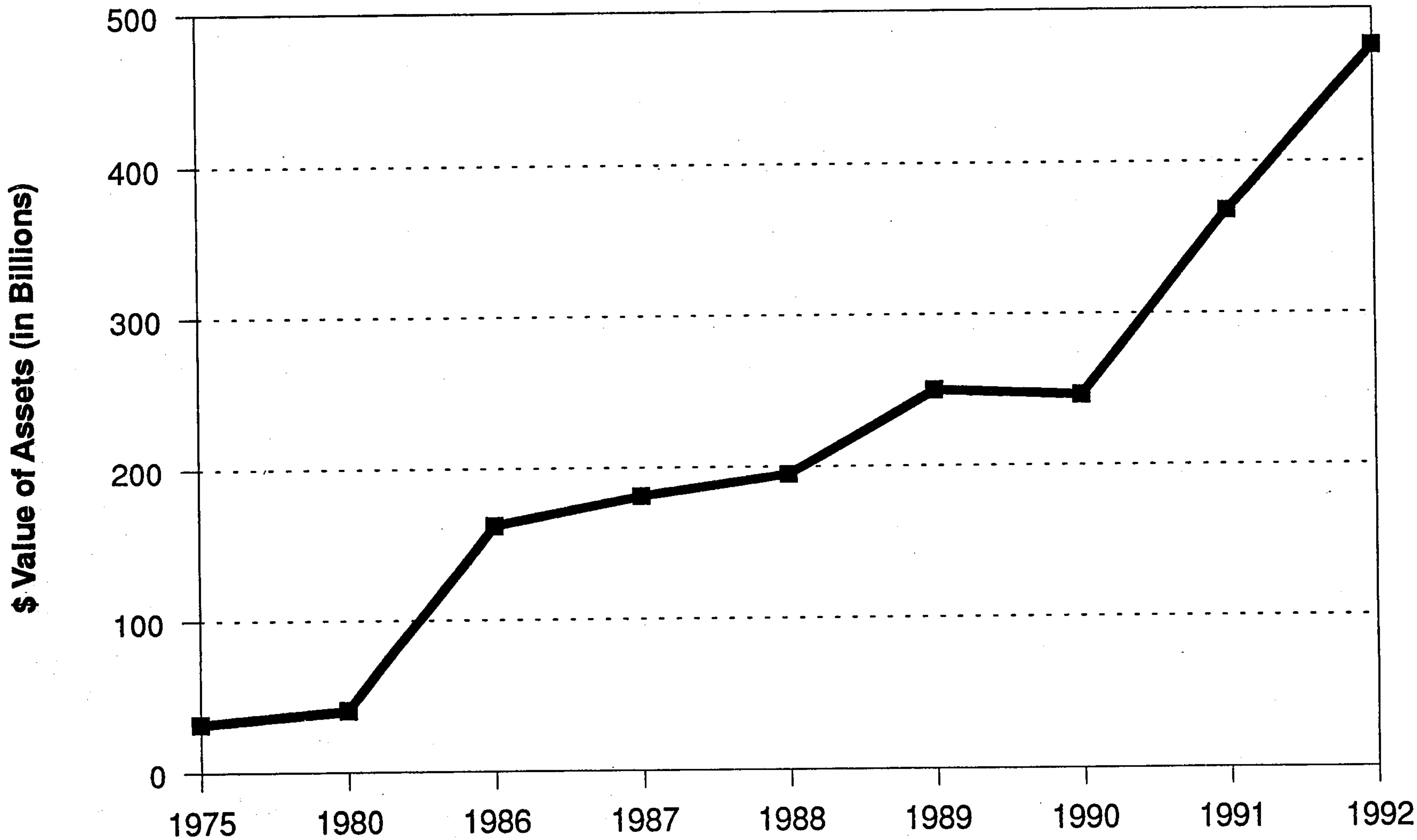
Allocation of Household Liquid Financial Assets (Not including pension fund reserves).

	1970	1980	1987	1988	1989	1990	1991	1992
Liquid Finc'l Assets (Billions)	$1,453	$3,115	$6,020	$6,501	$7,280	$7,405	$8,014	$8,164
Bank Dep.'s and CD's	37.4%	48.6%	43.2%	42.5%	39.5%	39.1%	36.2%	35.4%
Equities	47.0	35.7	29.1	28.9	30.3	27.1	29.1	31.1
US Govt. Sec.'s	6.9	7.7	8.2	9.6	10.2	11.1	10.5	11.0
Mutual Fund Shares	3.1	1.7	6.7	6.4	6.6	6.7	9.2	8.0
Muni Bonds	3.2	3.3	6.6	7.2	7.2	7.4	6.9	7.3
MM Funds	-	2.1	4.6	4.7	5.4	5.9	5.9	5.7
Corp. Bonds	2.3	1.0	1.5	0.8	0.9	2.6	2.2	1.6

SOURCE: SIA 1992 and 1993 Factbooks

EXHIBIT 3

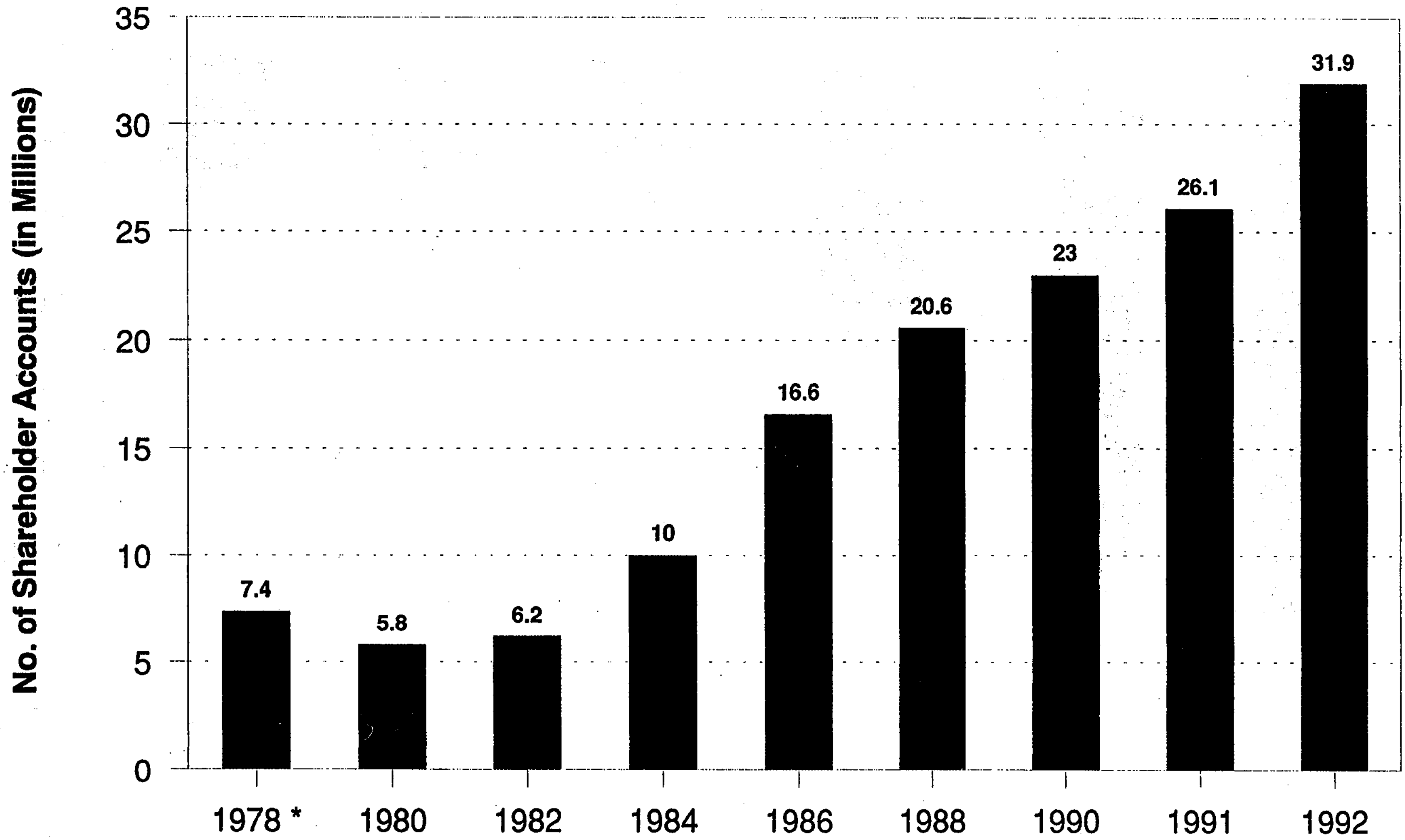
Equity Mutual Funds - $ Value of Assets



SOURCE: ICI 1992 Mutual Fund Factbook

EXHIBIT 4

Equity Mutual Funds - Number of Shareholder Accounts

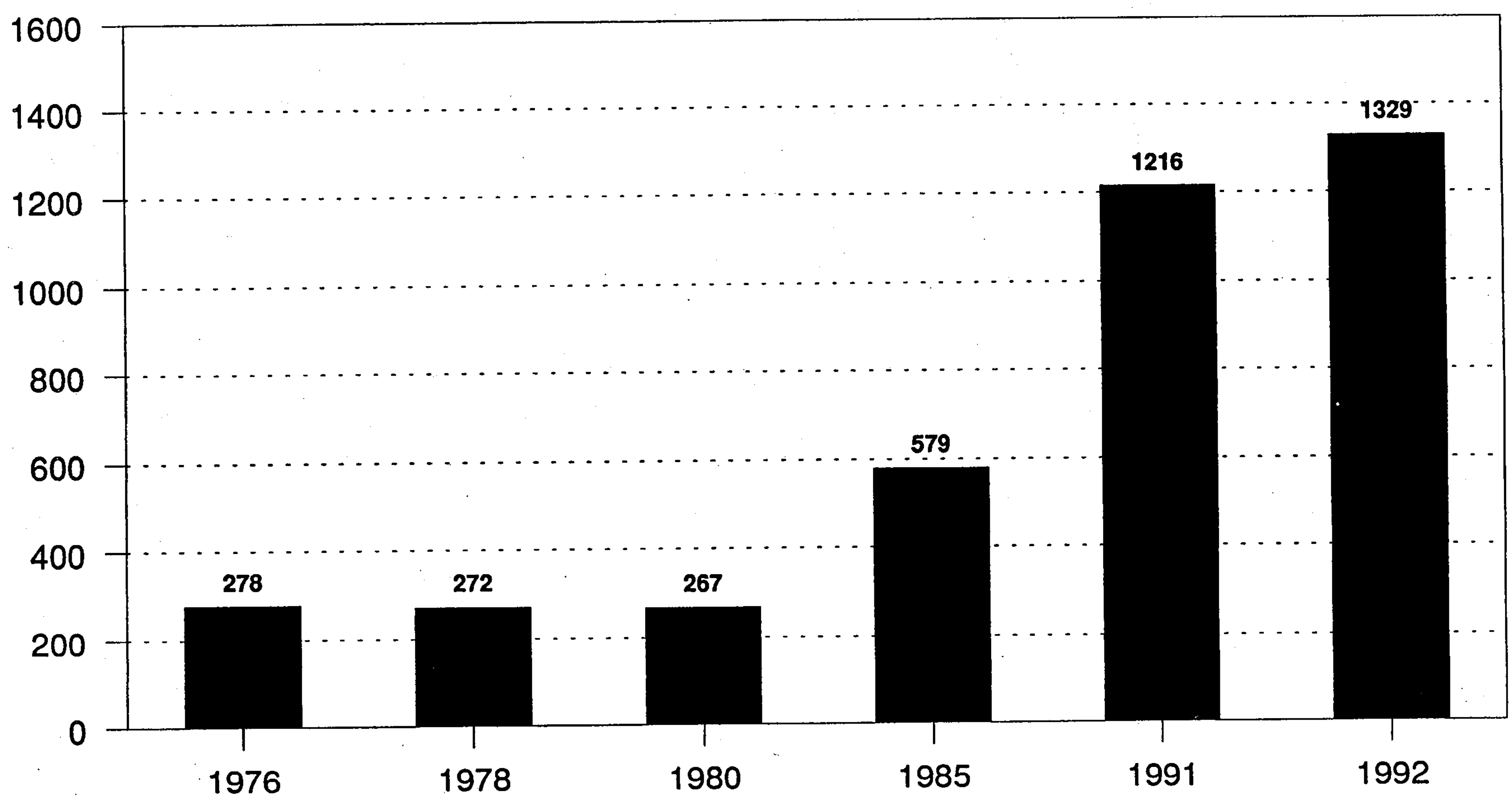


* Bond and income information not separate from equity prior to 1978.

SOURCE: ICI 1992 Mutual Fund Factbook

EXHIBIT 5

Mutual Funds - Number of Equity Funds



SOURCE: ICI 1992 Mutual Fund Factbook

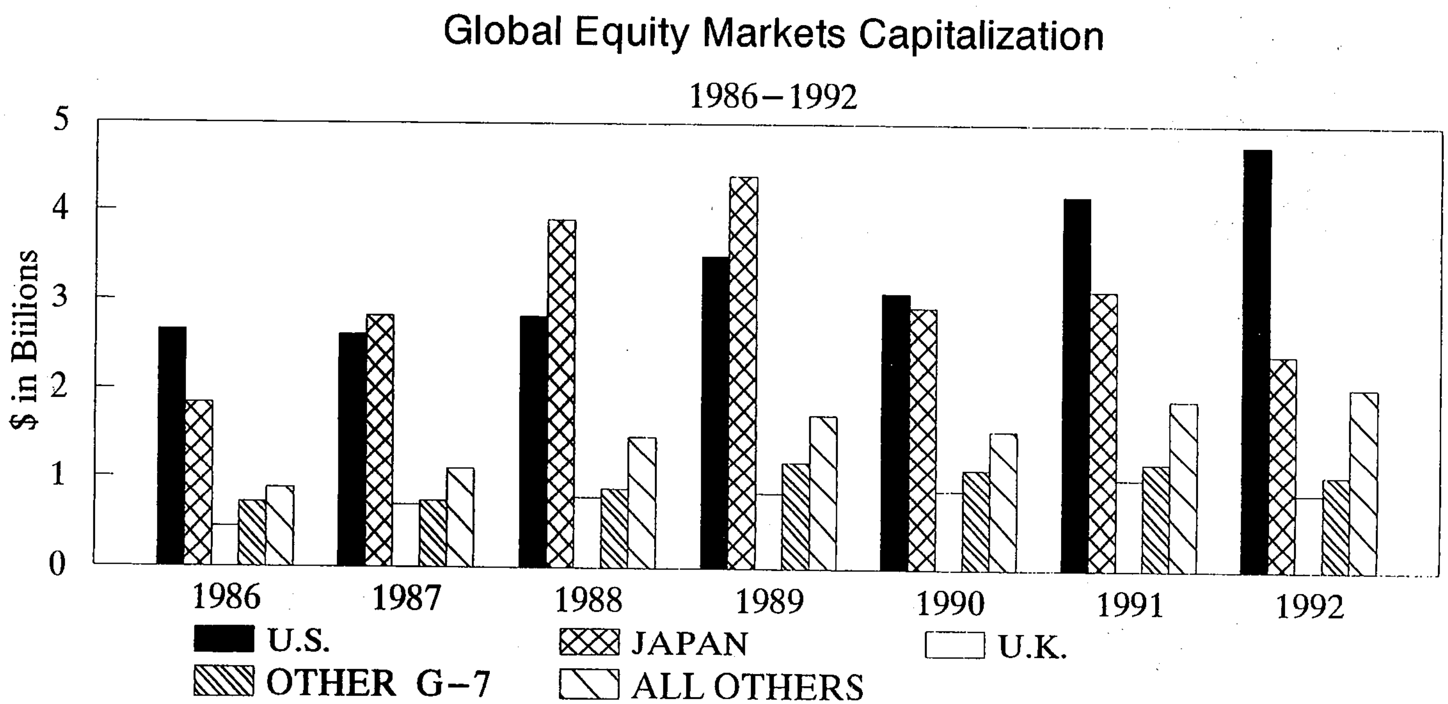
EXHIBIT 6

Global Equity Markets Capitalization

In Billions of Dollars

COUNTRY	1986	1987	1988	1989	1990	1991	1992
United States	2,637	2,589	2,794	3,506	3,090	4,186	4,758
Japan	1,843	2,803	3,907	4,393	2,918	3,131	2,399
United Kingdom	440	681	771	827	868	1,003	839
Germany	258	213	252	365	379	393	346
France	150	172	245	365	342	374	351
Canada	166	219	242	291	242	267	243
Italy	140	120	135	169	149	154	115
G–7 Nations	5,634	6,797	8,346	9,916	7,988	9,508	9,051
All Other Nations	881	1,101	1,481	1,725	1,561	1,906	2,046
WORLD	6,515	7,898	9,827	11,641	9,549	11,414	11,097

Source: International Finance Corporation

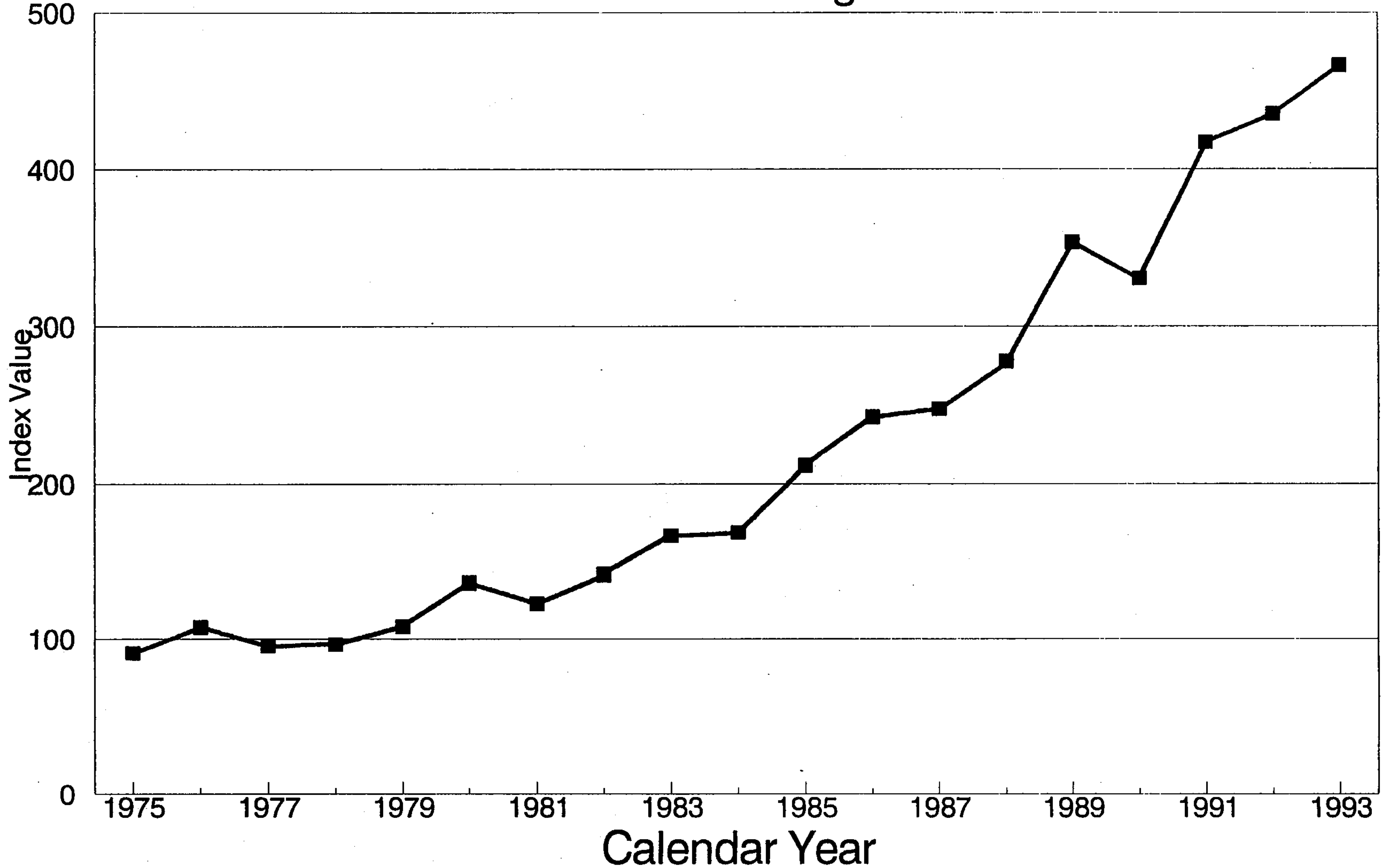


Source: International Finance Corporation

EXHIBIT 7

Standard and Poor's 500 Index

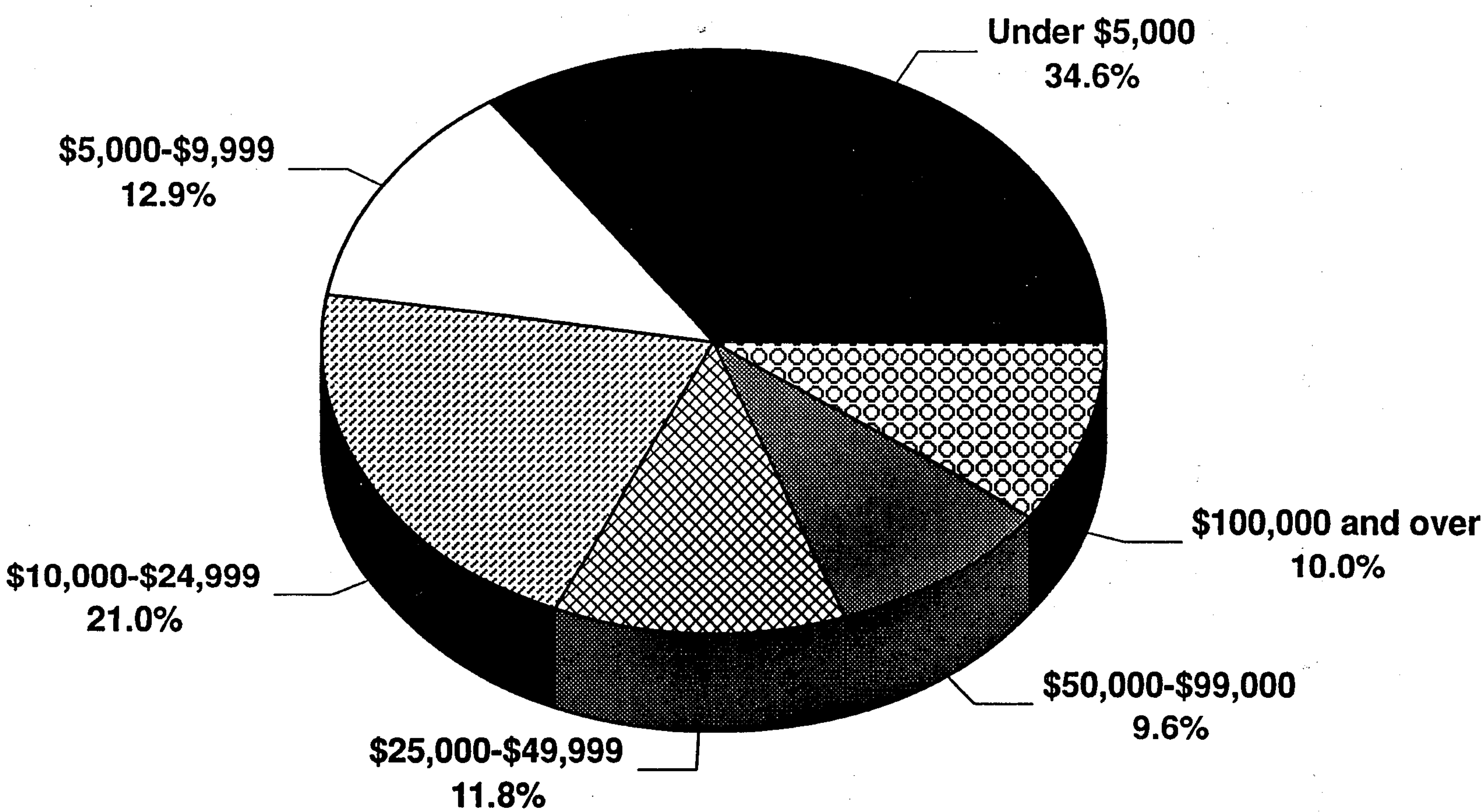
Year–End Closing Value



SOURCE: BLOOMBERG

EXHIBIT 8

Stock Portfolio Size of Individual Shareowners



SOURCE: NYSE Shareowner Survey (1990)

EXHIBIT 9

Annual Number of Stock Transactions by Individual Shareowners

# of Trades	NYSE Survey (Mid-89 to mid-1990)
None	44.9%
1	15.3
2	10.5
3	5.3
4	6.3
5	2.8
6+	14.9

# of Trades	NASD Survey (Late '84-'85)
None	26.3%
1	18.4
2	10.6
3	10.6
4	5.3
5+	28.9

SOURCE: NYSE Shareowner Survey 1990

EXHIBIT 10

Asset Size and Turnover of Brokerage Accounts

Composition of funds under management of each Registered Representative ("RR")
90.7% retail
9.3% institutional

Average number of clients per RR= 336.3

Median amount under management of each RR= $14.4 million

Median size of each account managed by RR= $42,818

Median amount of client dollars directed annually by each RR= $5.0 million ($14,868 per client; Note: This is the equivalent of approximately 300 shares of the average NYSE stock.)

Percentage of each account that RR directs annually into financial products= 34.7% (includes cash investments, redistributions and rollovers).

Average amount of commissions generated per retail transaction = $142.00

SOURCE: "Registered Representative" Subscriber Study (1992) & SIA "Report on Production & Earnings of Registered Representatives in 1991."

EXHIBIT 11

1993 MARKET SHARE DATA: NYSE STOCKS *				
	Average Shares Per Day (In Millions)	Average Shares Per Day (%)	Average Transactions Per Day	Average Transactions Per Day (%)
NYSE				
Regular Hours	264.8	78.53%	186,410	70.48%
Crossing Session I	0.2	0.06%		
Crossing Session II	4.4	1.30%		
ALL REGIONALS	34.3	10.17%	52,699	19.92%
BSE	4.2	1.25%	6,941	2.62%
CHX	13.1	3.88%	16,202	6.13%
PHLX	4.8	1.42%	7,609	2.88%
PSE	8.4	2.49%	15,602	5.90%
CSE	3.8	1.13%	6,345	2.40%
All Regionals Excluding CSE	30.5	9.05%	46,354	17.53%
THIRD MARKET				
Regular Hours **	19.6	5.81%	24,847	9.39%
After Hours	0.9	0.27%		
PTS				
Regular Hours	3.6	1.07%	543	0.21%
PTS After Hours	1.1	0.33%		
OVERSEAS BY NYSE FIRMS				
Program Trades	5.9	1.75%		
OTC (non–program)	1.7	0.50%		
Foreign Exchanges (non–program)	0.7	0.21%		
TOTAL	**337.2**	**100.00%**	**264,499**	**100.00%**

* These figures are for the first six months of 1993 (125 trading days), except for non–program foreign data, which uses a daily average from May, June, and July 1993. The figures do not include trades executed in the fourth market, such as trades directly between institutions without using an exchange or a broker–dealer.

** Regular hours refers to the operating hours of the NYSE. After hours trades are trades executed outside of the operating hours of the NYSE.

EXHIBIT 12

1993 MARKET SHARE DATA: NASDAQ NMS STOCKS				
	Average Shares Per Day (In Millions)	Average Shares Per Day (%)	Average Transactions Per Day	Average Transactions Per Day (%)
NASDAQ				
Regular Hours	206.8	86.13%	111,078	90.24%
After Hours (Form T)	1.0	0.42%	200	0.16%
PTS				
Regular Hours	31.9	13.29%	11,812	9.60%
After Hours	0.4	0.17%		
TOTAL	**240.1**	**100.00%**	**123,090**	**100.00%**

NOTE: These figures are for the first six months of 1993 (125 trading days). NASDAQ International is not stated separately since it averaged only 16,744 shares per day during this period.

EXHIBIT 13

Average Daily Trading Volume on U.S. Stock Markets

Dollar Value

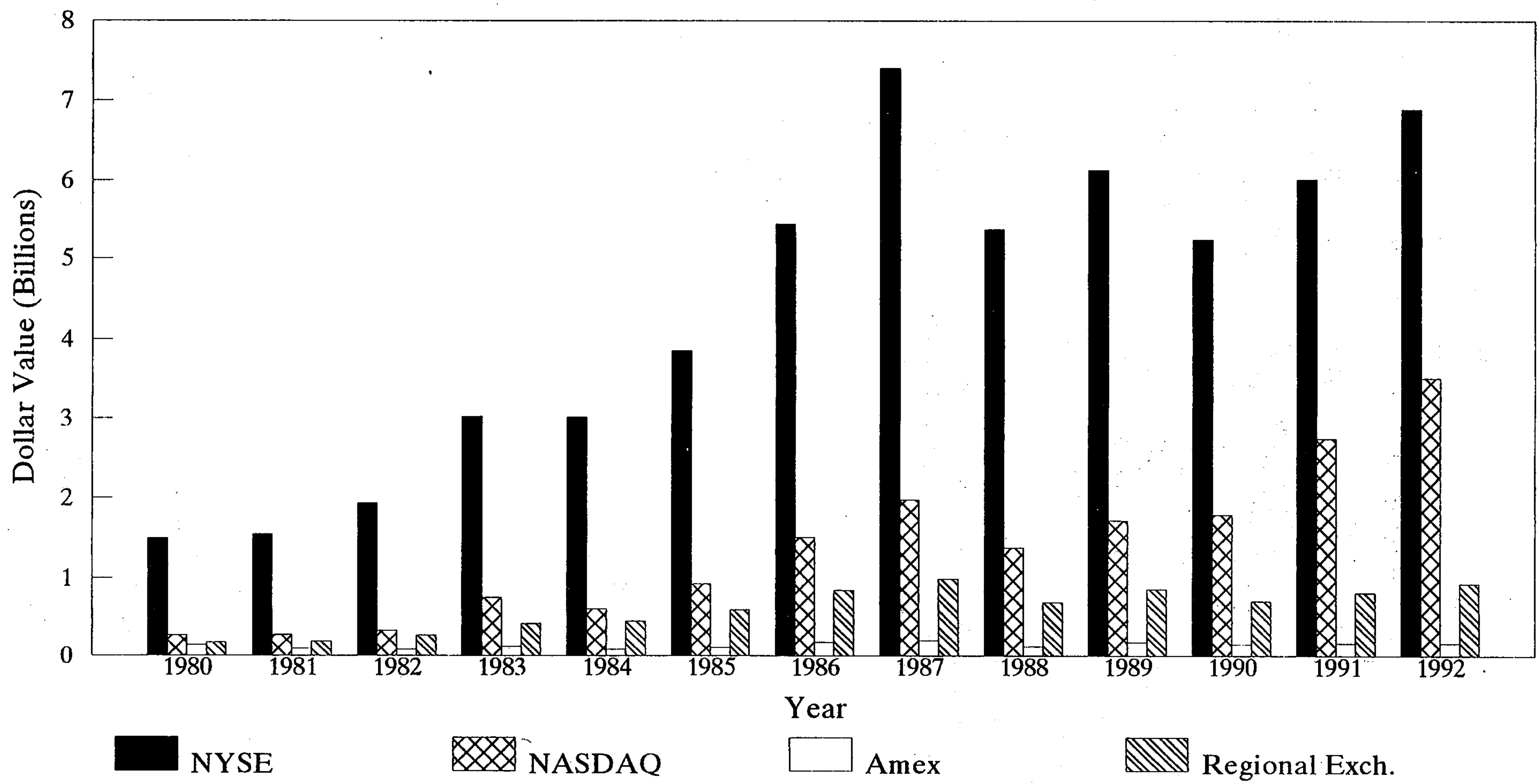


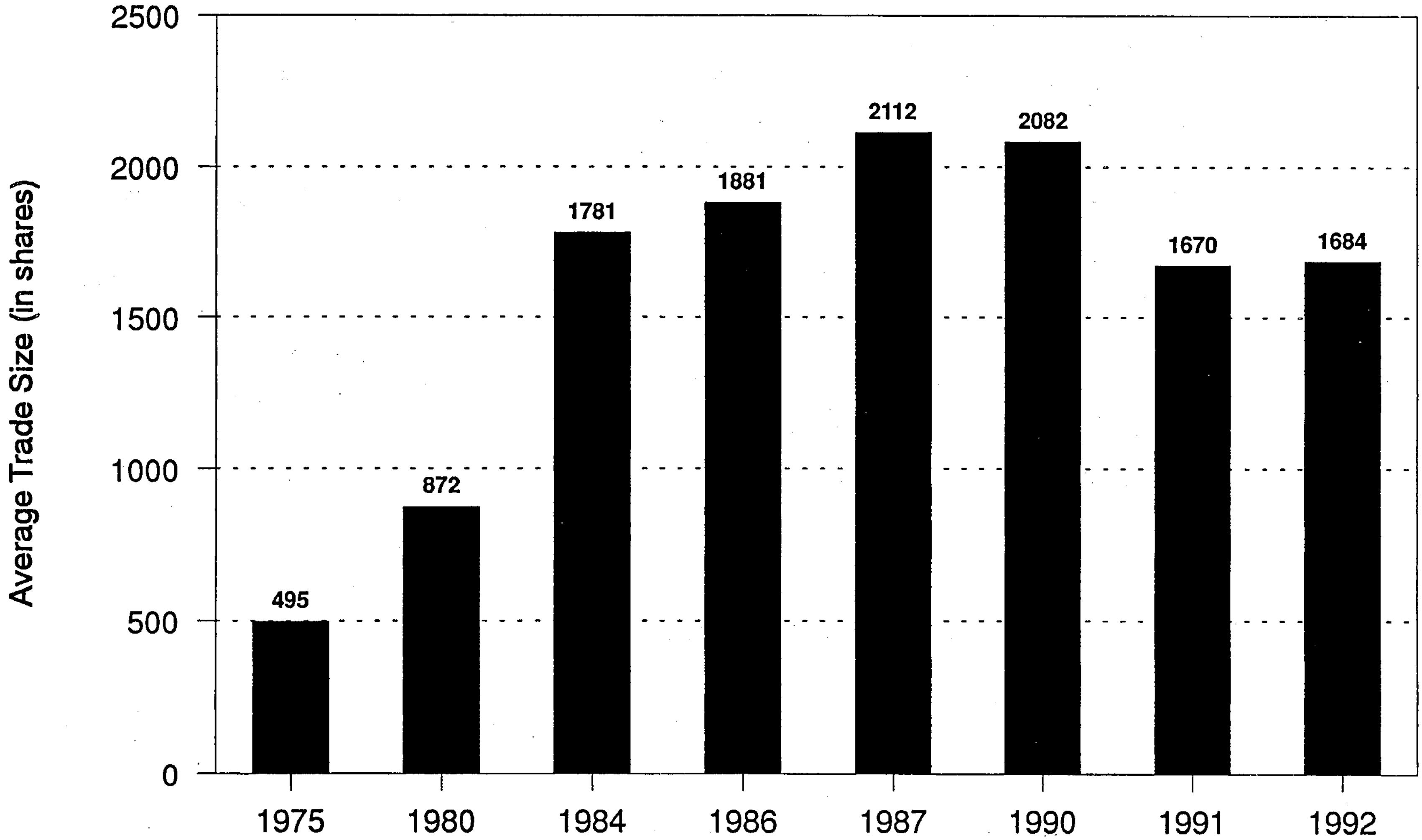
EXHIBIT 14

ANNUAL VOLUME / AVERAGE TRADE SIZE ON THE NEW YORK STOCK EXCHANGE		
Year	Volume (Billions of Shares)	Average Trade Size
1975	4.69	495
1980	11.35	872
1984	23.07	1,781
1986	35.68	1,881
1987	47.80	2,112
1988	40.85	2,303
1989	41.70	2,123
1990	39.66	2,082
1991	45.27	1,670
1992	51.38	1,684

Source: 1992 NYSE Factbook

EXHIBIT 15

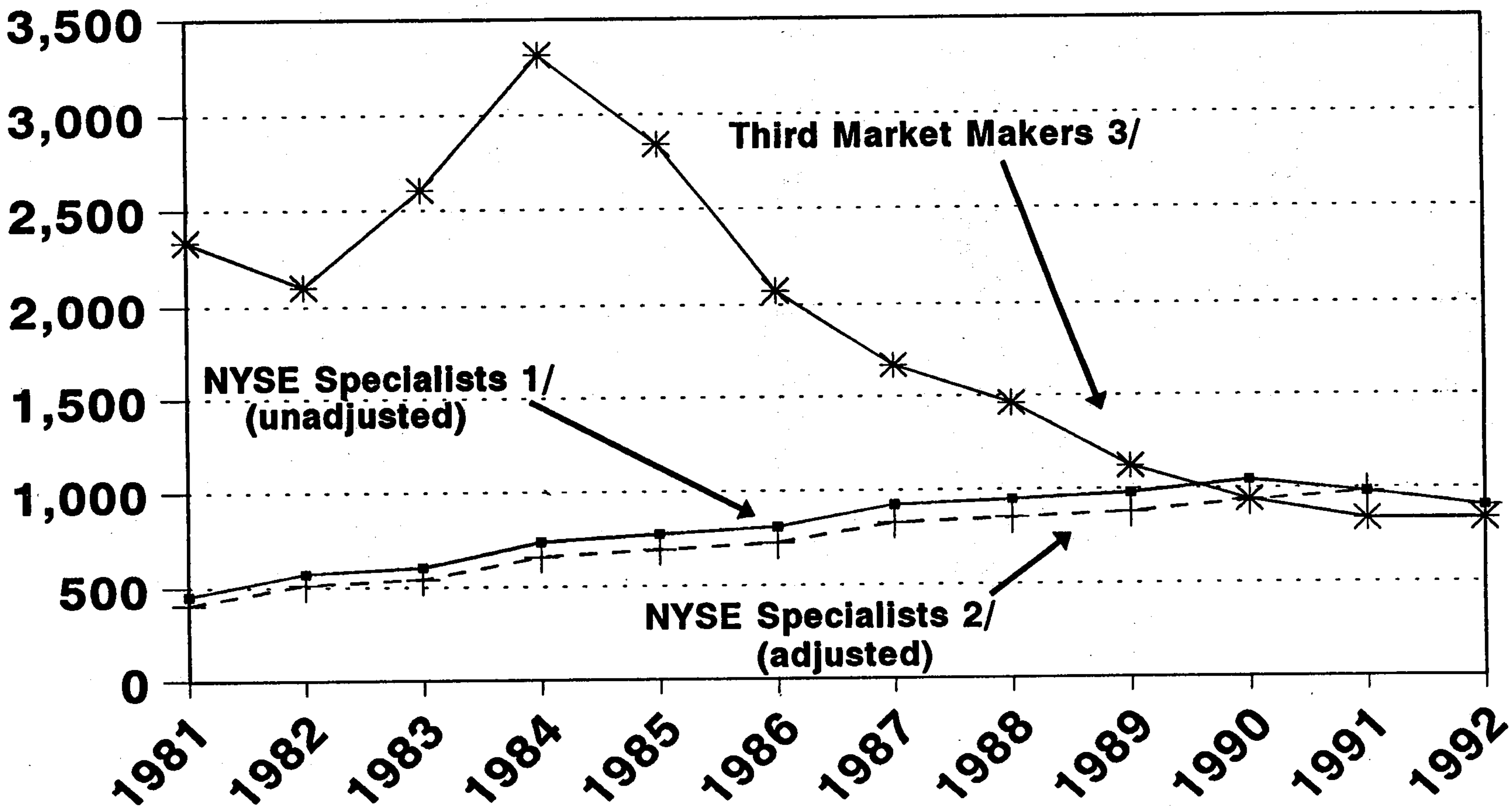
Average Trade Size on New York Stock Exchange



SOURCE: 1992 NYSE Factbook

EXHIBIT 16

Average Trade Size of Dealer Transactions
NYSE Specialists Versus Third Market Makers



1/ Trades executed by NYSE specialists as dealer (not adjusted for order bunching).
2/ Figures adjusted to reflect bunching of orders in 1981-1990.
3/ All OTC trades in NYSE-listed stocks (excluding Instinet).

EXHIBIT 17

ANNUAL VOLUME / AVERAGE TRADE SIZE ON NASDAQ		
Year	Volume (Billions of Shares)	Average Trade Size (NMS)
1975	1.39	*
1980	6.69	*
1986	28.74	1,616
1987	37.89	1,678
1988	31.07	2,025
1989	33.53	2,049
1990	33.38	2,124
1991	41.31	1,945
1992	48.46	1,915

* Unavailablefor these years
Source: 1992 NASDAQ Factbook

EXHIBIT 18

Distribution of consolidated tape trades in NYSE stocks, 1976-1992

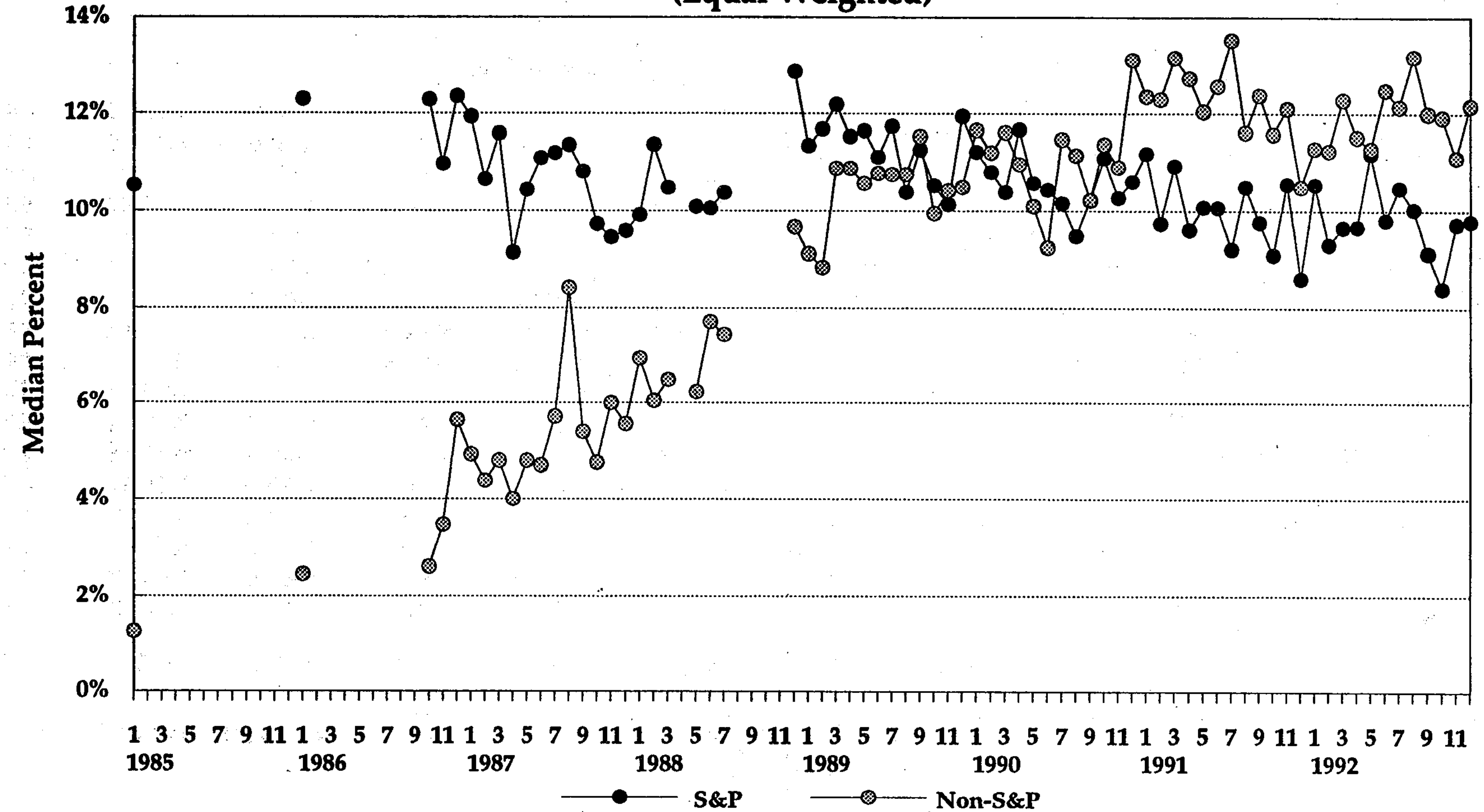
Year	NYSE	AMEX	PSE	CHX	PHLX	BSE	CSE	REGIONAL	INSTINET	NASD	TOTAL
1976	85.99%	0.01%	4.86%	3.56%	1.50%	0.85%	0.77%	11.55%	0.01%	2.39%	100.00%
1977	85.16%	0.02%	5.65%	3.39%	1.55%	0.77%	1.61%	12.99%	0.02%	1.83%	100.00%
1978	87.02%	0.01%	5.64%	3.16%	2.20%	0.65%	0.47%	12.13%	0.02%	0.83%	100.00%
1979	86.58%	0.00%	5.51%	3.33%	2.77%	0.65%	0.53%	12.79%	0.03%	0.60%	100.00%
1980	85.37%	0.01%	5.34%	3.58%	3.47%	0.77%	0.71%	13.88%	0.02%	0.74%	100.00%
1981	82.42%	0.00%	6.41%	4.54%	3.85%	0.91%	0.87%	16.58%	0.02%	0.96%	100.00%
1982	78.61%	0.00%	8.27%	5.89%	3.92%	1.00%	0.84%	19.92%	0.04%	1.44%	100.00%
1983	77.68%	0.00%	8.58%	6.81%	3.88%	1.25%	0.49%	21.01%	0.04%	1.28%	100.00%
1984	75.40%	0.00%	8.93%	7.95%	4.10%	1.78%	0.34%	23.10%	0.09%	1.41%	100.00%
1985	74.24%	0.00%	9.51%	8.16%	3.82%	2.17%	0.32%	23.98%	0.10%	1.70%	100.00%
1986	72.68%	0.00%	10.57%	8.52%	3.65%	2.25%	0.29%	25.28%	0.03%	2.00%	100.00%
1987	73.60%	0.00%	9.31%	8.94%	3.50%	2.32%	0.26%	24.33%	0.02%	2.05%	100.00%
1988	72.99%	0.00%	8.44%	9.74%	3.22%	2.33%	0.35%	24.08%	0.03%	2.91%	100.00%
1989	69.23%	0.00%	8.35%	10.43%	3.39%	3.16%	0.44%	25.77%	0.03%	4.98%	100.00%
1990	66.17%	0.00%	8.14%	9.71%	3.02%	3.77%	0.63%	25.27%	0.03%	8.53%	100.00%
1991	67.33%	0.00%	8.13%	8.03%	2.84%	3.37%	0.74%	23.11%	0.03%	9.53%	100.00%
1992	65.17%	0.00%	7.55%	8.34%	3.31%	3.17%	1.85%	24.22%	0.03%	10.57%	100.00%

Source: Consolidated Tape Association data.

EXHIBIT 19

Median Percent of Reported Trading Volume on Regional Exchanges for S&P and Non-S&P Stocks Listed on the NYSE

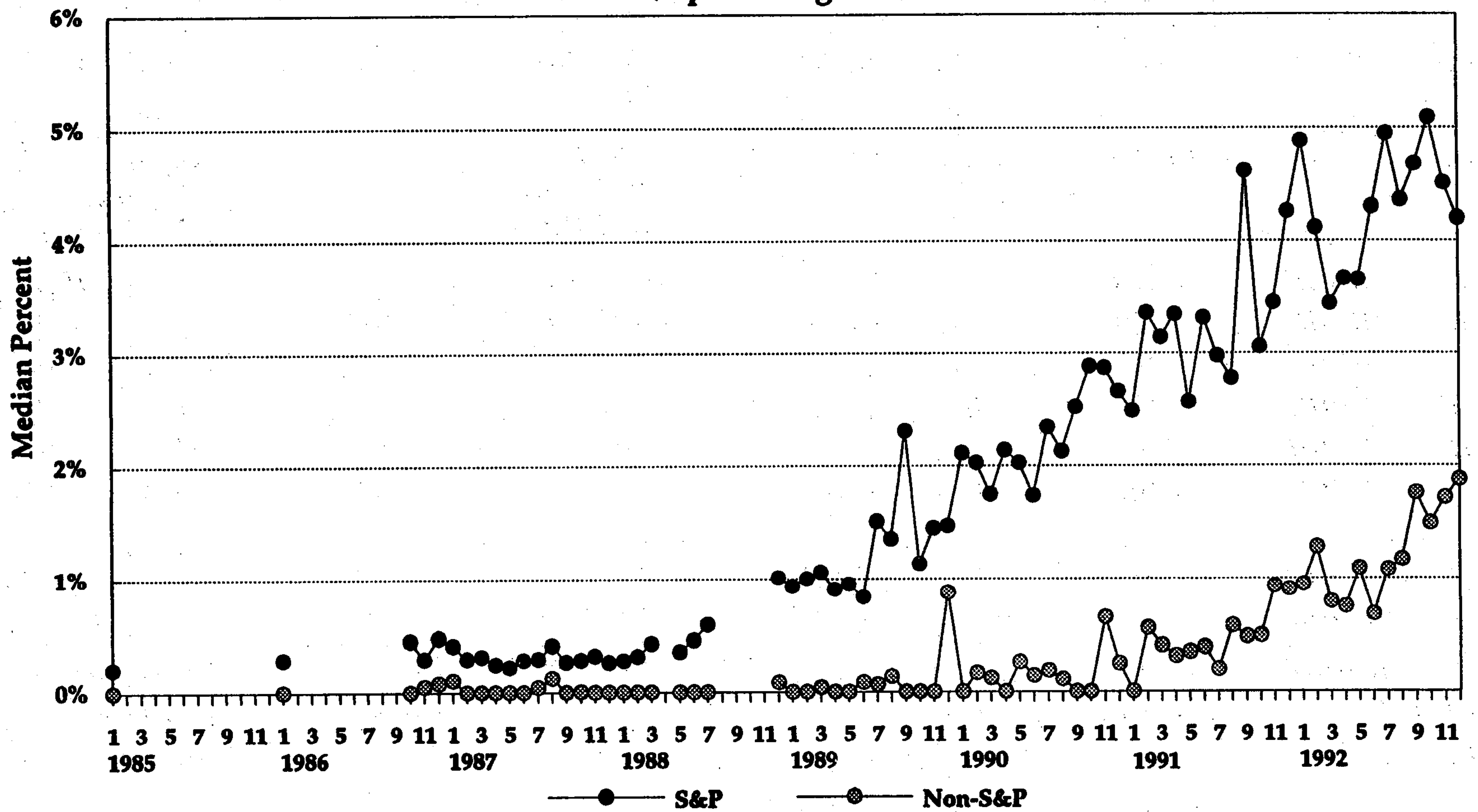
Jan 1985-Dec 1992
(Equal-Weighted)



Note: Dots are shown for months for which data is available.

EXHIBIT 20

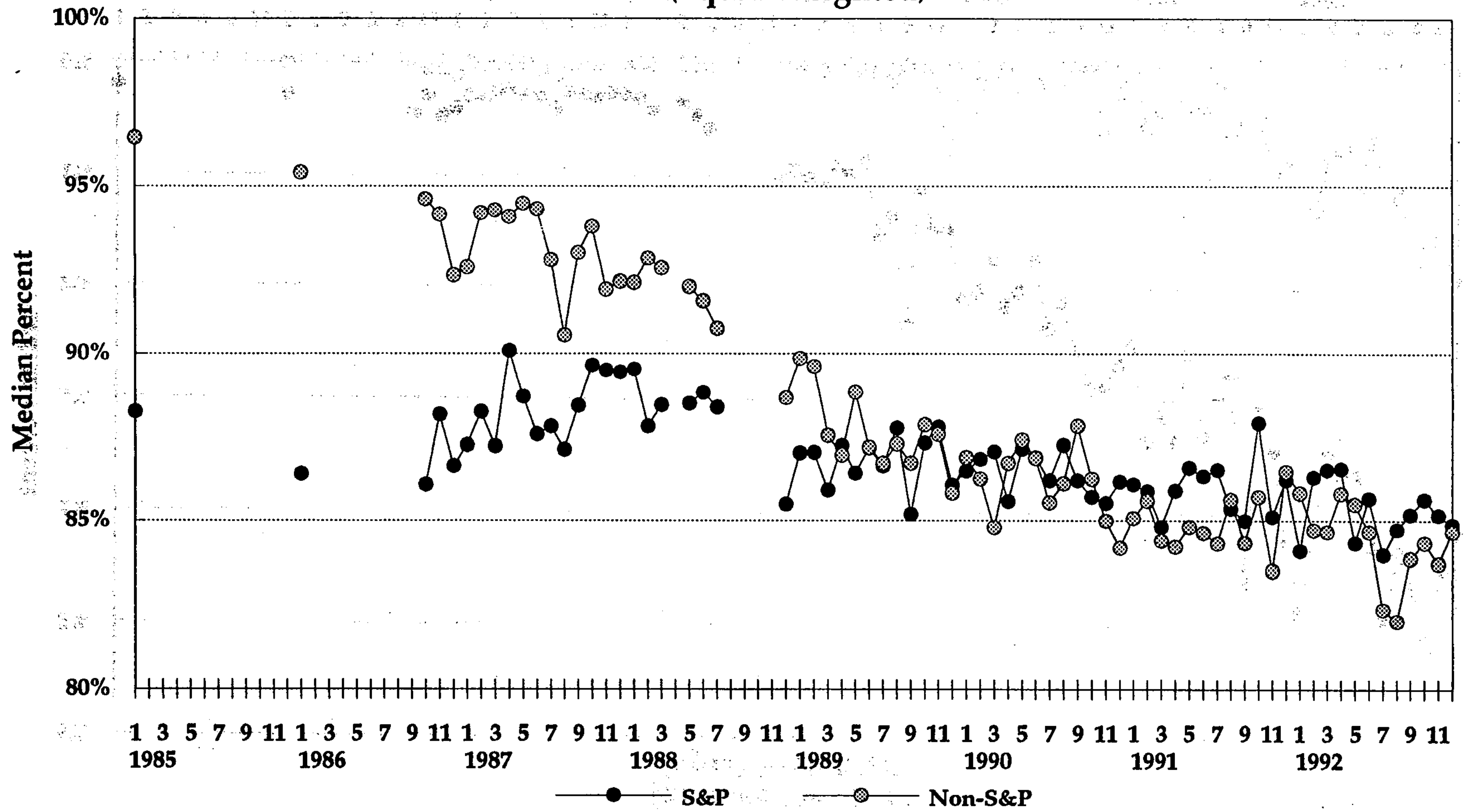
Median Percent of Reported OTC Trading Volume for S&P and Non-S&P Stocks Listed on the NYSE
Jan 1985-Dec 1992
(Equal-Weighted)



Note: Dots are shown for months for which data is available.

EXHIBIT 21

Median Percent of Reported NYSE Trading Volume for S&P and Non-S&P Stocks Listed on the NYSE
Jan 1985-Dec 1992
(Equal-Weighted)



Note: Dots are shown for months for which data is available.

EXHIBIT 22

AVERAGE PRICE AND AVERAGE TRADES PER DAY OF NYSE LISTED STOCKS, BY CONCENTRATION CATEGORY
PERIOD: MAY 10 – 14, 1993

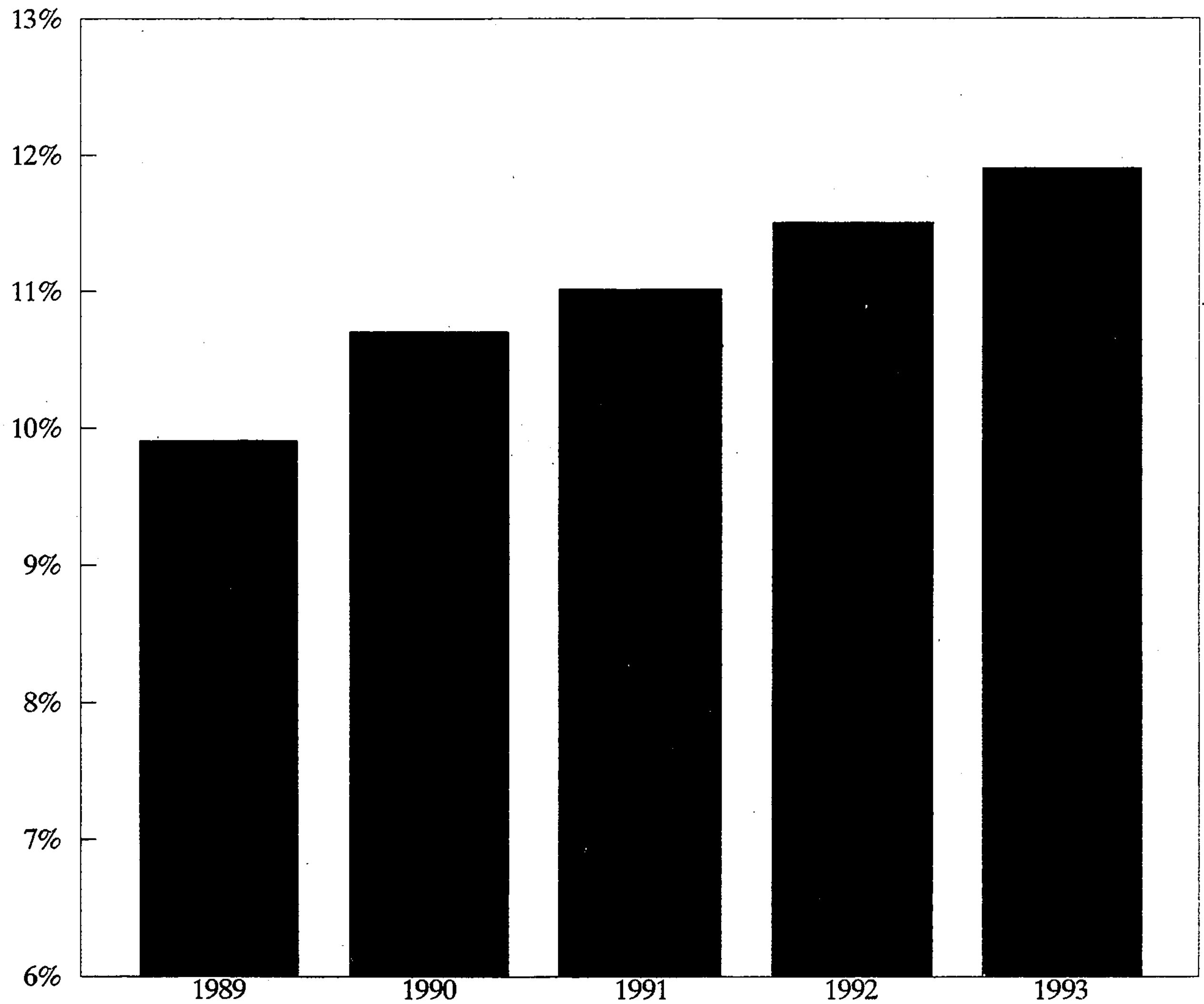
Stock Concentration	Average Price	Average Number of Daily Trades	Number of Stocks
100–90%	$22.98	17.4	394
90–80%	$29.33	36.4	391
80–70%	$26.07	53.4	433
70–60%	$24.73	74.3	366
60–50%	$22.02	109.8	280
50–40%	$19.13	164.7	167
40% or less	$17.55	308.9	120
All stocks:	$24.33	77.5	2,151

* The concentration measure is equal to the number of small trades executed on the NYSE as a percent of all small trades for each stock. Trades of less than 3,000 shares are considered small. The higher the percentage figure the greater the concentration of order flow on the NYSE (i.e., a concentration level of 90% means only 10% of small trades are executed off the NYSE.)

EXHIBIT 23

AVERAGE PROGRAM TRADING VOLUME EXECUTED ON THE NYSE AS A PERCENT OF NYSE VOLUME

1989	9.9%
1990	10.7%
1991	11.0%
1992	11.5%
1993	11.9%



NOTES: BEGINNING JUNE 1991, DATA INCLUDES CROSSING SESSION II VOLUME. ALL FIGURES REVISED TO INCLUDE DATA NOT AVAILABLE AT TIME OF PUBLICATION OF NYSE WEEKLY PROGRAM TRADING REPORTS (SEE EXHIBITS 24 – 27 FOR 1993 WEEKLY DATA). SOURCE: NYSE

EXHIBIT 24

NYSE MEMBER FIRM PROGRAM TRADING

STATISTICS BY MARKET	BY EXECUTING MARKET					EXECUTED ON THE NYSE				
	AVG DAILY PROGRAM TRADING	MARKET SEGMENTS: NYSE	FOREIGN MARKETS	OTHER U. S.	TOTAL	AVG DAILY NYSE VOLUME	PROGRAMS AS PCT OF NYSE VOL	AVG PROG TRADING	BUYS	SELLS
LATEST AVAILABLE WEEK:										
12/27 – 12/31 1993	27.7	74.6%	15.1%	10.3%	100.0%	201.4	10.3%	20.7	8.7	12.0
1993 STATISTICS										
4 TRIPLE–WITCH WEEKS										
AVERAGES:	80.0	80.6%	16.6%	2.9%	N/A	269.4	23.9%	64.2	35.0	29.3
HIGHS:	92.3	88.0%	29.4%	3.3%	N/A	301.6	29.1%	81.2	43.6	37.6
LOWS:	68.3	67.8%	8.7%	2.1%	N/A	247.2	20.5%	56.6	28.9	25.4
8 DOUBLE–WITCH WEEKS										
AVERAGES:	44.0	82.0%	14.7%	3.2%	N/A	280.9	12.9%	36.0	20.0	16.1
HIGHS:	51.7	92.6%	30.4%	6.3%	N/A	313.5	16.4%	45.8	24.0	23.7
LOWS:	32.1	68.4%	4.1%	1.2%	N/A	255.1	9.2%	26.7	15.0	11.1
12 EXPIRATION WEEKS										
AVERAGES:	56.0	81.6%	15.3%	3.1%	N/A	277.1	16.5%	45.4	25.0	20.5
HIGHS:	92.3	92.6%	30.4%	6.3%	N/A	313.5	29.1%	81.2	43.6	37.6
LOWS:	32.1	67.8%	4.1%	1.2%	N/A	247.2	9.2%	26.7	15.0	11.1
40 NONEXPIRATION WEEKS										
AVERAGES:	36.4	74.6%	21.7%	3.7%	N/A	260.7	10.2%	26.6	14.4	12.2
HIGHS:	69.1	92.2%	50.3%	10.8%	N/A	312.0	18.6%	54.5	34.6	20.1
LOWS:	24.8	47.6%	7.1%	0.3%	N/A	201.4	6.5%	18.1	6.8	7.2
52 1993 WEEKS TO DATE										
AVERAGES:	40.9	76.2%	20.2%	3.6%	N/A	264.5	11.7%	31.0	16.9	14.1
HIGHS:	92.3	92.6%	50.3%	10.8%	N/A	313.5	29.1%	81.2	43.6	37.6
LOWS:	24.8	47.6%	4.1%	0.3%	N/A	201.4	6.5%	18.1	6.8	7.2

NOTES: TRIPLE EXPIRATION: STOCK INDEX FUTURES, STOCK OPTIONS AND STOCKS. DOUBLE EXPIRATION: STOCK OPTIONS AND STOCKS

STATISTICS BASED ON COMPILATION OF DATA FROM NYSE WEEKLY PROGRAM TRADING REPORTS WHICH ARE SUBJECT TO REVISION.

EXHIBIT 25

NYSE MEMBER FIRM PROGRAM TRADING

WEEKLY DATA BY MARKET		BY EXECUTING MARKET					EXECUTED ON THE NYSE				
		AVG DAILY	MARKET SEGMENTS				AVG DAILY	PROGRAMS			
YEAR TO DATE WEEKLY PERIODS	EXPIR. TYPE	PROGRAM TRADING	NYSE	FOREIGN MARKETS	OTHER U.S.	TOTAL	NYSE VOLUME	AS PCT OF NYSE VOL	AVG PROG TRADING	BUYS	SELLS
12/27 – 12/31 1993		27.7	74.6%	15.1%	10.3%	100.0%	201.4	10.3%	20.7	8.7	12.0
12/20 – 12/24 1993		29.4	87.1%	7.5%	5.4%	100.0%	256.7	10.0%	25.6	14.4	11.2
12/13 – 12/17 1993	TRIPLE	91.0	67.8%	29.4%	2.8%	100.0%	301.6	20.5%	61.7	35.3	26.4
12/06 – 12/10 1993		35.2	57.2%	36.5%	6.3%	100.0%	284.2	7.1%	20.1	10.4	9.7
11/29 – 12/03 1993		42.9	67.8%	24.3%	7.9%	100.0%	275.3	10.5%	29.0	12.7	16.3
11/22 – 11/26 1993		27.0	69.4%	22.6%	8.0%	100.0%	215.0	8.7%	18.7	11.2	7.5
11/15 – 11/19 1993	DOUBLE	50.6	72.0%	23.3%	4.7%	100.0%	296.8	12.3%	36.4	19.2	17.2
11/08 – 11/12 1993		26.1	76.2%	18.9%	4.9%	100.0%	280.3	7.1%	19.9	8.7	11.2
11/01 – 11/05 1993		41.0	70.3%	24.5%	5.2%	100.0%	312.0	9.3%	28.9	11.7	17.2
10/25 – 10/29 1993		45.7	60.0%	34.8%	5.2%	100.0%	278.8	9.8%	27.4	17.1	10.3
10/18 – 10/22 1993		36.8	67.2%	29.3%	3.5%	100.0%	305.5	8.1%	24.8	13.4	11.4
10/11 – 10/15 1993	DOUBLE	32.1	83.1%	10.6%	6.3%	100.0%	290.4	9.2%	26.7	15.0	11.7
10/04 – 10/08 1993		32.7	87.4%	9.3%	3.3%	100.0%	260.6	11.0%	28.6	15.2	13.4
09/27 – 10/01 1993		37.8	67.3%	24.1%	8.6%	100.0%	263.6	9.6%	25.4	13.9	11.5
09/20 – 09/24 1993		42.0	58.3%	34.7%	7.0%	100.0%	267.7	9.2%	24.5	13.7	10.8
09/13 – 09/17 1993	TRIPLE	92.3	88.0%	8.7%	3.3%	100.0%	279.0	29.1%	81.2	43.6	37.6
09/06 – 09/10 1993		29.0	83.6%	11.6%	4.8%	100.0%	257.5	9.4%	24.3	16.6	7.7
08/30 – 09/03 1993		47.6	67.2%	27.5%	5.3%	100.0%	229.1	14.0%	32.0	17.1	14.9
08/23 – 08/27 1993		66.5	47.6%	50.3%	2.1%	100.0%	246.3	12.8%	31.6	20.0	11.6
08/16 – 08/20 1993	DOUBLE	44.5	82.4%	14.1%	3.5%	100.0%	275.1	13.3%	36.7	18.0	18.7
08/09 – 08/13 1993		32.1	56.5%	40.0%	3.5%	100.0%	248.8	7.3%	18.1	10.5	7.6
08/02 – 08/06 1993		28.5	70.6%	26.5%	2.9%	100.0%	240.0	8.4%	20.1	10.9	9.2
07/26 – 07/30 1993		28.0	90.4%	8.8%	0.8%	100.0%	253.9	10.0%	25.3	14.5	10.8
07/19 – 07/23 1993		38.9	84.2%	14.2%	1.6%	100.0%	248.0	13.2%	32.7	20.1	12.6
07/12 – 07/16 1993	DOUBLE	46.3	89.2%	9.0%	1.8%	100.0%	255.1	16.2%	41.3	22.7	18.6
07/05 – 07/09 1993		25.9	84.6%	14.0%	1.4%	100.0%	251.4	8.7%	21.9	10.2	11.7
06/28 – 07/02 1993		34.5	81.3%	14.4%	4.3%	100.0%	262.9	10.7%	28.0	13.2	14.8
06/21 – 06/25 1993		69.1	56.0%	42.7%	1.3%	100.0%	247.4	15.6%	38.7	25.7	13.0
06/14 – 06/18 1993	TRIPLE	68.3	83.9%	14.0%	2.1%	100.0%	250.4	22.9%	57.4	32.0	25.4
06/07 – 06/11 1993		31.3	77.4%	20.3%	2.3%	100.0%	241.6	10.0%	24.2	17.0	7.2
06/01 – 06/04 1993		29.3	71.2%	27.0%	1.8%	100.0%	257.9	8.1%	20.9	11.6	9.3
05/24 – 05/28 1993		30.1	81.7%	15.8%	2.5%	100.0%	240.7	10.2%	24.6	12.7	11.9
05/17 – 05/21 1993	DOUBLE	51.7	88.6%	9.4%	2.0%	100.0%	279.9	16.4%	45.8	22.1	23.7
05/10 – 05/14 1993		34.0	86.3%	11.5%	2.2%	100.0%	251.6	11.7%	29.3	9.9	19.4
05/03 – 05/07 1993		24.8	84.1%	12.3%	3.6%	100.0%	248.2	8.4%	20.8	6.8	14.0
04/26 – 04/30 1993		40.6	66.3%	22.9%	10.8%	100.0%	264.3	10.2%	26.9	13.1	13.8
04/19 – 04/23 1993		28.6	90.1%	8.6%	1.3%	100.0%	283.4	9.1%	25.7	10.5	15.2
04/12 – 04/16 1993	DOUBLE	42.5	68.4%	30.4%	1.2%	100.0%	273.6	10.6%	29.1	18.0	11.1
04/05 – 04/08 1993		59.1	92.2%	7.1%	0.7%	100.0%	293.4	18.6%	54.5	34.6	19.9
03/29 – 04/02 1993		29.5	82.9%	15.1%	2.0%	100.0%	254.0	9.6%	24.4	14.5	9.9
03/22 – 03/26 1993		30.9	90.1%	8.5%	1.4%	100.0%	243.5	11.4%	27.8	15.3	12.5
03/15 – 03/19 1993	TRIPLE	68.5	82.7%	14.1%	3.2%	100.0%	247.2	22.9%	56.6	28.9	27.7
03/08 – 03/12 1993		48.4	70.2%	27.6%	2.2%	100.0%	266.8	12.7%	34.0	18.7	15.3
03/01 – 03/05 1993		37.7	82.5%	16.5%	1.0%	100.0%	254.7	12.2%	31.1	16.3	14.8
02/22 – 02/26 1993		52.7	90.9%	7.4%	1.7%	100.0%	295.0	16.2%	47.9	27.8	20.1
02/16 – 02/19 1993	DOUBLE	47.8	79.9%	17.0%	3.1%	100.0%	313.5	12.2%	38.2	24.0	14.2
02/08 – 02/12 1993		26.0	76.0%	21.4%	2.6%	100.0%	241.5	8.2%	19.8	12.1	7.7
02/01 – 02/05 1993		43.6	55.5%	44.2%	0.3%	100.0%	305.9	7.9%	24.2	14.5	9.7
01/25 – 01/29 1993		25.5	71.2%	28.1%	0.7%	100.0%	276.4	6.5%	18.1	8.8	9.3
01/18 – 01/22 1993		27.7	75.9%	19.2%	4.9%	100.0%	262.3	8.0%	21.1	9.6	11.5
01/11 – 01/15 1993	DOUBLE	36.7	92.6%	4.1%	3.3%	100.0%	262.9	12.9%	34.0	20.6	13.4
01/04 – 01/08 1993		30.5	75.4%	21.7%	2.9%	100.0%	260.8	8.8%	23.0	13.5	9.5

NOTES: TRIPLE EXPIRATION: STOCK INDEX FUTURES, STOCK OPTIONS AND STOCKS. DOUBLE EXPIRATION: STOCK OPTIONS AND STOCKS.
DATA COMPILED FROM NYSE WEEKLY PROGRAM TRADING REPORTS WHICH ARE SUBJECT TO REVISION.

EXHIBIT 26

NYSE MEMBER FIRM PROGRAM TRADING

STATISTICS BY STRATEGY / ACCOUNT	BY TYPE OF STRATEGY					BY TYPE OF ACCOUNT			
	INDEX ARBITRAGE	OTHER RULE 80A(c)	TOTAL INDEX ARB	ALL OTHER	TOTAL	FIRM	CUSTOMER FACILITATION	CUSTOMER	TOTAL
LATEST AVAILABLE WEEK:									
12/27 – 12/31 1993	28.0%	6.4%	34.4%	65.6%	100.0%	39.6%	5.3%	55.1%	100.0%
1993 STATISTICS									
4 TRIPLE–WITCH WEEKS									
AVERAGES:	45.0%	4.1%	49.1%	51.0%	N/A	43.7%	19.8%	36.5%	N/A
HIGHS:	50.2%	6.6%	56.8%	60.0%	N/A	47.9%	31.2%	45.7%	N/A
LOWS:	38.0%	2.0%	40.0%	43.2%	N/A	40.6%	9.9%	27.1%	N/A
8 DOUBLE–WITCH WEEKS									
AVERAGES:	47.2%	6.0%	53.2%	46.9%	N/A	46.7%	9.7%	43.6%	N/A
HIGHS:	59.2%	10.9%	64.5%	61.0%	N/A	57.7%	16.3%	54.1%	N/A
LOWS:	37.1%	1.8%	39.0%	35.5%	N/A	36.5%	4.1%	31.3%	N/A
12 EXPIRATION WEEKS									
AVERAGES:	46.5%	5.3%	51.8%	48.2%	N/A	45.7%	13.1%	41.3%	N/A
HIGHS:	59.2%	10.9%	64.5%	61.0%	N/A	57.7%	31.2%	54.1%	N/A
LOWS:	37.1%	1.8%	39.0%	35.5%	N/A	36.5%	4.1%	27.1%	N/A
40 NONEXPIRATION WEEKS									
AVERAGES:	33.7%	7.3%	40.9%	59.1%	N/A	44.0%	11.0%	45.0%	N/A
HIGHS:	47.5%	17.3%	53.7%	74.2%	N/A	66.0%	30.1%	57.3%	N/A
LOWS:	19.0%	2.7%	25.8%	46.3%	N/A	22.9%	2.9%	28.9%	N/A
52 1993 WEEKS TO DATE									
AVERAGES:	36.6%	6.8%	43.4%	56.6%	N/A	44.4%	11.4%	44.2%	N/A
HIGHS:	59.2%	17.3%	64.5%	74.2%	N/A	66.0%	31.2%	57.3%	N/A
LOWS:	19.0%	1.8%	25.8%	35.5%	N/A	22.9%	2.9%	27.1%	N/A

NOTES: TRIPLE EXPIRATION: STOCK INDEX FUTURES, STOCK OPTIONS AND STOCKS. DOUBLE EXPIRATION: STOCK OPTIONS AND STOCKS.
STATISTICS BASED ON COMPILATION OF DATA FROM NYSE WEEKLY PROGRAM TRADING REPORTS WHICH ARE SUBJECT TO REVISION.

EXHIBIT 27

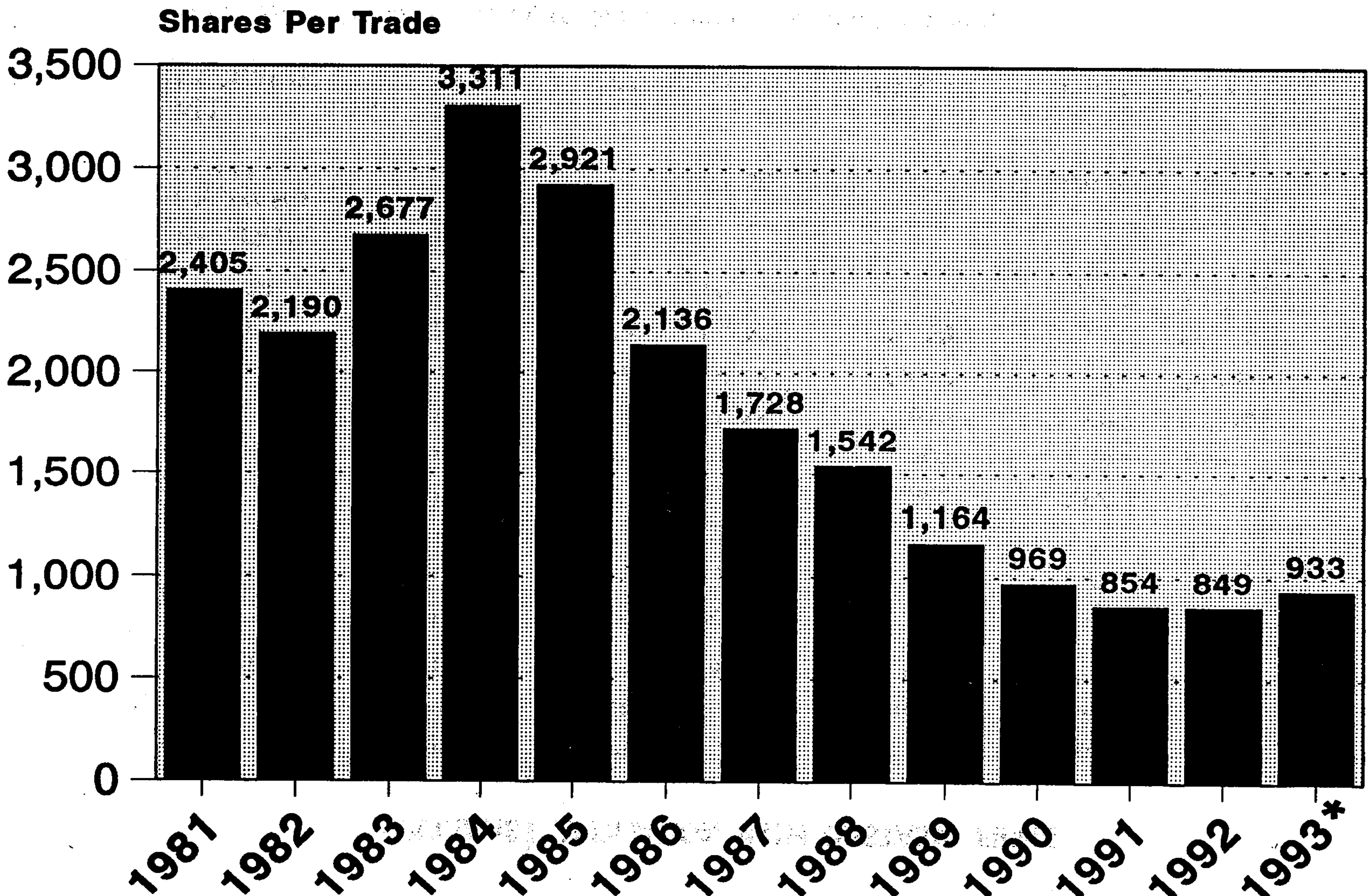
NYSE MEMBER FIRM PROGRAM TRADING

WEEKLY DATA BY STRATEGY / ACCOUNT		BY TYPE OF STRATEGY					BY TYPE OF ACCOUNT			
YEAR TO DATE WEEKLY PERIODS	EXPIR. TYPE	INDEX ARBITRAGE	OTHER RULE 80A(c)	TOTAL INDEX ARB	ALL OTHER	TOTAL	FIRM	CUSTOMER FACILITATION	CUSTOMER	TOTAL
12/27 – 12/31 1993		28.0%	6.4%	34.4%	65.6%	100.0%	39.6%	5.3%	55.1%	100.0%
12/20 – 12/24 1993		30.2%	3.7%	33.9%	66.1%	100.0%	36.6%	6.5%	56.9%	100.0%
12/13 – 12/17 1993	TRIPLE	46.2%	4.5%	50.7%	49.3%	100.0%	44.4%	9.9%	45.7%	100.0%
12/06 – 12/10 1993		22.5%	8.2%	30.7%	69.3%	100.0%	35.3%	13.0%	51.7%	100.0%
11/29 – 12/03 1993		19.0%	10.9%	29.9%	70.1%	100.0%	37.9%	9.8%	52.3%	100.0%
11/22 – 11/26 1993		28.4%	9.1%	37.5%	62.5%	100.0%	43.4%	12.3%	44.3%	100.0%
11/15 – 11/19 1993	DOUBLE	48.3%	10.9%	59.2%	40.8%	100.0%	53.5%	9.4%	37.1%	100.0%
11/08 – 11/12 1993		35.2%	14.6%	49.8%	50.2%	100.0%	59.6%	2.9%	37.5%	100.0%
11/01 – 11/05 1993		42.9%	8.7%	51.6%	48.4%	100.0%	52.6%	3.7%	43.7%	100.0%
10/25 – 10/29 1993		27.2%	7.7%	34.9%	65.1%	100.0%	40.7%	4.7%	54.6%	100.0%
10/18 – 10/22 1993		25.3%	8.6%	33.9%	66.1%	100.0%	42.9%	11.1%	46.0%	100.0%
10/11 – 10/15 1993	DOUBLE	48.4%	6.9%	55.3%	44.7%	100.0%	40.7%	5.2%	54.1%	100.0%
10/04 – 10/08 1993		21.3%	5.8%	27.1%	72.9%	100.0%	39.6%	15.8%	44.6%	100.0%
09/27 – 10/01 1993		23.0%	5.7%	28.7%	71.3%	100.0%	41.4%	12.8%	45.8%	100.0%
09/20 – 09/24 1993		33.7%	7.9%	41.6%	58.4%	100.0%	56.8%	6.8%	36.4%	100.0%
09/13 – 09/17 1993	TRIPLE	45.5%	3.2%	48.7%	51.3%	100.0%	40.6%	23.4%	36.0%	100.0%
09/06 – 09/10 1993		42.4%	8.6%	51.0%	49.0%	100.0%	53.3%	5.7%	41.0%	100.0%
08/30 – 09/03 1993		23.8%	3.8%	27.6%	72.4%	100.0%	36.1%	6.6%	57.3%	100.0%
08/23 – 08/27 1993		38.3%	12.3%	50.6%	49.4%	100.0%	55.6%	9.9%	34.5%	100.0%
08/16 – 08/20 1993	DOUBLE	59.2%	5.3%	64.5%	35.5%	100.0%	49.3%	5.2%	45.5%	100.0%
08/09 – 08/13 1993		38.9%	9.7%	48.6%	51.4%	100.0%	48.9%	6.1%	45.0%	100.0%
08/02 – 08/06 1993		24.5%	17.3%	41.8%	58.2%	100.0%	41.9%	7.6%	50.5%	100.0%
07/26 – 07/30 1993		37.4%	10.4%	47.8%	52.2%	100.0%	49.4%	8.0%	42.6%	100.0%
07/19 – 07/23 1993		32.0%	5.1%	37.1%	62.9%	100.0%	42.8%	20.0%	37.2%	100.0%
07/12 – 07/16 1993	DOUBLE	37.1%	4.7%	41.8%	58.2%	100.0%	43.1%	12.8%	44.1%	100.0%
07/05 – 07/09 1993		46.0%	7.7%	53.7%	46.3%	100.0%	50.6%	8.7%	40.7%	100.0%
06/28 – 07/02 1993		32.0%	5.3%	37.3%	62.7%	100.0%	47.6%	6.1%	46.3%	100.0%
06/21 – 06/25 1993		38.3%	3.5%	41.8%	58.2%	100.0%	66.0%	5.1%	28.9%	100.0%
06/14 – 06/18 1993	TRIPLE	50.2%	6.6%	56.8%	43.2%	100.0%	47.9%	14.8%	37.3%	100.0%
06/07 – 06/11 1993		46.3%	7.2%	53.5%	46.5%	100.0%	54.5%	7.1%	38.4%	100.0%
06/01 – 06/04 1993		20.0%	7.5%	27.5%	72.5%	100.0%	32.3%	19.5%	48.2%	100.0%
05/24 – 05/28 1993		37.1%	13.6%	50.7%	49.3%	100.0%	45.0%	7.2%	47.8%	100.0%
05/17 – 05/21 1993	DOUBLE	51.5%	7.3%	58.8%	41.2%	100.0%	57.7%	11.0%	31.3%	100.0%
05/10 – 05/14 1993		37.3%	7.2%	44.5%	55.5%	100.0%	45.1%	12.9%	42.0%	100.0%
05/03 – 05/07 1993		41.6%	5.7%	47.3%	52.7%	100.0%	45.6%	8.0%	46.4%	100.0%
04/26 – 04/30 1993		31.7%	5.0%	36.7%	63.3%	100.0%	33.2%	16.2%	50.6%	100.0%
04/19 – 04/23 1993		37.1%	8.1%	45.2%	54.8%	100.0%	43.3%	18.0%	38.7%	100.0%
04/12 – 04/16 1993	DOUBLE	48.5%	7.0%	55.5%	44.5%	100.0%	43.6%	13.7%	42.7%	100.0%
04/05 – 04/08 1993		22.9%	2.9%	25.8%	74.2%	100.0%	22.9%	30.1%	47.0%	100.0%
03/29 – 04/02 1993		39.5%	4.3%	43.8%	56.2%	100.0%	44.5%	5.9%	49.6%	100.0%
03/22 – 03/26 1993		43.0%	2.7%	45.7%	54.3%	100.0%	47.4%	12.6%	40.0%	100.0%
03/15 – 03/19 1993	TRIPLE	38.0%	2.0%	40.0%	60.0%	100.0%	41.7%	31.2%	27.1%	100.0%
03/08 – 03/12 1993		46.6%	3.1%	49.7%	50.3%	100.0%	37.9%	10.2%	51.9%	100.0%
03/01 – 03/05 1993		35.0%	6.9%	41.9%	58.1%	100.0%	39.6%	15.4%	45.0%	100.0%
02/22 – 02/26 1993		30.2%	5.3%	35.5%	64.5%	100.0%	39.7%	20.0%	40.3%	100.0%
02/16 – 02/19 1993	DOUBLE	47.3%	3.8%	51.1%	48.9%	100.0%	48.8%	4.1%	47.1%	100.0%
02/08 – 02/12 1993		41.9%	6.3%	48.2%	51.8%	100.0%	44.4%	12.3%	43.3%	100.0%
02/01 – 02/05 1993		35.6%	6.9%	42.5%	57.5%	100.0%	46.1%	5.9%	48.0%	100.0%
01/25 – 01/29 1993		47.5%	4.4%	51.9%	48.1%	100.0%	53.2%	10.0%	36.8%	100.0%
01/18 – 01/22 1993		30.7%	6.3%	37.0%	63.0%	100.0%	36.1%	22.7%	41.2%	100.0%
01/11 – 01/15 1993	DOUBLE	37.2%	1.8%	39.0%	61.0%	100.0%	36.5%	16.3%	47.2%	100.0%
01/04 – 01/08 1993		32.0%	5.7%	37.7%	62.3%	100.0%	30.7%	15.7%	53.6%	100.0%

NOTES: TRIPLE EXPIRATION: STOCK INDEX FUTURES, STOCK OPTIONS AND STOCKS. DOUBLE EXPIRATION: STOCK OPTIONS AND STOCKS.
DATA COMPILED FROM NYSE WEEKLY PROGRAM TRADING REPORTS WHICH ARE SUBJECT TO REVISION.

EXHIBIT 28

OTC Trading in NYSE-Listed Stocks



* First nine months

EXHIBIT 29

SPECIALIST AFFILIATION WITH UPSTAIRS FIRMS

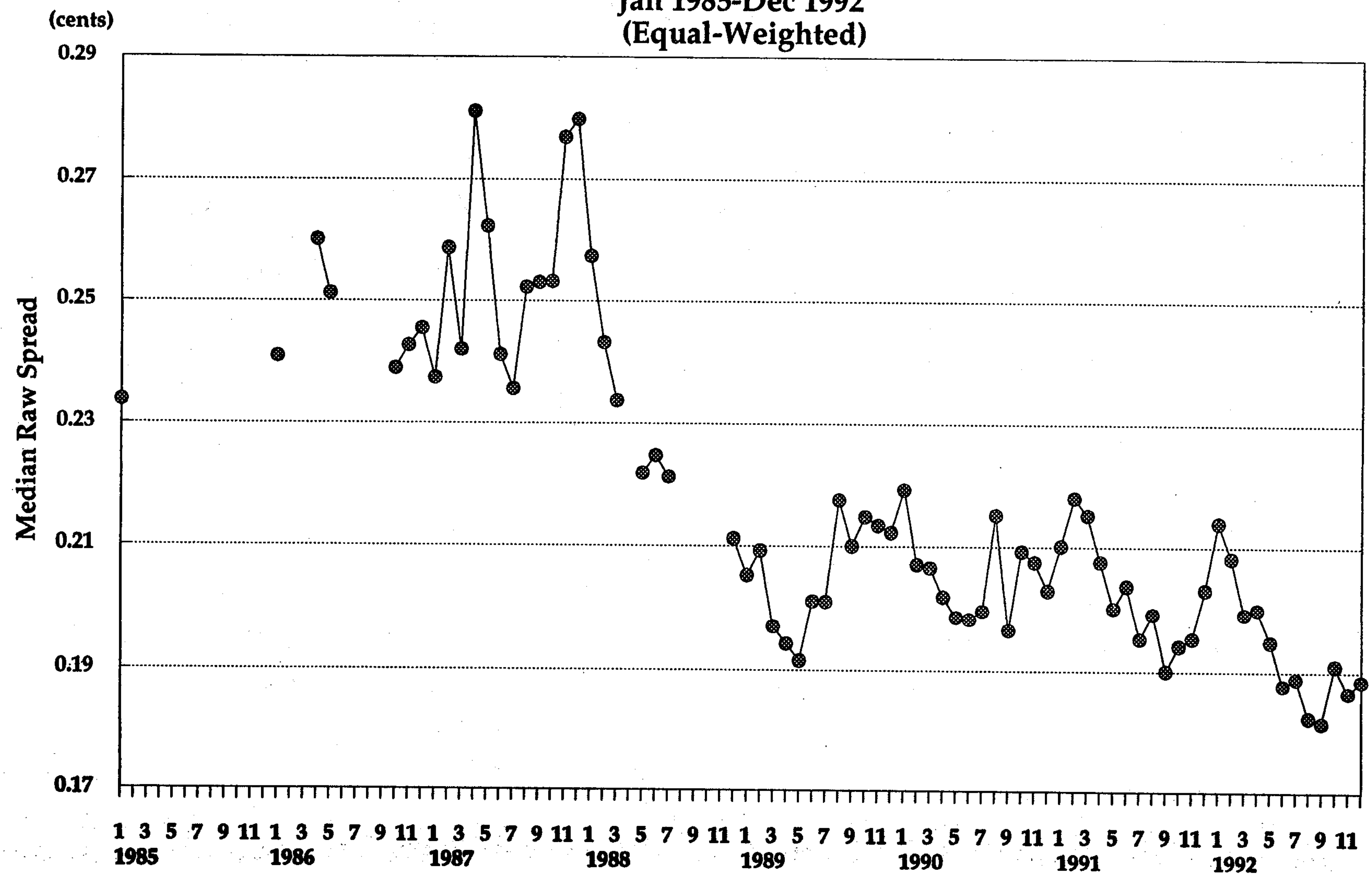
Exchange	Number of Specialist Units	Number of Affilated Units	Percent	Number of Stocks	Number of Stocks of Affiliates	Percent
Amex	15	3	20.0%	958	327	34.1%
NYSE	40	3	7.5%	2,089	259	12.4%
BSE	19	11	57.9%	1,863	1,681	90.2%
CHX	42	13	31.0%	2,306	582	25.2%
CSE	12	7	58.3%	543	500	92.1%
PHLX	26	4	15.4%	2,047	545	26.6%
PSE: LA	19	13	68.4%	1,758	1,213	69.0%
PSE: SF	17	13	76.5%	1,758	1,458	82.9%
REGIONAL EXCHANGE TOTAL	135	61	45.2%	10,275	5,979	58.2%
ALL EXCHANGES	190	67	35.3%	13,322	6,565	49.3%

Note: The CSE uses a multiple dealer system, so that there may be several designated dealers trading each stock. In the category for number of stocks traded by firms affiliated with an upstairs broker–dealer, we have counted each stock once, regardless of how many designated dealers trade it.

EXHIBIT 30

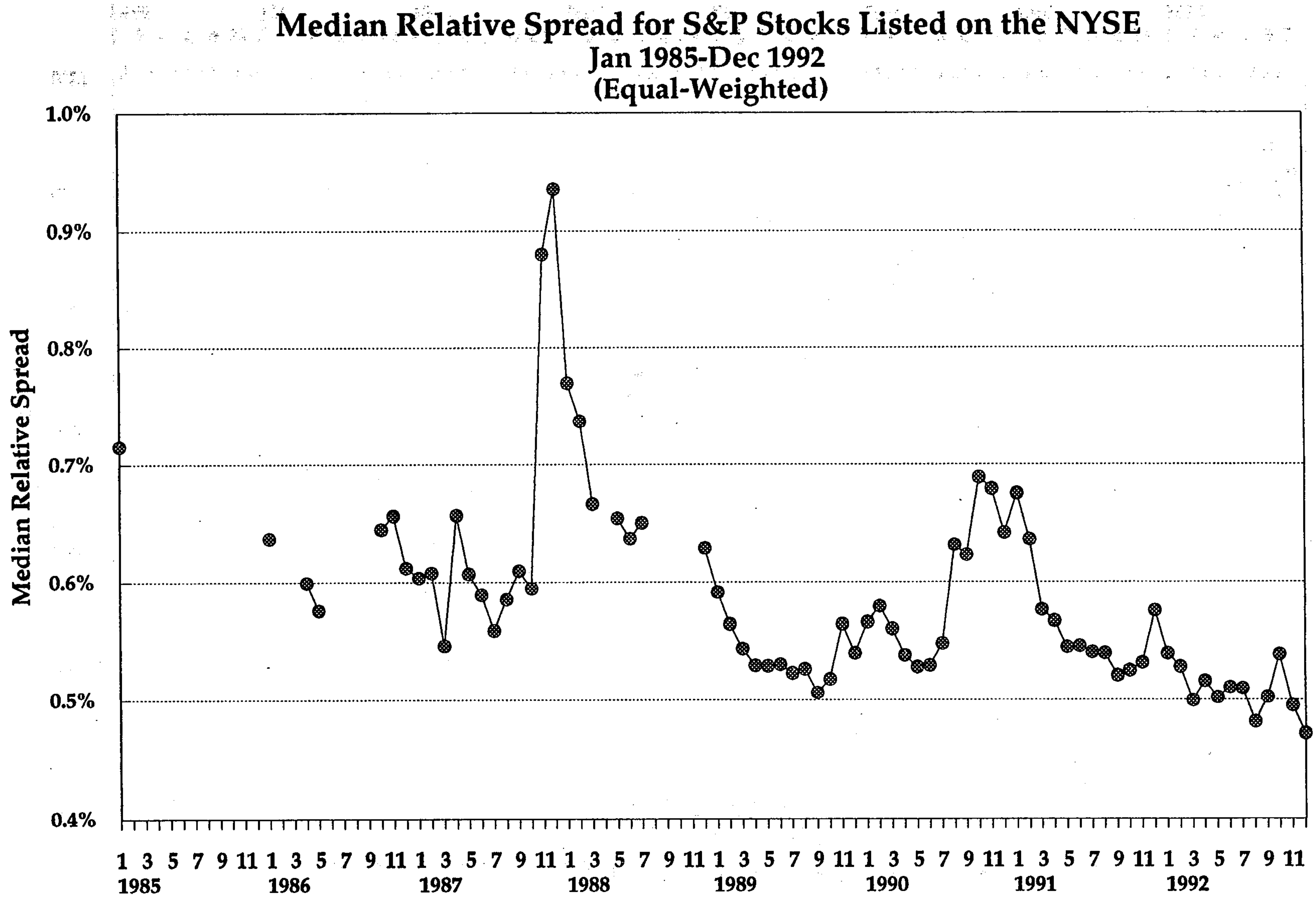
Median Raw Spread for S&P Stocks Listed on the NYSE

Jan 1985-Dec 1992
(Equal-Weighted)



Note: Dots are shown for months for which data is available.

EXHIBIT 31

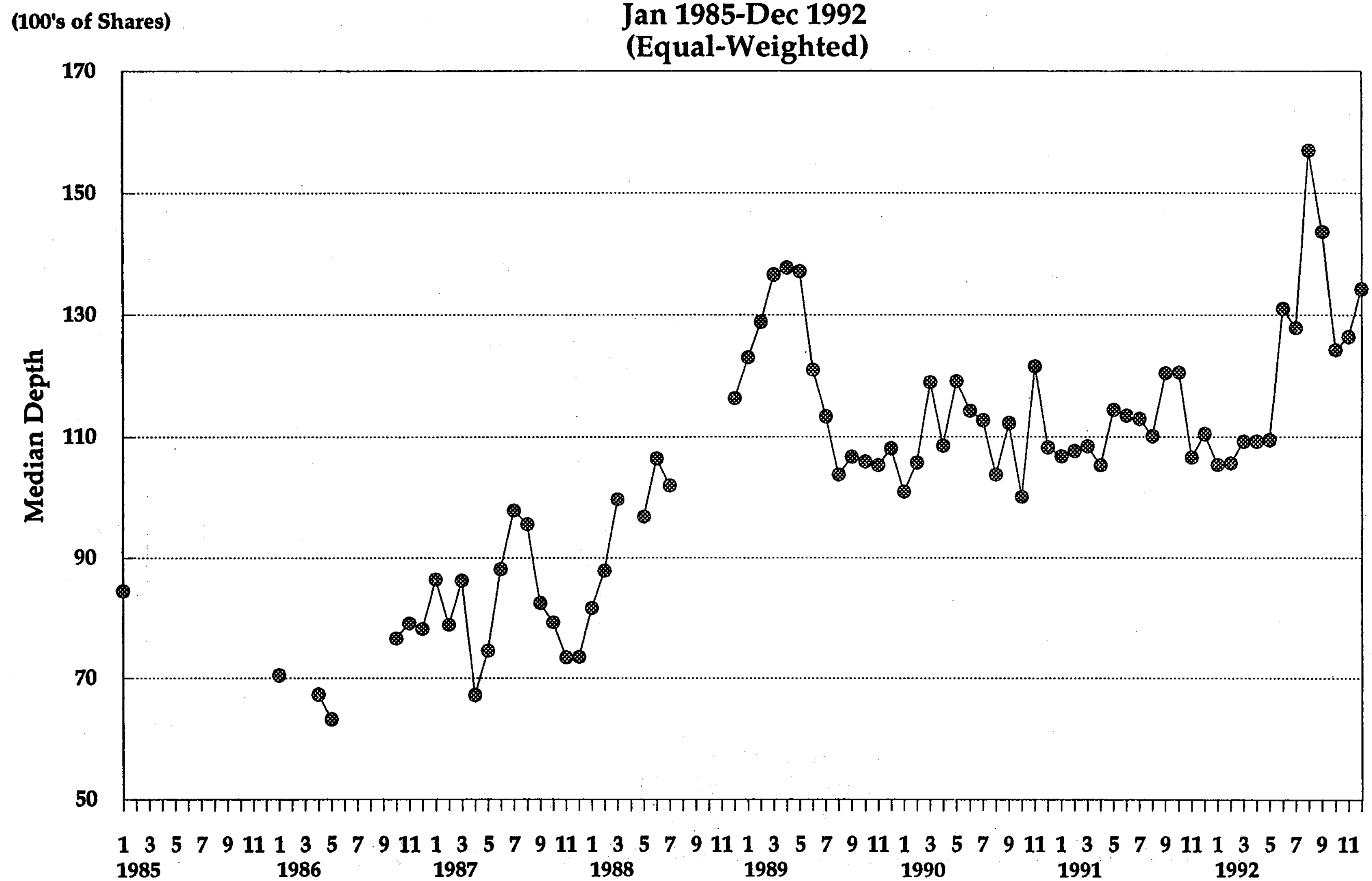


Note: Dots are shown for months for which data is available.

EXHIBIT 32

Median Depth for S&P Stocks Listed on the NYSE

Jan 1985-Dec 1992
(Equal-Weighted)

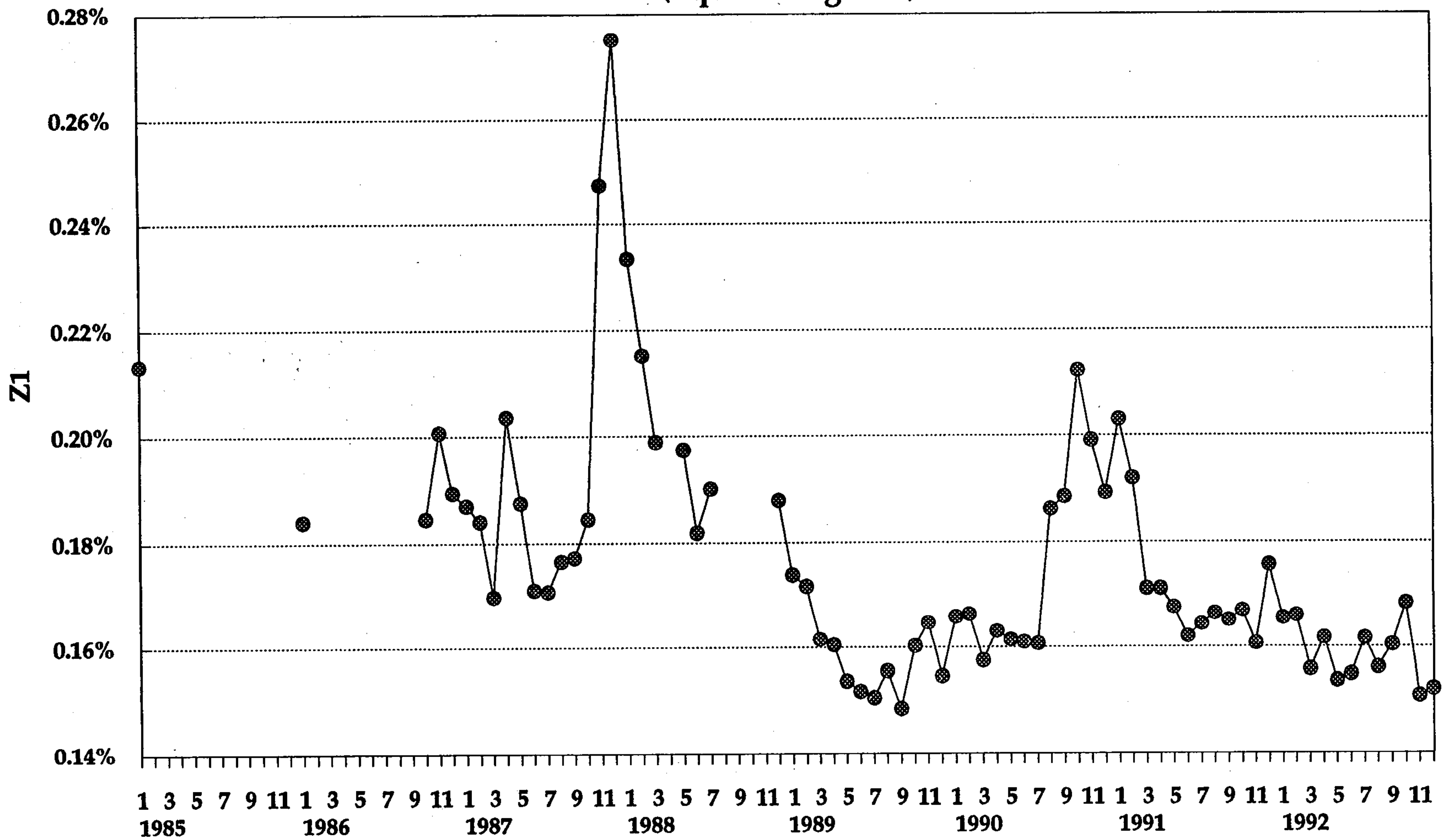


Note: Dots are shown for months for which data is available.

EXHIBIT 33

Median Difference Between the Price and Midpoint of Spread (Z1) for S&P Stocks Listed on the NYSE*

Jan 1985-Dec 1992
(Equal-Weighted)

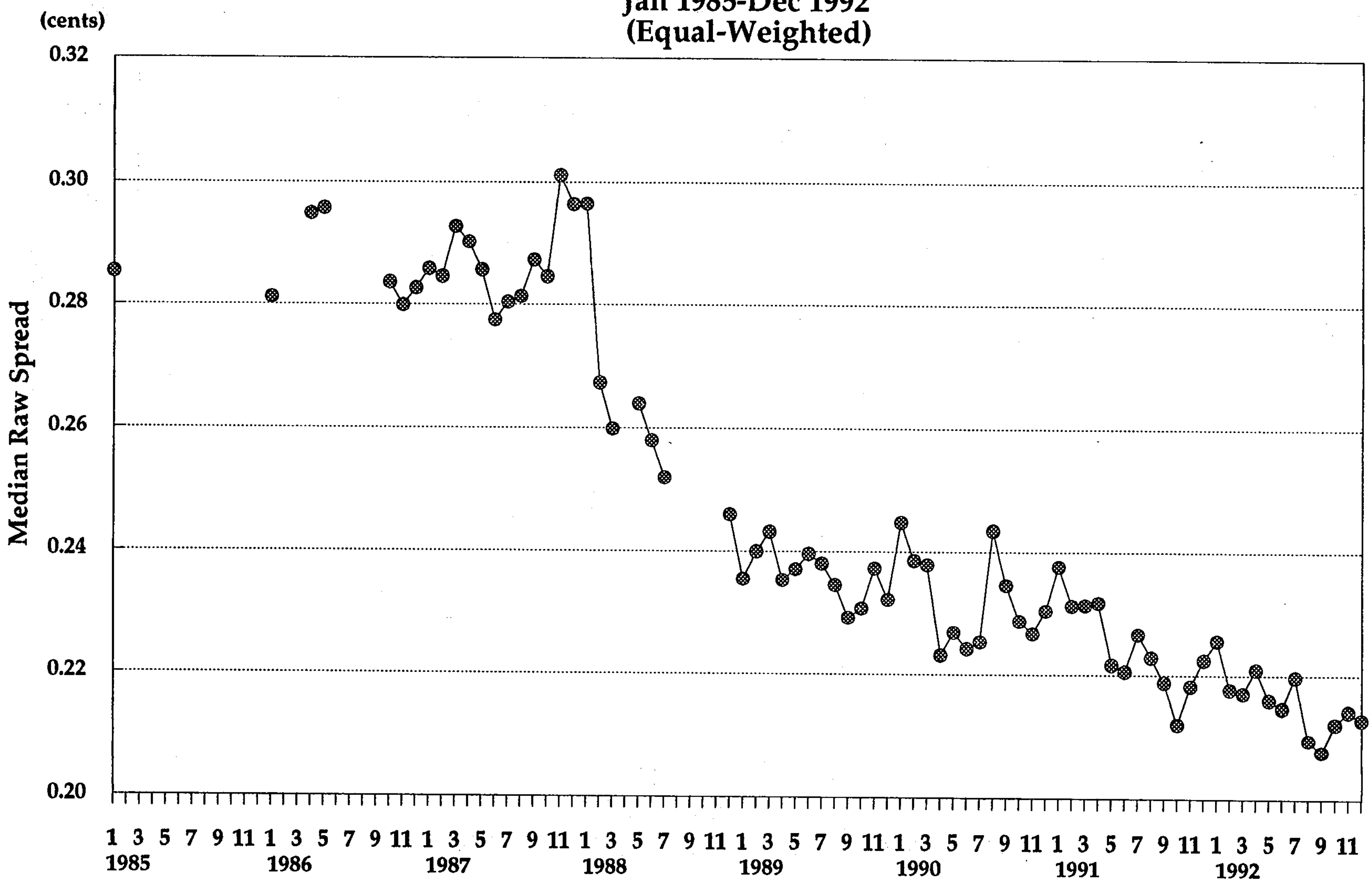


Note: Dots are shown for months for which data is available. *Z1 is the absolute value of the ratio: (Price-Midpoint)/Midpoint.

EXHIBIT 34

Median Raw Spread for Non-S&P Stocks Listed on the NYSE

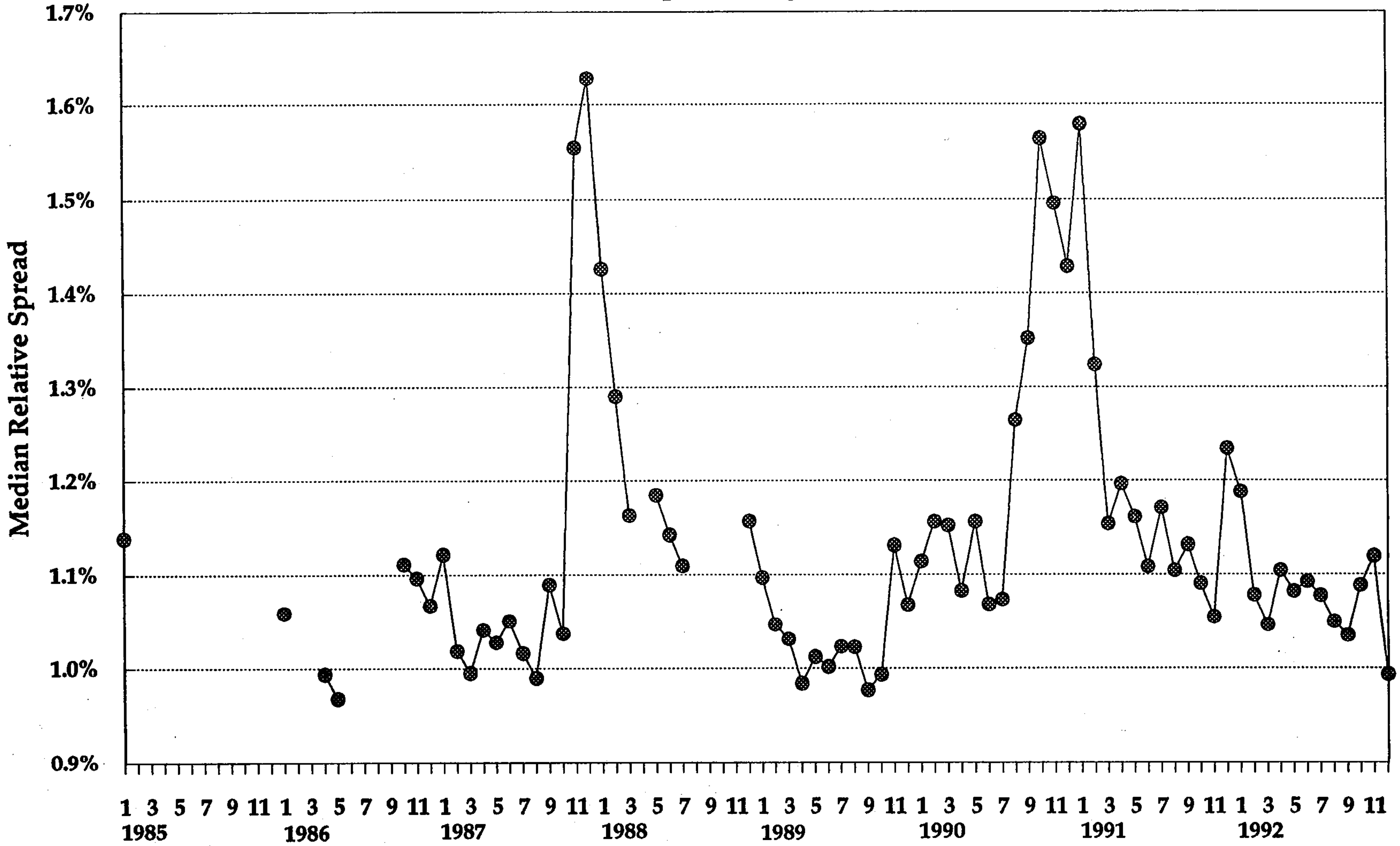
Jan 1985-Dec 1992
(Equal-Weighted)



Note: Dots are shown for months for which data is available.

EXHIBIT 35

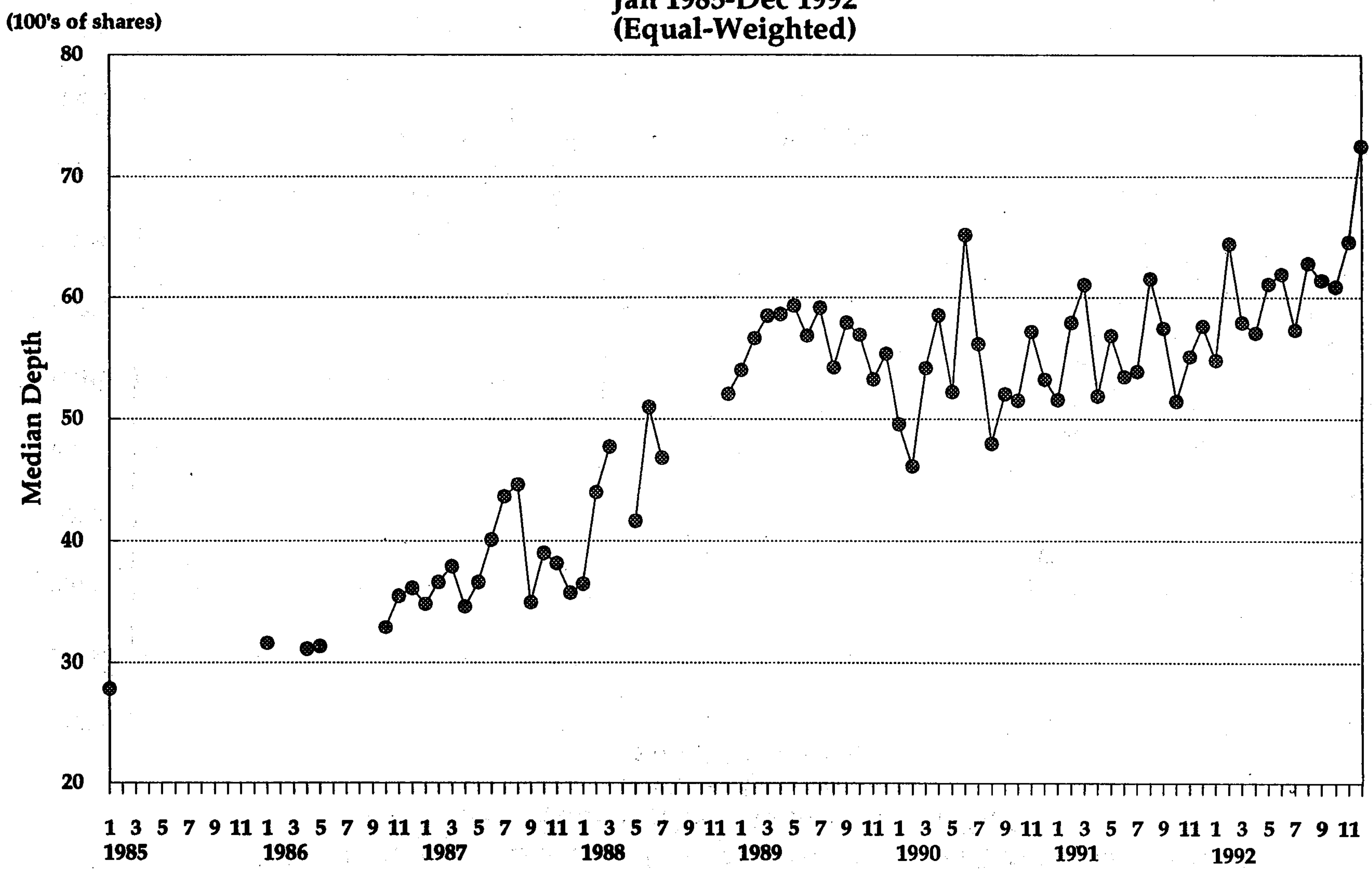
Median Relative Spread for Non-S&P Stocks Listed on the NYSE
Jan 1985-Dec 1992
(Equal-Weighted)



Note: Dots are shown for months for which data is available.

EXHIBIT 36

Median Depth for Non-S&P Stocks Listed on the NYSE
Jan 1985-Dec 1992
(Equal-Weighted)

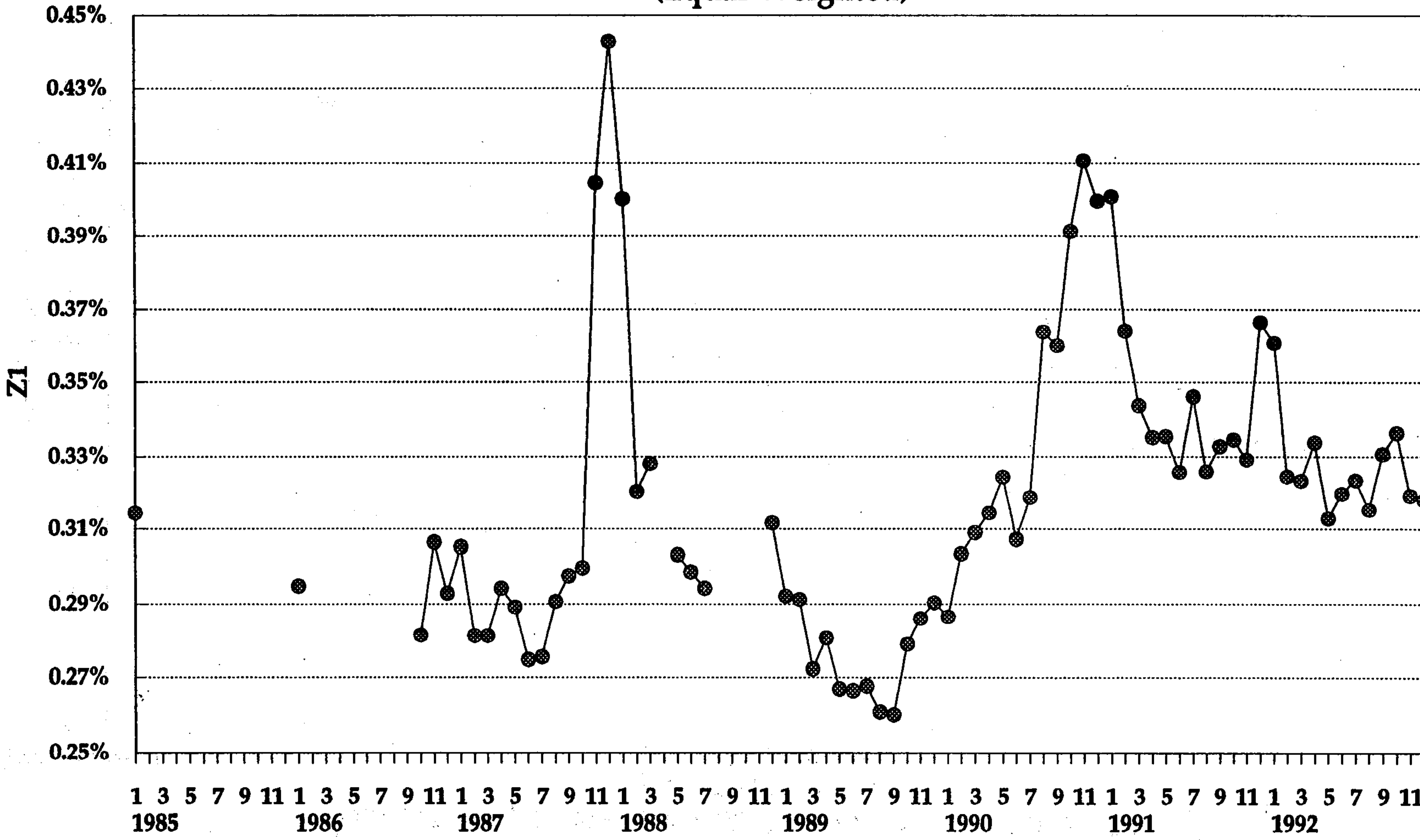


Note: Dots are shown for months for which data is available.

EXHIBIT 37

Median Difference Between the Price and Midpoint of Spread (Z1) for Non-S&P Stocks Listed on the NYSE*

Jan 1985-Dec 1992
(Equal-Weighted)



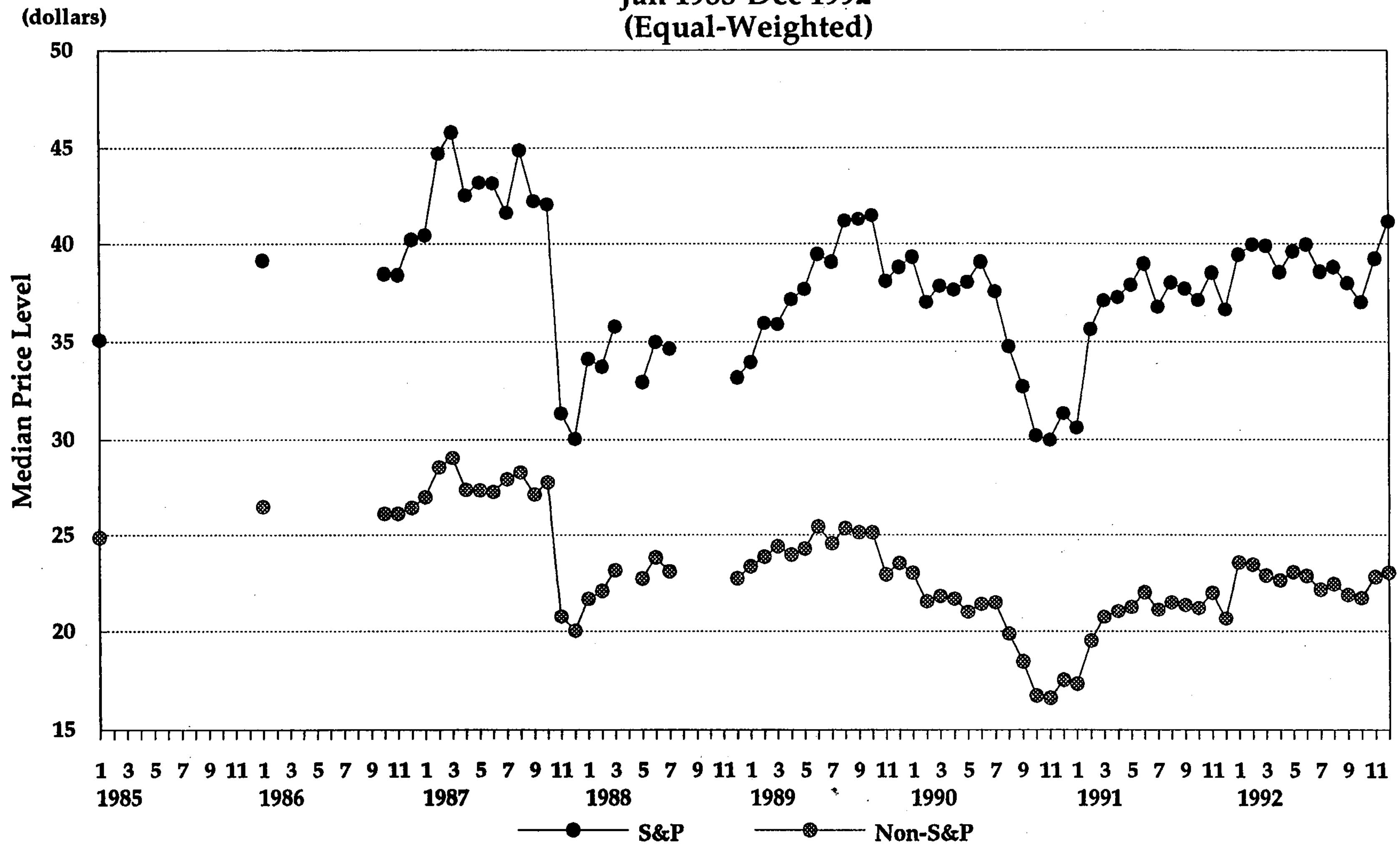
Note: Dots are for months for which data is available. *Z1 is the absolute value of the ratio: (Price-Midpoint)/Midpoint.

EXHIBIT 38

Median Price Level for S&P and Non-S&P Stocks Listed on the NYSE

Jan 1985-Dec 1992

(Equal-Weighted)



Note: Dots are shown for months for which data is available.

EXHIBIT 39

PERCENT OF TRADES IN NYSE–LISTED STOCKS EXECUTED AT / INSIDE THE QUOTE BY MARKET, FOR THE WEEK OF MAY 10 – 14, 1993

Exchange	Number of Trades	At the Bid	At the Ask	Inside the Best Bid/Offer	Outside the Best Bid/Offer
NYSE	495,714	37.0%	40.4%	22.2%	0.9%
BSE	29,721	38.4%	45.6%	16.2%	1.0%
CHX	67,796	35.3%	44.4%	20.2%	1.2%
CSE	31,460	40.0%	54.3%	7.2%	0.8%
OTC	105,908	39.1%	49.8%	9.9%	1.8%
PHLX	32,151	38.6%	50.2%	10.4%	1.3%
PSE	66,033	36.3%	47.3%	15.5%	1.6%

NOTE: Percentage figures do not total 100% due to rounding.

EXHIBIT 40

AVERAGE TRADE COST IN NYSE–LISTED STOCKS BY TRADE SIZE AND MARKET, FOR THE WEEK OF MAY 10–14, 1993

In Cents Per Share

Trade Size	On the	On Non–NYSE Markets					
In Shares	NYSE	ALL	BSE	CHX	CSE	PHLX	PSE
100	6.0	6.6	6.4	6.8	6.6	7.1	6.7
101 – 1,000	6.1	6.4	6.2	6.3	6.5	6.8	6.1
1,001 – 2,999	6.2	6.1	6.1	6.0	6.3	6.4	5.7
3,000 – 4,999	6.3	6.2	6.4	6.1	6.4	6.4	5.8
5,000 – 9,999	6.1	6.4	6.4	6.5	6.9	6.5	5.9
10,000 – 19,999	6.0	6.8	6.8	6.7	7.2	7.2	6.4
20,000 and over	6.6	6.9	8.3	6.3	7.2	7.0	5.5
All Trades	6.1	6.4	6.3	6.4	6.5	6.9	6.2
Number of Trades (000's)	496	333	30	68	31	32	66

NOTE: "Trade Cost" is the absolute value of the difference between the midpoint of the bid–ask spread (equilibrium price) and the trade price.

EXHIBIT 41

DISTRIBUTION OF TRADES BY SPREAD SIZE AND PERCENT OF TRADES EXECUTED AT / INSIDE THE QUOTE BY SPREAD SIZE FOR TRADES OF NYSE – LISTED STOCKS DURING THE WEEK OF MAY 10 – 14, 1993

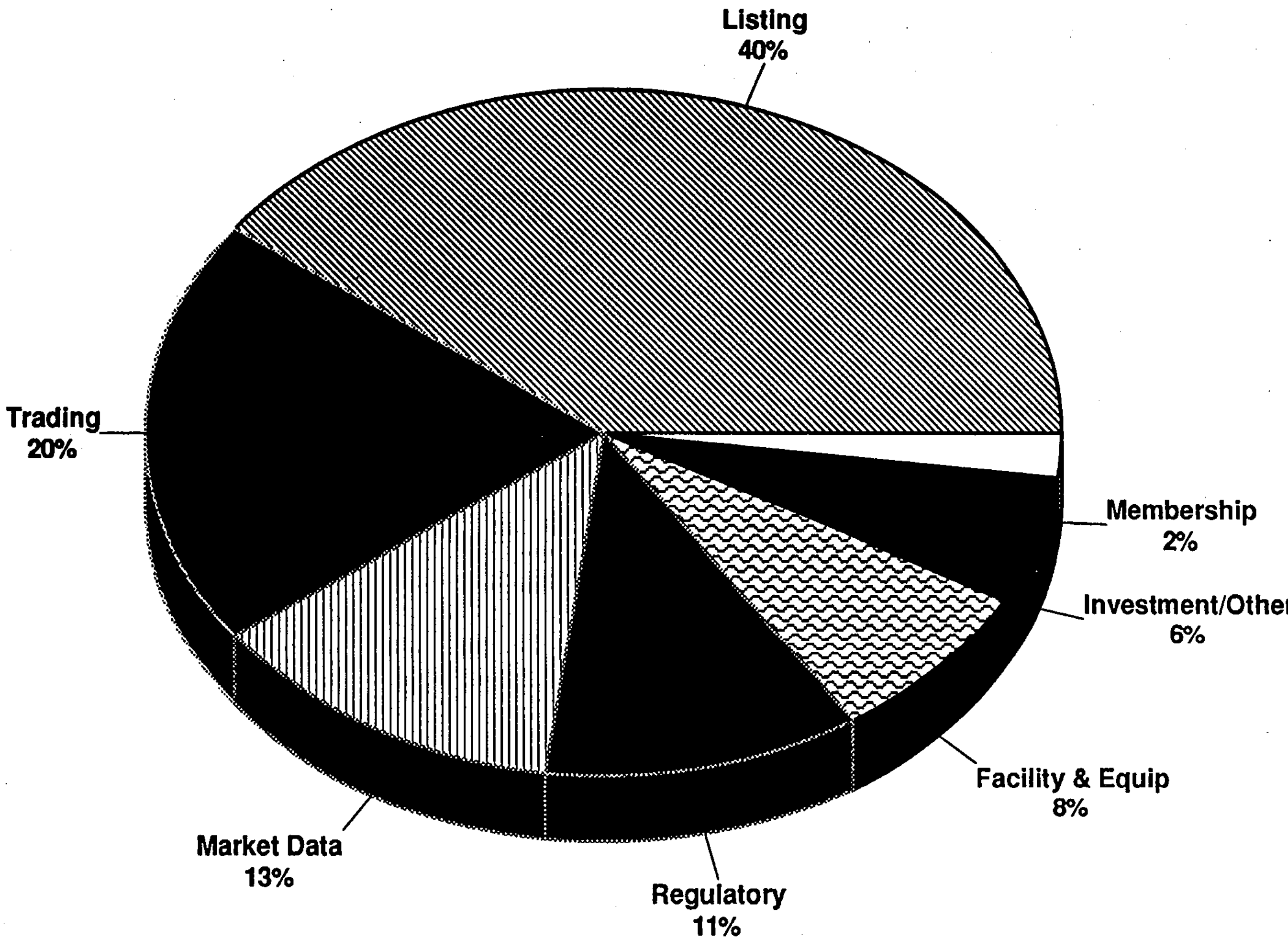
	Distribution of Trades		Trade Executions	
Spread Size	Percent	Cumulative Percent	At the Best Bid or Ask	Inside the Quote
1/8 or less	69.0%	69.0%	98.5%	N/A
3/16–4/16	26.2%	95.2%	41.8%	57.8%
5/16–1/2	4.6%	99.8%	25.8%	73.4%
More than 1/2	0.2%	100.0%	22.6%	74.6%

NOTE: The spread is equal to the difference between the best bid and best ask at the time of the trade and is based on quotes from all U. S. markets trading NYSE–listed stocks.

EXHIBIT 42

NEW YORK STOCK EXCHANGE

DISTRIBUTION OF REVENUE BY SOURCE



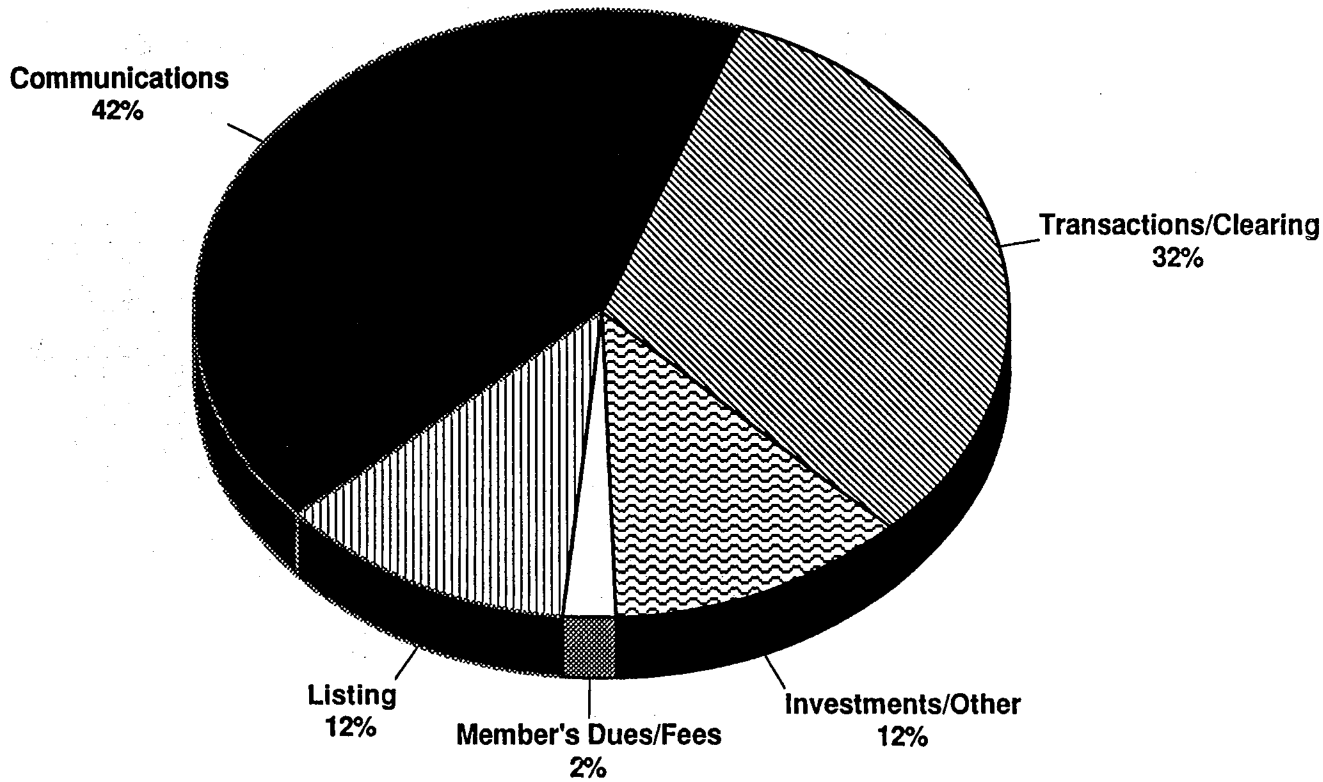
CALENDAR YEAR 1992

Data Source: NYSE Annual Report

EXHIBIT 43

AMERICAN STOCK EXCHANGE

DISTRIBUTION OF REVENUE BY SOURCE



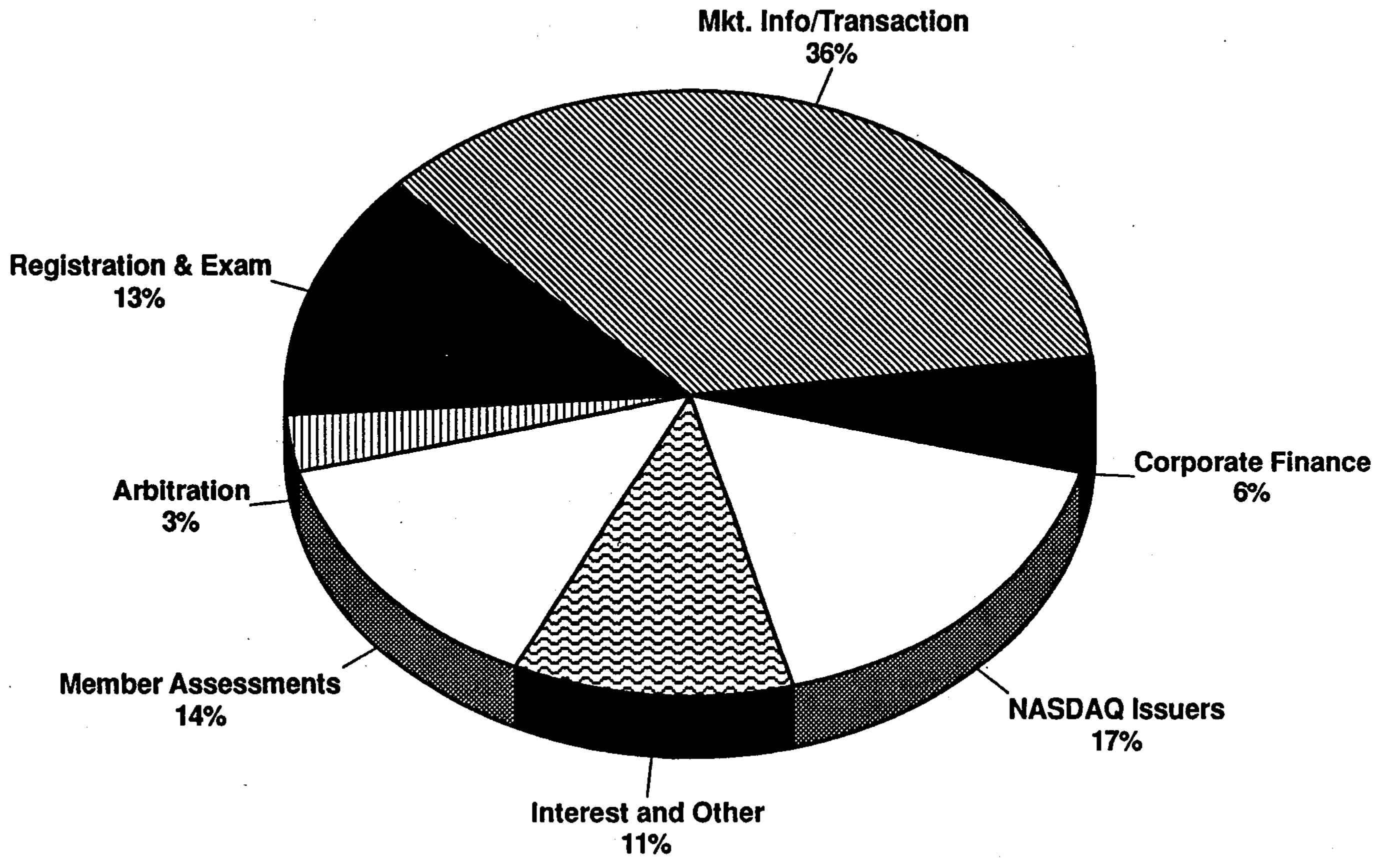
CALENDAR YEAR 1992

Data Source: AMEX Annual Report

EXHIBIT 44

NASD

DISTRIBUTION OF REVENUE BY SOURCE



CALENDAR YEAR 1992

Data Source: NASD Annual Report

Study I

Introduction and Historical Background

A. Origins of the Study

The Securities and Exchange Commission ("Commission") and the organized U.S. securities markets have developed a strong and creative working relationship. This relationship has produced many developments that have increased investor protection and improved substantially the quality, efficiency, and fairness of the U.S. securities markets. Nevertheless, the existing self-regulatory structure has on occasion proved inadequate to respond to developing issues, and the Commission intervened to provide direction.[1]

The U.S. equity markets have changed dramatically over the past decade. Advances in trading technology, new trading strategies, and an exponential growth in market volume have created new challenges for the securities markets and the Commission. In addressing both the market structure issues arising from these challenges, the Commission has often been placed in the role of arbiter between competing markets. Moreover, because of time constraints and the crisis of the moment, the Commission is often forced to address market structure issues on a piecemeal basis, although resolution of a particular issue affects other issues.

To take a broader approach, William Heyman, then Director of the Division of Market Regulation ("Division"), instructed the staff in late 1991 to study the structure of the secondary market for equities in the United States because of its importance to capital-raising and investment. The Study was limited to market structure issues for several reasons. First, technical and complex market structure issues had proven to be the most difficult to settle on a piecemeal basis, and more often than not required a broad, conceptual approach. Second, evaluating these technical and complex market structure issues required the specialized expertise of the Commission. Third, the Division in the previous few years had produced several major studies and voluminous Congressional testimony on the 1987 and 1989 Market Breaks and related intermarket issues.[2] The last major study of equity market structure had been conducted nearly 20 years earlier.

The scope and methodology of the study were set forth in a concept release issued by the Commission in July 1992 ("Concept Release").[3] The Concept Release stated that the Study was intended to analyze the U.S. equity markets and their regulatory structure, especially the major secondary markets for listed and over-the-counter ("OTC") stocks. The Study would also examine the proper and equitable assignment of regulatory and self-regulatory costs among the equity markets and market participants. The goal was not to dictate the structure of the U.S. equity markets, but rather to ensure that regulation provides necessary investor protection and enables the markets to function as fairly, orderly, and competitively as possible.

B. Historical Background

Many issues addressed in this Study did not first appear in the past few years, but instead have been considered in one form or another since the Institutional Investor Study in 1971, the last major study of equity market structure.[4] That study led to the Securities Acts Amendments of 1975 ("1975 Amendments"),[5] which marked a major turning point in the history of the securities industry and its regulatory environment. With the adoption of the 1975 Amendments, Congress issued a mandate to the Commission that still shapes the equity markets: the Commission was directed --having due regard for the public interest, the protection of investors, and the maintenance of fair and orderly markets -- to use the authority granted under the Securities Exchange Act of 1934 ("Exchange Act")[6] to facilitate the establishment of a national market system ("NMS") for securities. The events leading up to the 1975 Amendments, and occurring since, provide the background for the issues prompting the Market 2000 Study.[7]

1. Pre-1975 Amendments: Commission Action

The idea of a national market system had been discussed for several years before Congress embraced it in the 1975 Amendments.[8] The Commission had discussed the concept of a central market system in the letter transmitting the Institutional Investor Study to Congress in 1971 ("1971 Transmittal Letter").[9] The changes then occurring in the securities markets confronted the Commission with a basic regulatory issue: the extent to which regulatory authorities should attempt to direct and structure the future development of such markets.

At the time, anticompetitive practices, such as fixed commission rates and barriers to market access, continued to work against the development of a fair and efficient market system. The combination of these two elements had fragmented the market for larger publicly traded securities. Orders for these securities were dispersed among various markets as institutions sought marketplaces, in part, to reduce commissions paid or to benefit from the opportunity to purchase services with "soft" commission dollars by means of reciprocal arrangements. The Commission found that these reciprocal arrangements aggravated the potential for conflicts of interests and prevented fair competition.[10]

The Commission foresaw that overcoming these obstacles would not be easy. Nonetheless, the Commission did not believe that it was either feasible or desirable to predetermine and require a particular structure, or to specify particular market procedures for the future. Rather, to address these concerns, the Commission offered guidance to the industry by identifying certain goals and principles for the evolution of a more efficient and fair market. The major goal was the creation of a strong central market system for securities of national importance, in which all buying and selling interest could participate and be subject to competitive forces. The Commission noted that the communication and data processing facilities then available made it possible to preserve geographically separated trading markets, yet tie them together on a national basis. The Commission summed up its objective as seeking a strong central market system to which all investors had access, in which all qualified broker-dealers and existing market institutions could participate according to their capabilities, and which was controlled not only by appropriate regulation but also by the forces of competition.[11]

In 1972, the Commission issued a Statement on the Future Structure of the Securities Markets ("Future Structure Statement")[12] describing its vision of a central market system. The system would be based upon communication technology to link the various elements of the marketplace together and would include a set of rules governing the relationships among market participants. At a minimum, the central market system would: include a nationwide disclosure or market information system to make universally available price and volume information in all markets and quotation information from all market makers; eliminate artificial impediments to dealing in the best market; provide access for any qualified broker-dealer to all exchanges; and integrate third market makers (*i.e.*, broker-dealers who make markets in listed stocks off the exchanges) into the central system by including them in the disclosure system.

In 1973, the Commission issued a more detailed explanation of the policies to be implemented by a central market system ("1973 Policy Statement").[13] The Commission set forth in that statement the fundamental principles that would characterize a central market system. First, because the equity markets perform the vital function of allocating investment capital, the Commission deemed it important that the markets value securities accurately, based on supply and demand.[14] This valuation required that all indications of investor buying and selling interest be exposed to the greatest extent practicable so as to increase the opportunity for demand to find supply. Second, centralization would ensure that sellers would have their interest communicated to the greatest number of potential buyers, including dealers. Sellers would be able to trade with whoever was willing to pay the highest price, while buyers would trade with anyone willing to sell for the lowest price. The role of market makers would be to help offset imbalances of interest between buyers and sellers. Third, the broker's primary duty to customers would be to use reasonable diligence to obtain the best execution for each order handled. The Commission believed that to do so, the broker must have access to a communications system capable of displaying all interest, be able to execute a transaction without artificial impediments, and have access between market centers. Fourth, the central market system would foster the development of strong competition among its participants to serve the liquidity needs of individual and institutional investors.[15]

By 1973, the Commission had begun to address some of the obstacles previously identified in the 1971 Transmittal Letter as impeding the development of the central market system. The Commission had implemented initiatives to begin phasing out of fixed commission rates.[16] Substantial progress toward a composite last sale reporting system had been achieved.[17] In addition, a proposed rule for a composite quotation system had been issued for public comment.[18]

2. 1975 Amendments: Congressional Action

Congress, too, had been actively studying all aspects of the securities markets, including the problems the markets faced and the securities industry's response.[19] Congressional interest culminated in the adoption of the 1975 Amendments. With these amendments, Congress unequivocally endorsed the development of the NMS, and clarified and strengthened the Commission's authority to promote the achievement of such a system.

The Senate report accompanying the 1975 Amendments[20] noted that changes had occurred over the past 40 years in securities trading, the role of institutional investors in the markets, the national and international economy, and communications and data processing technology. The House report accompanying the 1975 Amendments[21] stated that these events had raised serious questions regarding the efficiency of the securities markets and their resiliency and flexibility to meet the challenge of the changed economic conditions. The 1975 Amendments reflected a Congressional judgment that the principal stock exchanges and the securities firms resisted modernization and were unable or unwilling to respond to economic and technological changes. This situation resulted in misallocations of capital, widespread inefficiencies, and undesirable and potentially harmful fragmentation of trading.[22]

Congress was aware of the Commission's belief that, unless the industry developed a new sense of confidence and vigor and the Commission was granted broad and flexible authority to shape a new market system adequate to meet the needs of investors, future domestic capital requirements might not be met. Although the Commission had taken some steps to create more efficient, competitive, and fair securities markets, Congress felt that new legislation was necessary to assure investors that the U.S. securities markets would continue to remain fair, vigorous, and efficient. As a result, Congress vested the Commission with the power to eliminate all unnecessary or inappropriate burdens on competition, while granting the Commission broad and effective powers to pursue the goal of centralizing trading of securities in the interest of both efficiency and investor protection. In addition, while endorsing the concept of self-regulation, Congress required the Commission to exercise more extensive oversight authority over self-regulatory organizations ("SROs").

Congress also stated that it expected the Commission to provide leadership for the development of a more coherent and rational regulatory structure. In particular, the Commission was directed to facilitate the establishment of the NMS in accordance with specified Congressional findings and objectives. The approach chosen by Congress was designed to provide maximum flexibility to the Commission and the securities industry in giving content to the concept of the NMS. Congress intended the NMS to evolve through the interplay of competitive forces as unnecessary regulatory restrictions were removed. The Commission was expected to act promptly and effectively to ensure that the essential mechanisms of the NMS were put into place as rapidly as possible in those situations where competition was not sufficient.[23] Congress envisioned communications systems at the heart of the NMS and granted the Commission broad regulatory authority over such systems.

Congress also directed the Commission to advance the concept of equal regulation so that persons enjoying similar privileges, performing similar functions, and having the potential for similar market effects would be treated equally. The Commission was charged with ensuring that no member of a class had an unfair advantage over other members as a result of a disparity in regulation not necessary or appropriate to further the objectives of the Exchange Act. Congress specifically directed the Commission to review, *de novo*, exchange rules to determine those that limited or conditioned the ability of members to effect transactions otherwise than on such exchanges ("off-board trading restrictions"), to prepare a report of this review in 90 days, and to commence a proceeding to eliminate the rules that did not satisfy the provisions of section 19(c) under the Exchange Act.[24]

Finally, the 1975 Amendments directed the Commission to establish a National Market Advisory Board ("NMAB") to advise the Commission on the development of the NMS. The NMAB was to consist of 15 members representing the securities industry and the public. The NMAB was to recommend steps to facilitate the establishment of the NMS, to furnish the Commission with its views on other significant regulatory proposals, and to study the existing statutory scheme of self-regulation in light of the NMS.[25]

3. Initiatives After the 1975 Amendments

a. Listed Stocks and Off-board Trading Restrictions. The 1975 Amendments required the Commission, as a first step toward the development of the NMS, to assess issues relating to off-board trading restrictions in connection with its review of exchange rules. The immediate result of that review was the adoption of Rule 19c-1 under the Exchange Act,[26] which prohibited exchanges from limiting their members' off-board agency trading with qualified third market makers and non-member block positioners. The Commission deferred action with respect to exchange prohibitions preventing members from effecting transactions "in-house" as agent for both buyer and seller off an exchange (so-called in-house agency cross transactions) and dealing for their own account (*i.e.*, as principals) off an exchange. The deferral was intended to permit further study of the issues raised by those prohibitions and to evaluate industry efforts to implement the NMS.

The Commission then proposed Rule 19c-2 under the Exchange Act to remove the existing exchange prohibitions against effecting in-house agency cross transactions off an exchange and against dealing as principal off an exchange.[27] Commentators predicted that the removal of off-board restrictions for principal trading would have dramatic and radical effects on the existing exchange markets resulting from the loss of substantial order flow, which ultimately could lead to the demise of the exchanges.[28] Commentators also argued that such risks would diminish to the extent that meaningful progress toward implementation of the NMS was accomplished.[29] The Commission decided to defer consideration of proposed Rule 19c-2 until after several NMS initiatives could be implemented and their effects assessed.[30] The Commission clarified that such deferral did not signal a willingness to postpone indefinitely consideration of the remaining issues presented by off-board trading restrictions. In addition, the Commission, pursuant to a recommendation by the NMAB, amended Rule 19c-1 to enable exchanges to prohibit off-board executions of in-house agency crosses.[31]

Proposed Rule 19c-2 was withdrawn officially two years later when the Commission adopted Rule 19c-3.[32] As discussed below, Rule 19c-3 prohibited application of all off-board trading restrictions to securities not traded on exchanges on April 26, 1979, or which ceased to be so traded after that date.[33] The Commission noted that the adoption of Rule 19c-3 did not appear to involve the type of dramatic and radical changes anticipated from Rule 19c-2 because Rule 19c-3 applied primarily to securities then traded exclusively over-the-counter.

b. Other NMS Initiatives. In addition to addressing off-board trading restrictions, the Commission undertook various initiatives to promote the development of the NMS. In January 1978, the Commission issued a statement describing a market structure program consisting of the following initiatives: the development and implementation of three new NMS facilities (a consolidated quotation system, a nationwide network of order routing facilities, and a central public agency limit order file); the refinement of the existing consolidated transaction reporting system; the commencement of rulemaking proceedings to consider designation of certain securities as qualified for trading in the NMS; and the continued consideration of off-board trading rules in light of the progress made toward the NMS.[34]

The results of these initiatives were described in a 1979 Commission status report.[35] The Commission discussed the adoption of a rule requiring all market centers to collect and to make available firm quotation information, including size, to securities information vendors for dissemination to market professionals and the public.[36] The rule improved brokers' and investors' knowledge of current prices at which securities could be bought or sold throughout the country. Second, progress toward the implementation of a market linkage system had also been made with the beginning of the operation of the Intermarket Trading System ("ITS"), developed jointly by several exchanges.[37] ITS was intended to permit orders for the purchase and sale of securities traded by several markets to be routed among the markets trading the security.[38] The system enabled regional specialists (and later, third market makers) to compete with the primary market and to shed their risk positions more efficiently, thereby facilitating their ability to make markets.

The 1979 Status Report also discussed the Commission's priorities for the near future. First among them was the achievement of nationwide price protection for public limit orders in NMS securities against executions at inferior prices. Furthermore, the Commission intended to stimulate movement towards the availability of neutral order routing facilities: a device to route retail orders to the market with the best quotation with a size equal to or exceeding the order.[39] Finally, the Commission intended to initiate rulemaking proceedings to consider whether off-board trading restrictions should apply to OTC securities when those securities became listed or admitted to unlisted trading privileges on an exchange.

c. Limit Order Protection. By 1975, the Commission already had taken some steps toward the creation of a mechanism to ensure nationwide protection for limit orders. In the Commission's opinion, such protection was achievable by using the advanced technology then available to provide for a computerized central limit order repository, or composite book ("CLOB").[40] As envisioned, the CLOB would incorporate both public (*i.e.*, agency orders for persons other than brokers or dealers) and professional limit orders. Such a limit order book would permit the effective integration of existing exchange and third market makers by ensuring continuation and extension of the public's ability to obtain priority in competing for executions. The CLOB also would provide an efficient and practical means to protect all limit orders on a national basis. In conjunction with the NMAB, the Commission issued a release requesting comments on the issues associated with the CLOB's proposed characteristics, development, and implementation.[41]

Two years later, in the January 1978 Statement,[42] the Commission encouraged SROs to take joint action to develop and implement a limited version of the CLOB, a computerized central limit order file ("Central File"). The Central File would provide a mechanism into which public agency limit orders (*i.e.*, any limit order not for the proprietary account of a broker or dealer) could be entered and queued for execution in accordance with auction-type principles of price and time priority. It was expected that brokers and dealers would satisfy orders on the Central File prior to execution of a transaction at an inferior or equal price in any market.

The January 1978 Statement had included a Commission request to each SRO to express its willingness to undertake joint implementation of the Central File and to submit a joint plan to the Commission.[43] While the National Association of Securities Dealers ("NASD") submitted a plan,[44] most other SROs opposed the proposal. They argued that the absolute time priority proposed for public limit orders would have significant deleterious effects on the exchange trading process. The trading advantage provided to these orders would create a disincentive to the commitment of market making capital by dealers and would eventually force all trading into a fully automated trading system. The SROs also suggested that the Commission allow time for ITS participants to attempt to provide limit order protection through ITS.[45]

The Commission recognized in the 1979 Status Report that a national system based upon absolute time priority could have a radical and potentially disruptive impact on trading and suggested that, instead, efforts be concentrated on a system affording protection based on price priority. The Commission stressed its belief that nation-wide price protection should be a basic characteristic of the NMS, and also agreed that an opportunity to use ITS as the mechanism to provide intermarket price protection was warranted.[46] The Commission described two types of initiatives necessary to achieve the intended protection by means of the ITS. First, the SROs and the securities industry would collectively have to solve the practical and technical problems associated with the dissemination and display of public limit orders and the enhancement of ITS. Second, the Commission believed it would be necessary to prohibit a broker or dealer from executing any order for a security traded in the system at a price inferior to that of any displayed public limit order, unless the broker or dealer assured that, simultaneously with or immediately after execution, those limit orders displayed at the time of execution were satisfied at the limit price or better.

In April 1979, the Commission proposed such a price protection rule ("Price Protection Proposal").[47] Under the Price Protection Proposal, a broker or dealer executing a transaction at a price inferior to the price on any displayed public limit order would have to satisfy that order either simultaneously with, or immediately after, such an execution. The Commission viewed the proposed rule as necessary to provide a basis for the type of mandatory inter-market order interaction appropriate to the existing developmental stage of the NMS.[48]

The ITS participants responded to the proposal by insisting that limit order protection could be best achieved through ITS. They proposed a "Limit Order

Information System" ("LOIS") to be added to ITS. LOIS never was implemented, even in its pilot form.[49] Instead, ITS participants decided to find other alternatives to provide limit order protection. As a result, ITS participants developed rules to prevent one market from trading through the price of another market[50] and a block trade policy providing price protection to quotations displayed in the ITS.[51]

d. Order Routing Facilities. The 1979 Status Report also recommended that the markets consider the adoption of neutral order-routing facilities.[52] The Commission viewed the development of order-routing facilities as another means to achieve the statutory objective of ensuring fair competition among brokers and dealers and among markets. Prior efforts to stimulate movement to neutral order-routing facilities had resulted in two inconsistent proposals. These proposals were submitted in response to the Commission's call, in its January 1978 Statement, for the development of a single neutral order-routing system. The commentators argued that order-routing decisions should be left to the broker executing the order, and opposed any Commission mandate to establish a single order-routing facility. In their view, any system based solely on price would eliminate competitive differences in execution services based on a broker's consideration of factors other than price.

In June 1978, the Commission solicited additional comment on the issue of whether order-by-order routing of retail orders should be a characteristic of the NMS.[53] The Commission deferred consideration of this issue in the 1979 Status Report, however, noting that quotations, at the time, were not always firm and differences in execution and clearing costs existed.[54] Ultimately, each SRO developed its own order-routing facility, some of which also provide automated executions,[55] and several broker-dealers also developed in-house small order execution systems.[56]

e. OTC Securities and Off-board Trading Restrictions. The third priority the Commission had discussed in the 1979 Status Report involved the status of OTC securities. The Commission had been concerned that application of off-board trading restrictions to OTC securities that became listed might not be justified under the Exchange Act. In April 1979, the Commission announced the commencement of a rulemaking proceeding, including public hearings, to consider the amendment of exchange rules imposing off-board trading restrictions.[57] The Commission proposed to amend those rules to preclude their application to certain securities that were not traded on an exchange on April 26, 1979, or were traded on an exchange on that date, but failed to remain so thereafter ("Rule 19c-3 securities").

Application of off-board trading restrictions to securities then traded exclusively OTC was deemed inconsistent with two of the purposes to be achieved by the development of the NMS: ensuring the opportunity for fair competition among brokers and dealers and between exchange markets and markets other than exchanges, and preserving and strengthening the nation's securities markets. Because most firms then providing continuous markets with respect to OTC securities were exchange members, the Commission was concerned that, once an OTC security became listed, the pre-existing OTC market would be seriously impaired, if not extinguished. The Commission's proposal aimed to preserve the competitive benefits flowing from an active OTC market existing concurrently with exchange markets. In addition, the Commission believed that Rule 19c-3, once adopted, would create new incentives to improve existing market linkages and to develop new facilities to meet the needs of a more complex trading environment. Adoption of the rule would also test the sufficiency of the existing and developing NMS facilities to ensure an appropriate integration of trading in disparate locations and to safeguard the integrity of the NMS. Finally, the Commission welcomed the opportunity to gain actual experience regarding the effects of concurrent OTC and exchange trading to be applied in connection with future initiatives regarding the elimination of off-board trading restrictions for non-Rule 19c-3 securities (*i.e.*, those traded exclusively on exchanges on April 26, 1979).[58]

Criticism of the Rule 19c-3 Proposal focused mainly on concerns with the potential for internalization of orders by the large full-service firms.[59] The predicted adverse effects included: anticompetitive effects on both specialists and small broker-dealers without the market making capacity of large integrated firms; fragmentation of the market for Rule 19c-3 securities; and increasing opportunity for overreaching of customers by the large integrated firms.[60] The Commission recognized the potential for internalization yet decided to adopt the proposed rule, noting that the problems it created were generic in nature and were already present in the markets for both listed and OTC securities.[61] On balance, the Commission preferred not to deprive the securities markets of the benefit of additional market maker competition. It was confident that any negative results could be dealt with through other measures. Furthermore, the Commission was of the opinion that overreaching concerns would be ameliorated by the existence of accurate transaction reporting and quotation information.

After the adoption of Rule 19c-3, the Commission encouraged the securities industry to continue its search for an equitable, efficient, and generally acceptable resolution of the concerns relating to internalization. As a result of such efforts, the Securities Industry Association ("SIA") developed some principles on which to base an anti-internalization rule that would apply to all Rule 19c-3 securities. In addition, the NYSE developed a proposal applicable only to OTC market makers in Rule 19c-3 securities. The Commission then proposed for comment two alternative rules based on the SIA's principles and the NYSE's proposal ("order-exposure rules").[62]

Both proposed order-exposure rules essentially required a market maker to stop (*i.e.*, guarantee execution) a customer order at the proposed execution price, and -- through the consolidated quotation system -- publicly to bid or offer the order at an eighth better than the proposed execution price, before executing the order as principal.[63] Although the Commission published the rules for comment, it had yet to establish a need for a rule, and requested comment on deferring any action in this area pending further study and evaluation of the Rule 19c-3 experiment.

Public comment on the proposed rules focused mainly on the need for a rule, not to whom it should apply or on the specifics of the rule. The commentators were divided on the issue of need. Those supporting a rule argued that internalization of orders by OTC market makers was contrary to the NMS's goals. Furthermore, they were of the view that internalization would result in deterioration of the market for Rule 19c-3 securities. In their opinion, forcing order exposure would promote the maximum interaction of orders, encourage heightened intermarket competition that would lead to improved executions, reduce concerns about unfair competition for order flow by providing access to order flow before it was executed by principals in the recipient market, and correct price inefficiencies introduced by market fragmentation.

Commentators opposing any order-exposure rule focused on the lack of a basis to adopt a rule, and on the negative effects its adoption could cause. They pointed out that Commission and industry monitoring had not identified any harmful effects on the markets from trading in Rule 19c-3 securities: adoption of a prophylactic rule to address undemonstrated concerns would amount to overregulation.[64] In addition, these commentators believed the proposed rules included complex and burdensome procedures that would curtail most off-board trading, in effect making efficient execution impossible. Moreover, these commentators believed that, in light of the minimum benefits likely to result from a rule and the significant additional transaction costs and added risks that would be imposed on off-board market makers, a rule could not be justified under a cost-benefit analysis.

The Commission then withdrew the proposed rules, and proposed another version reflecting refined SIA principles, other industry proposals, and the comments to the original proposals.[65] The Commission had yet to decide on the advisability of an order exposure rule. The Commission preliminarily indicated, however, that, if adopted, a rule should apply to obtain the potential benefits of order exposure for both exchange and OTC markets, rather than to address speculative overreaching and similar concerns associated with internalization of orders by OTC market makers.

Events in the trading of Rule 19c-3 securities overtook Commission action. After the reproposal, some major OTC market makers in Rule 19c-3 securities ceased making markets in such securities, citing, among other factors, frustrations with inefficiencies in the operation of the ITS Computer Assisted Execution System ("CAES") link and dissatisfaction with trading in the current Rule 19c-3 environment. The Commission deferred action on the proposed order-exposure rule in light of the limited amount of trading in Rule 19c-3 securities, the costs that would be imposed by the rule on broker-dealers, and the limited benefits to be obtained.[66]

f. NMS Designation. Concurrently with many of the initiatives described above, the Commission had worked in one more area essential to the NMS: the designation of NMS securities. Congress had vested the Commission with rulemaking authority to designate the securities qualified for trading in the NMS in the 1975 Amendments.[67] In its January 1978 Statement, the Commission expressed its belief that listed securities included in the consolidated transaction reporting system and a number of securities traded in the OTC market generally possessed characteristics justifying their inclusion in the NMS. The Commission noted, however, that inclusion of the OTC securities was contingent upon the implementation of the technical elements that would ensure competitively fair trading of such securities, consistent with NMS principles. The Commission also explained that, with respect to NMS securities traded OTC, it intended to require transaction reporting, consolidated collection and dissemination of quotations, and trading to be effected by means of, and subject to the requirements of, order-routing and other systems developed to build the NMS.

The industry had responded to the January 1978 Statement by cautioning the Commission about the consequences of premature inclusion of OTC securities in the

NMS. Fears were expressed about undesirable effects on the existing markets for those securities. In the industry's opinion, premature inclusion of OTC securities in evolving NMS facilities would create disincentives to market making for those securities, which in turn would affect OTC issuers' ability to raise capital. Affording issuers the ability to choose whether to seek designation was recommended.

In 1979, the Commission proposed a rule with a two-tiered approach to designation that took into account the concerns expressed with respect to OTC securities.[68] Tier 1 automatic designation was reserved for securities meeting relatively high requirements. Tier 2 designation could be obtained through application by the issuer or by two or more of the market centers trading the security.[69] Factors such as assets, earnings history, and national investor following were incorporated into the standards.[70] This approach was in keeping with Congressional intent, expressed in the 1975 Amendments, that designation should be based on the individual characteristics of the securities and not on where they had been traded before. The Commission believed the two-tiered approach responded to concerns regarding uniformity of standards and to the role of issuers in the designation process.

In 1981, the Commission adopted a revised version of the proposed rule that would apply only to OTC securities and amended Rule 11Aa3-1 under the Exchange Act to require the dissemination of transaction and quotation information with respect to OTC securities designated NMS ("NASDAQ/NMS").[71] Incorporated in the rule was a modified two-tiered approach that would allow a limited number of the more actively traded OTC securities to obtain automatic designation under Tier 1 criteria. Last sale reporting for Tier 1 securities began within the year.[72] The Tier 2 criteria would allow for designation upon request by an issuer and verification by the NASD that the security substantially met the designation criteria.[73] With the adoption of this rule, the Commission achieved, with respect to most liquid OTC securities, real-time reporting and firm quotations as to price and size.

In 1987, the Commission changed its approach to the NMS designation procedures. It replaced the two-tier designation system for OTC securities with a standard designating as NMS securities all OTC or exchange-listed securities for which transactions were reported pursuant to an effective transaction reporting plan.[74] When the Commission proposed this change, it recognized that Congress had anticipated that the NMS designation criteria would relate to the trading characteristics of securities.[75] It also noted, however, that Congress had provided the Commission with maximum flexibility in developing the NMS. Relying on 11 years of experience, the Commission concluded that securities included in NMS quotation and transaction reporting systems should be designated as qualified for participation in any NMS facility. Experience had shown that the trading markets for securities meeting a threshold of trading characteristics benefitted from the components of the NMS, market information systems and trading linkages, as well as from competition. The proposed approach would accord equal treatment to OTC securities designated NMS and listed securities reported to the consolidated tape because eligibility would be tied to the transaction reporting rule. Uniform treatment would be assured because the requirements for an effective transaction reporting plan for NASDAQ securities would parallel those for listed securities.

In 1990, the Commission approved a transaction reporting plan for NASDAQ/NMS securities traded on an exchange pursuant to unlisted trading privileges.[76] This facilitated the trading of NASDAQ securities in an exchange environment, thus expanding the order-routing possibilities of NASDAQ securities.[77]

C. Recent Events

After the Commission implemented many of the initiatives described above, market events in the latter part of the 1980s required the Commission to focus on new issues. Most prominent among them was the introduction of stock index options and futures and their effect on the equity markets. For example, the Division produced reports examining the volatility occurring in the market breaks of October 1987 and 1989.[78] Derivatives-related issues continue at the forefront of the Commission's agenda.[79] In addition, the internationalization of the securities markets also requires continuing attention from the Commission as it seeks to preserve high standards of investor protection in a global marketplace.[80]

At the same time, the discrete events that led to the Market 2000 Study were taking place, albeit in a less dramatic fashion. For example, the Commission received proposals from several entities sponsoring proprietary trading systems. The practice of payment for order flow became more popular as a mechanism to attract order flow. Third market trading grew. More active, larger capitalization issuers elected to remain in the OTC market, raising both competitive concerns for the exchanges and regulatory issues for the Commission. As the Commission sought to address these issues and related developments, it became clear that a comprehensive examination was necessary to formulate a consistent regulatory policy. The analyses contained in the following studies explain how the Division arrived at the regulatory policy and the recommendations discussed in the Market 2000 Report.

1. For example, the SEC's Report of the Special Study of the Securities Markets, H.R. Doc. No. 95, 88th Cong., 1st Sess. (1963) ("Special Study"), the SEC's Institutional Investor Study Report, H.R. DOC. NO. 64, 92d Cong., 1st Sess. (1971) ("Institutional Investor Study"), the creation of the Municipal Securities Rulemaking Board pursuant to Exchange Act Section 15B, 15 U.S.C. § 78o-3 (1988), and the Securities Investors Protection Act of 1970, 15 U.S.C. §§ 78aaa *et seq.*, responded to problems stemming from gaps in the existing regulatory and self-regulatory structure.

2. *See, e.g.*, DIVISION OF MARKET REGULATION, SEC, THE OCTOBER 1987 MARKET BREAK (1988); DIVISION OF MARKET REGULATION, SEC, TRADING ANALYSIS OF OCTOBER 13 AND 16, 1989 (1990).

3. Securities Exchange Act Release No. 30920 (July 14, 1992), 57 FR 32159 (July 22, 1992). The Concept Release identified the major issues that the study would consider and solicited comments and data thereon. A letter from Richard Breeden, Chairman, SEC, to Edward J. Markey, Chairman, Subcomm. on Telecommunication and Finance, Comm. on Energy and Commerce, U.S. House of Representatives (July 11, 1991), with an accompanying memorandum from William H. Heyman, Director, Division of Market Regulation, to Richard Breeden, Chairman, SEC (July 3, 1991), was attached to the Concept Release. The letter and Heyman memorandum were the precursors to the study.

4. Institutional Investor Study, *supra* note 1. Congress had mandated the Commission to conduct a study and investigation of the purchase, sale, and holding of securities by institutional investors to determine the effect thereof upon the maintenance of fair and orderly securities markets, the stability of the securities markets, and the interests of issuers and the public. The Institutional Investor Study concluded that while institutions had increased their share of outstanding equity securities, the increase had been relatively gradual over time, but that the holdings tended to be concentrated in the shares of larger, publicly traded corporations. The study's findings highlighted the need for regular, uniform, and comprehensive institutional reporting of securities holdings given the growth in institutional investment activities.

5. Pub. L. No. 94-29, 89 Stat. 97 (1975).

6. 15 U.S.C. §§ 78a to 78ll (1988).

7. Exchange Act Section 11A(a)(1), 15 U.S.C. § 78k-1(a)(1), recites the Congressional findings that: the securities markets are an important national asset which must be preserved and strengthened; new data processing and communications techniques create the opportunity for more efficient and effective market operations; and it is in the public interest and appropriate for the protection of investors and the maintenance of fair and orderly markets to assure certain specified objectives. The latter include: economically efficient executions; fair competition among brokers and dealers, among exchange markets, and between exchange markets and markets other than exchange markets; public availability of quotation and transaction information; opportunity to obtain best execution; and opportunity to obtain execution without dealer intervention.

8. During the years preceding adoption of the 1975 Amendments, the term "central market system" had been used in debating the issues affecting the securities industry.

9. Institutional Investor Study, *supra* note 1, pt. 1, at xxiv-xxv.

10. *Id.* at xxii.

11. *Id.* at xxv.

12. SEC, Statement of the Securities and Exchange Commission on the Future Structure of the Securities Markets (Feb. 2, 1972), 37 FR 5286 (Feb. 4, 1972) ("Future Structure Statement"). The Future Structure Statement reflected three and a half years of hearings and was issued to inform Congress, the public, and the securities industry of the Commission's views on the status of the markets and the direction in which the public interest required that they evolve. The Commission stated that the public was entitled to: (1) disclosure of trading volume and prices in all markets; (2) competition

focused on providing the best combination of price, service, and transaction cost; and (3) regulations designed to assure fair, open, and direct dealing and, to the extent feasible, to maintain price stability and market depth. The Commission's overall objective was to encourage the development of capital markets with the ability to mobilize capital effectively and, in so doing, to allocate resources efficiently, to establish realistic and fair valuation of investment services, and to protect investors. All of these were to be attained consistent with the national policy of favoring free and open competition. The Commission also announced the formation of three advisory committees ("1972 Advisory Committees") to study issues relating to market disclosure, block trading, and the central market system.

13. SEC, *Policy Statement of the Securities and Exchange Commission on the Structure of a Central Market System* (Mar. 29, 1973), *reprinted in* [1973] Sec. Reg. & L. Rep. (BNA) No. 196, at D-1 (Apr. 4, 1973).

14. As envisioned then, the central market system only would include listed securities, although its features could be found appropriate at a later time for trading OTC securities. Eligible securities would have sufficient investor interest to satisfy specific criteria based on the number and breadth of distribution of the shares available for trading. Any member of the central market system would be free to trade any eligible security. All transactions would have to be reported and executed subject to the central market system rules. Fourth market transactions (*i.e.*, those directly between institutional customers outside of an organized market and without the use of a broker) would not be subject to those requirements.

15. The assumption was that market makers would bid higher or offer lower than competitors in an effort to attract business. This competition would narrow spreads and enable investors to buy for less and to sell for more.

16. The Commission had required the incorporation of volume discounts into the fixed rate system in 1968. Securities Exchange Act Release No. 8324 (May 28, 1968); Securities Exchange Act Release No. 8399 (Sept. 4, 1968). It also mandated the introduction of competitively determined rates on the portion of orders in excess of $500,000 in 1971. Securities Exchange Act Release No. 9105 (Mar. 11, 1971); Securities Exchange Act Release No. 9132 (Apr. 1, 1971). That figure was lowered to $300,000 a year later. Future Structure Statement, *supra* note 12.

    The Commission continued its efforts to phase out fixed commission rates for several years. In 1974, the Commission then proposed Rule 19b-3 to prohibit national securities exchanges from adopting or retaining any rules requiring members, directly or indirectly, to charge any person any fixed rate of commission for transactions executed on such exchanges. Securities Exchange Act Release No. 11703 (Oct. 24, 1974), 39 FR 38396 (Oct. 31, 1974). In addition, the Commission held oral hearings on the proposal. The proposed rule was adopted in January 1975. It became effective with respect to public rates and clearance charges on May 1, 1975. The effective date with respect to floor brokerage charges was delayed until May 1, 1976. Securities Exchange Act Release No. 11203 (Jan. 23, 1975), 40 FR 7394 (Feb. 20, 1975). The prohibitions on fixed commission rates were codified in Exchange Act Section 6(e)(1), 15 U.S.C. § 78 f(e)(1), by the 1975 Amendments.

17. The Commission had noted the need for and initially discussed the concept of a composite last sale reporting system in its Future Structure Statement, *supra* note 12. Shortly thereafter, Rule 17a-15 was proposed in Securities Exchange Act Release No. 9530 (Mar. 8, 1972), 38 FR 5761 (Mar. 21, 1972). In response to the proposed rule, the New York Stock Exchange ("NYSE") and American Stock Exchange ("Amex") questioned the Commission's authority to adopt the rule, asserted proprietary rights in last sale data, and suggested that a consolidated reporting system be implemented by the Securities Industry Automation Corporation, their jointly-owned subsidiary. The proposed rule was republished for comment incorporating some of the features suggested by the NYSE and Amex as well as those of the 1972 Advisory Committee on market disclosure. Concurrently with the rule's adoption, the Commission requested the filing of reporting plans thereunder by the end of 1972. Securities Exchange Act Release No. 9850 (Nov. 8, 1972), 37 FR 24172 (Nov. 15, 1972). The plans were published for comment in early 1973. Securities Exchange Act Release No. 10026 (Mar. 5, 1973), 38 FR 6443 (Mar. 9, 1973). Over a year elapsed before a joint plan was declared effective

by the Commission. Securities Exchange Act Release No. 10787 (May 10, 1974), 39 FR 17799 (May 1974). Full implementation of the consolidated system was finally achieved over four years after the initial publication of the rule. Rule 17a-15 was subsequently redesignated Rule 11Aa3-1 in Securities Exchange Act Release No. 16589 (Feb. 19, 1980), 45 FR 12377 (Feb. 26, 1980).

18. The Commission had stated that a composite quotation system was essential to a central market system in its Future Structure Statement, *supra* note 12. It then proposed Rule 17a-14. Securities Exchange Act Release No. 9529 (Mar. 8, 1972), 37 FR 5760 (Mar. 21, 1972). The proposed rule would have required that the quotations of members of an exchange or an association be made available, but would not have required the quotations to be firm. Subsequent to the proposal, the Commission received input from one of the 1972 Advisory Committees and the benefit of the Senate's views, as expressed in its Securities Industry Study. *See infra* note 19. Two years later, the rule was reproposed. Securities Exchange Act Release No. 10969 (Aug. 14, 1974), 39 FR 31920 (Sept. 3, 1974). The NYSE and Amex then questioned the Commission's authority to adopt the rule; the Commission deferred consideration thereof. Instead, it requested the exchanges to amend any of their rules restricting access to or use of quotations disseminated by them. Shortly after the Commission announced that the required changes to exchange rules had been made, the 1975 Amendments became law. The Commission was thereby granted explicit authority to implement a composite quotation system in new Exchange Act Section 11A(c)(1). In 1978, the Commission adopted Rule 11Ac1-1, 17 C.F.R. § 240.11Ac1-1, requiring information on firm quotations and optional quotation sizes. Thereafter, the self-regulatory organizations created a consolidated quotation system ("CQS") to collect quotations and make them available in a single data stream. The CQS plan to implement Rule 11Ac1-1 was first declared temporarily effective in 1978. Securities Exchange Act Release No. 15009 (July 28, 1978), 43 FR 34851. It was permanently approved in 1980. Securities Exchange Act Release No. 16518 (Jan. 22, 1980), 45 FR 6521.

19. Both Houses of Congress held extensive hearings on the equity markets. *See* SUBCOMM. ON SECURITIES OF THE SENATE COMM. ON BANKING, HOUSING AND URBAN AFFAIRS, 93D CONG., 1ST SESS., SECURITIES INDUSTRY STUDY (Comm. Print 1973); SUBCOMM. ON COMMERCE AND FINANCE OF THE HOUSE COMM. ON INTERSTATE AND FOREIGN COMMERCE, 92D CONG., 2D SESS., SECURITIES INDUSTRY STUDY (Comm. Print 1972).

20. S. REP. NO. 75, 94th Cong., 1st Sess. 1 (1975) ("Senate Report").

21. H.R. REP. NO. 123, 94th Cong., 1st Sess. 44 (1975).

22. Senate Report, *supra* note 20, at 1.

23. H.R. REP. NO. 249, 94th Cong., 1st Sess. 92 (1975).

24. Section 11A(c)(4), 15 U.S.C. § 78k-1(c)(4). After an initial review of off-board trading rules, the Commission reported to Congress and initiated a proceeding to abrogate such rules. Securities Exchange Act Release No. 11628 (Sep. 2, 1975), 40 FR 41808.

25. The NMAB was established on September 30, 1975. It conducted public meetings between October 1975 and December 1977. During this period, the NMAB submitted to the Commission its views on numerous issues related to the establishment of the NMS and reported to Congress on issues of self-regulation.

26. 17 C.F.R. § 240.19c-1 (1993); *see* Securities Exchange Act Release No. 11942 (Dec. 19, 1975), 41 FR 4507 ("Rule 19c-1 Release").

27. Securities Exchange Act Release No. 13662 (June 23, 1977), 42 FR 33510. Rules to address the problem of overreaching of customers by off-board market makers were proposed concurrently. *See infra* note 60.

28. *See* Securities Exchange Act Release No. 15769 (Apr. 26, 1979), 44 FR 26688 ("Rule 19c-3 Proposal"); Securities Exchange Act Release No. 16888 (June 11, 1980), 45 FR 41125 ("Rule 19c-3 Adopting Release").

29. *See* Securities Exchange Act Release No. 14416 (Jan. 26, 1978), 43 FR 4354 ("January 1978 Statement").

30. *Id.*

31. Securities Exchange Act Release No. 14325 (Dec. 30, 1977), 43 FR 1327 (Jan. 7, 1978).

32. Rule 19c-3 Adopting Release, *supra* note 28.

33. *See infra* Section III.D. Of the top 100 NYSE issues, based on consolidated share volume for 1992, 80 are currently subject to NYSE Rule 390, which imposes off-board trading restrictions because they were listed on the NYSE before April 26, 1979 and 20 may be traded off the exchange pursuant to Rule 19c-3. *See* 2 NYSE Guide (CCH) ¶ 2390.

34. January 1978 Statement, *supra* note 29.

35. Securities Exchange Act Release No. 15671 (Mar. 22, 1979), 44 FR 20360 (Apr. 4, 1979) ("1979 Status Report").

36. 17 C.F.R. § 240.11Ac1-1; *see* Securities Exchange Act Release No. 14415 (Jan. 26, 1978), 43 FR 4342 (adopting Rule 11Ac1-1). The rule became effective in August 1978 and required each SRO to collect, process, and make available to securities information vendors quotations and quotation sizes for all securities as to which last sale information was included in the consolidated system contemplated by Rule 17a-15 (now Rule 11Aa3-1) under the Exchange Act.

37. See Appendix II for a full description of the Intermarket Trading System.

38. Discussions among industry participants regarding the development of a market linkage system had begun in late 1976. The Commission endorsed the concept in its January 1978 Statement, *supra* note 29, and requested the SROs to inform it of their plans to participate in such a system. The ITS began limited operations in April 1978 linking the NYSE and the Philadelphia Stock Exchange. By the end of 1978 all other exchanges, except the Cincinnati Stock Exchange, had joined ITS. The latter joined the system in 1981. After protracted negotiations and Commission intervention, the National Association of Securities Dealers, Inc. joined ITS in 1982. ITS was permanently approved as a NMS facility in 1983. For a detailed description of the operations of the ITS, see Appendix II.

39. The Commission believed that order routing systems should operate in a neutral fashion (*i.e.*, permit routing of orders on a non-discriminatory basis). Non-neutral order routing systems were deemed inconsistent with the development of the NMS because they impeded fair competition among markets and prevented a broker from obtaining best execution. The Commission urged the SROs to take joint action to develop a single order routing system to be made available to their members so that prompt and efficient routing of orders could be made from brokers' or dealers' offices to any participating market.

40. *See* Rule 19c-1 Release, *supra* note 26.

41. Securities Exchange Act Release No. 12159 (Mar. 2, 1976) (request for public comment on issues related to the development of a composite central limit order repository). The Commission noted that existing exchange mechanisms for the storage and execution of limited price orders required modification to meet the needs of member firms and investors for expeditious handling of order flow and to cope with an increasing volume of transactions. These mechanisms, it was further noted, were not able to provide nationwide limit order protection.

42. *See supra* note 29.

43. The responses to this request were discussed in the 1979 Status Report, *supra* note 35, at 20362.

44. The NASD submitted a plan for an electronic facility functionally similar to the Central File proposed by the Commission, but reserved judgment on the policy and regulatory issues associated with implementation of the facility described in its own plan.

45. The NYSE and Midwest Stock Exchange submitted proposals regarding the electronic dissemination and display of limit order information from each market center and the use of ITS to assure intermarket price protection of displayed orders in any market.

46. In addition, the Commission solicited comment on whether price protection should be limited to public limit orders when it could easily be extended to all displayed orders at the market, whether public or professional.

47. Securities Exchange Act Release No. 15770 (Apr. 26, 1979), 44 FR 26692.

48. The proposed rule would have covered only reported securities included in a market linkage system implemented or operated in accordance with a plan approved under Section 11A(a)(3)(B) of the Exchange Act, 15 U.S.C. § 78k-1(a)(3)(B).

49. Development of LOIS was delayed due to disagreement among NYSE members until the Fall 1980, when implementation was approved by the NYSE Board. By year-end, ITS participants had approved the necessary amendments to ITS and had filed implementing rules for a pilot program. *See, e.g.*, Securities Exchange Act Release No. 17194 (Oct. 6, 1980), 45 FR 67494 (Oct. 10, 1980).

50. See ITS Appendix for a detailed description of ITS.

51. Securities Exchange Act Release No. 17704 (Apr. 9, 1981), 46 FR 22520 (Apr. 17, 1981).

52. *See supra* note 35.

53. Securities Exchange Act Release No. 14885 (June 23, 1978), 15 S.E.C. Doc. 138 (1978). The Commission reasserted its opinion that, at the very least, a broker must make periodic assessments of the quality of the competing markets to assure that all reasonable steps were being taken to obtain best execution for its customer's order.

54. At that point, the NYSE and Amex were considering modifying their common message switch ("CMS") to permit other market centers to send and receive messages. The CMS then allowed routing of odd-lot orders to odd-lot dealers, who could use it to confirm the transactions.

55. For example, the Pacific Stock Exchange's Scorex; NYSE's OARS, SuperDot, and R4; Chicago Stock Exchange's MAX; Philadelphia Stock Exchange's PACE; and NASD's SOES.

56. For example, Morgan Stanley's MatchPlus.

57. Rule 19c-3 Proposal, *supra* note 28.

58. *Id.*

59. Internalization refers to a broker-dealer who executes its customer order flow as principal without exposing that order flow to other market participants.

60. Overreaching refers to the possibility that broker-dealers may take advantage of their customers by executing retail transactions as principal at prices less favorable to the customers than could have been obtained had the broker-dealers acted as agents.

61. *See* Rule 19c-3 Adopting Release, *supra* note 28.

62. Securities Exchange Act Release No. 18738 (May 13, 1982), 47 FR 22376 (May 24, 1982).

63. The NYSE's version would have required a market maker to display a principal quotation matching the proposed execution price; the SIA's version would not have included that requirement. Both proposals would have allowed an OTC market maker participating in the Computer Assisted Execution System ("CAES") to enter its customer orders in that system, but only if the order entry and execution functions were not coordinated.

    Upon adoption of Rule 19c-3, the Commission had directed the NASD and the exchange participants in ITS to develop an automated linkage to allow orders to be routed between OTC and exchange markets, via the CAES ("ITS/CAES link"). The Commission had determined that implementation of the ITS/CAES link would not exacerbate internalization concerns. The ITS/CAES link started operating in 1982. The results suggested that it encouraged OTC market makers to participate in the system with respect to Rule 19c-3 stocks, and enhanced price competition. The ITS/CAES link did not cause a major restructuring of the markets for such stocks as predicted by some commentators. The exchanges retained a predominant share of the order flow.

64. *See* SEC, A Monitoring Report on Rule 19c-3 under the Securities Exchange Act of 1934, Securities Exchange Act Release No. 18062 (Aug. 25, 1981), 23 S.E.C. Doc. 650 (1981). The report concluded that, based on the limited amount of OTC trading pursuant to Rule 19c-3 at the time, no significant adverse effects on the markets for Rule 19c-3 securities could be discerned nor any significant overreaching problems observed.

65. Securities Exchange Act Release No. 19372 (Dec. 23, 1982), 47 FR 58287 (Dec. 30, 1982).

66. Securities Exchange Act Release No. 20074 (Aug. 12, 1983), 48 FR 38250 (Aug. 23, 1983).

67. Exchange Act Section 11A(a)(2), 15 U.S.C. § 78k-1(a)(2).

68. Securities Exchange Act Release No. 15926 (June 15, 1979), 44 FR 36912.

69. The proposed rule would have required SROs participating in the NMS to create a joint designating body which would operate pursuant to a designating plan to be filed with the Commission.

70. Because the Tier 1 criteria were modeled on the NYSE's and Amex's initial listing standards, most securities listed on those exchanges would receive automatic designation.

71. Securities Exchange Act Release No. 17549 (Feb. 17, 1981), 46 FR 13992 (Feb. 25, 1981).

72. Securities Exchange Act Release No. 18514 (Feb. 25, 1982), 47 FR 9388 (Mar. 5, 1982).

73. Tier 2 designation criteria were later expanded to include the NASD's National List (*i.e.*, the list of NASDAQ securities supplied to the national news media). Securities Exchange Act Release No. 21583 (Dec. 18, 1984), 50 FR 730 (Jan. 7, 1985).

74. Securities Exchange Act Release No. 24635 (June 23, 1987), 52 FR 24139 (June 29, 1987). *See* Appendix III for a description of transaction reporting requirements.

75. Securities Exchange Act Release No. 23817 (Nov. 17, 1986), 51 FR 42856 (Nov. 26, 1986).

76. Securities Exchange Act Release No. 28149 (June 26, 1990), 55 FR 27917 (July 6, 1990).

77. In 1992, the NASD amended its by-laws to require trade reporting for NASDAQ securities similar to that required for NASDAQ/NMS securities. Securities Exchange Act Release No. 30569 (Apr. 10, 1992), 57 FR 13396 (Apr. 16, 1992). Although the NASD collects and disseminates last sale

information for NASDAQ securities in the same manner as for NASDAQ/NMS securities, NASDAQ securities are not deemed "reported securities" for purposes of Rule 11Aa3-1 under the Exchange Act because transactions involving NASDAQ securities are not reported pursuant to an effective transaction reporting plan. Thus, NASDAQ securities do not qualify as NMS securities under Rule 11Aa2-1.

In 1993, the Commission approved a rule change by the NASD extending trade reporting to non-NASDAQ OTC equity securities. Securities Exchange Act Release No. 32647 (July 16, 1993), 58 FR 39262 (July 22, 1993). Thus, at present, real-time, last sale transaction reporting is required for the vast majority of securities transactions in the United States.

78. *See supra* note 4.

79. *See, e.g.*, Securities Exchange Act Release No. 32256 (May 4, 1993), 58 FR 27486 (May 10, 1993) (soliciting comment on net capital treatment for derivative products).

80. *See, e.g.*, SEC, INTERNATIONALIZATION OF THE SECURITIES MARKETS, Report to the Senate Comm. on Banking, Housing, and Urban Affairs and the House Comm. on Energy and Commerce, 100th Cong., 1st Sess. (1987).

Study II

Structure of the U.S. Equity Markets

The U.S. equity markets today are larger, faster, more complex, and more varied than at any time in the past. This development reflects changes in the composition of the users of the markets, both customers and professional intermediaries, as well as in the structure of the markets themselves. Both the exchange market and the over-the-counter ("OTC") market are vastly different from what they were 20 years ago. This study describes the U.S. equity markets as they exist today.

A. The Users of the Markets

The predominant trend of the past 20 years has been the growth in size and diversity of users of the equity markets. Current market participants include numerous large entities, representing both retail customers and professionals. In the Securities and Exchange Commission's ("Commission") 1971 Institutional Investor Study, this trend was described as the "institutionalization" of the market.[1] The institutional presence in the markets has continued to grow. For example, in 1975, institutions owned 30% of U.S. equities, but by 1992 they owned slightly more than 50% (Exhibit 1).[2] The following summaries describe the various users of the markets.

1. The Public Investor

Although the level of individual investor activity has fluctuated with various market cycles,[3] the importance of the individual investor has never been questioned. Indeed, in the 1950s, the New York Stock Exchange ("NYSE") encouraged investors to "own your share in America" by buying equities. Individual investors have always been considered the cornerstone of U.S. equity markets.

The number of shareholder accounts increased from 25 million in 1975 to 51 million in 1990 and is still growing. A typical individual account averages approximately $14,000, generates several hundred dollars per year in brokerage commissions, and places orders that average approximately 300 shares per order. Over two-thirds of these accounts, however, effect no more than two transactions per year. Many retail investors use a discount broker for execution.

The absolute amount of retail investor activity is greater than in years past, but the *percentage* of market activity attributable to direct individual investor participation in the market has declined. In 1992, block trades, which are effected almost exclusively by institutions, accounted for 50% of NYSE volume, an increase from 16% in 1975. Program trades, negligible in 1975, accounted for another 11% of NYSE volume in 1992. Activity by market professionals, such as options market makers and equity trading desks, accounted for an additional significant portion of NYSE volume. Thus, of the total volume on the NYSE, a minority results from the direct activity of individual investors. This trend is not as pronounced for the OTC market, but there is increasing institutional activity in that market as well, especially for OTC stocks included in the major market indexes.

Although there has been a decline in the percentage of *direct* individual participation, there actually has been an increase in *indirect* participation in the equity securities market. Individual investors are more likely to participate through institutions, such as mutual funds, public pension plans, private pension plans, or insurance companies. Together with the endowment funds of colleges and religious organizations, these entities now own over $2.3 trillion of U.S. equities.

2. Institutional Investors

a. Mutual Funds.[4] Mutual funds have become increasingly significant participants in the equity markets. Between 1975 and 1992, mutual funds' share of total U.S. equities more than doubled (Exhibits 1 and 2). During roughly the same period, the number of equity funds grew from 276 to 1,232, the number of accounts in equity funds tripled from 8.9 million to 26 million, and the dollar value of assets in equity funds soared from $34 billion to $383 billion (Exhibits 3 and 4).

The overwhelming majority of equity mutual funds' assets are actively managed. Equity funds usually participate in the equity market through direct purchases and sales of stock. Few use stock options, stock index options, or stock index futures to any great extent. With the growth of money committed to defined-contribution retirement plans,[5] including the so-called "401(k)" plans,[6] it is likely that the amount of assets held by equity funds will continue to increase.

b. Pension Funds. Until the recent growth in assets held by equity mutual funds, the most substantial growth in equity assets had been in pension plans, particularly public pension plans. Between 1975 and 1992, the amount of U.S. equities held by private and public pension plans grew from $132 billion to $1.3 trillion (Exhibit 1). Indeed, the equity holdings of one of the largest public pension plans today almost equal the combined equity holdings of all the public pension plans existing in 1975.[7]

The increase in pension plan assets has led to three important developments in the equity markets. First, as pension plan assets grew, those within a plan sponsor's organization responsible for managing these assets (*e.g.*, treasurer's office) found this responsibility to be increasingly burdensome. As a result, a substantial amount of pension plan assets was turned over to professional money managers. This development increased the concentration of equity assets in the hands of a relatively small number of professional managers.[8]

Second, plan sponsors began to employ independent consultants to evaluate the performance of their money managers. This situation has increased the pressure on money managers, who are turning more frequently to soft dollar arrangements to minimize their costs and thereby enhance their performance statistics.[9] The use of consultants has not been confined to the sponsors of pension plans; many investment companies rely on consultants to evaluate the performance of their portfolio managers.

Third, performance consultants usually measure the performance of a money manager by comparing the manager's results to a benchmark index, such as the Standard & Poor's ("S&P") 500. Rather than attempting to exceed these benchmarks, some money managers began to engage in passive management.[10] Also known as "indexed investing," this technique involves buying a basket of stocks that comprise an index in the exact proportion of their weight in the index. The basket is then maintained so that it mirrors the benchmark index. As stocks are added to or removed from the index, the same stocks are added to or removed from the indexed account. Indexation allows money managers to cut costs by reducing transaction costs, management fees, and brokerage commissions, and provides an easy method of managing huge pools of assets.

The equity assets committed to passive management grew substantially during the past two decades. From 1975 to the beginning of 1992, the amount of U.S. equity assets passively managed increased from under $1 billion to $231 billion.[11] During this period, the percentage of total assets indexed by the top 200 pension funds expanded from under 1% to 18.3%. Generally, most of the pension funds committed to passive management during the 1980s used the S&P 500 index as a benchmark. An increasing percentage of new indexed assets, however, has been committed to mid and small capitalization indexes over the past two years. Most indexed assets, regardless of the particular index, are concentrated among a handful of money managers.[12]

The popularity of indexed investment has affected the equity markets in several ways. The technique contributed to the growth in program trading. It also led to the development of several proprietary trading systems that offer crossing trades in portfolios of securities. Finally, the growth in pension plan assets committed to passive management helped fuel the rise in the stock index futures and stock index options markets in the 1980s. The managers of these assets found it more efficient to use the index-derivative markets to rebalance assets and manage the risks of their portfolios.[13]

The growth in pension funds and other institutional assets led, in part, to higher institutional trading volume during the 1980s. Many investment managers for pension plans (and, to some extent, portfolio managers at mutual funds) wanted to produce positive results for periodic evaluations by the performance evaluators. Thus, some investment managers developed short-term investment horizons.[14] Derivative products such as options and futures enabled institutional investors to adjust their positions more quickly and generate new equity strategies. Passive management caused incoming money to be invested in stocks as soon as possible to avoid index tracking errors. To some extent, all of these trends also applied to other types of large institutional investors, such as college endowment funds and large insurance companies with equity portfolios.

c. **Hedge Funds.** Private investment funds, colloquially known as hedge funds, are a growing participant in the equity market. The term "hedge fund" generally refers to a private fund involving fewer than 100 investors[15] that can engage in more aggressive forms of trading, such as margin buying, short selling, day trading, and speculative use of derivatives.[16] Hedge funds are usually organized as private limited partnerships; the general partner is responsible for managing the fund and making investment decisions.

There is no direct source of information on hedge funds.[17] Anecdotal reports indicate that over 500 funds are in existence, up from around 100 during the mid-1980s. The estimated asset size of various equity hedge funds ranges from several million for the small funds, to several billion dollars for the large funds. Because hedge funds are not registered entities, it is difficult to quantify the amount of equity trading attributable to them.

3. Market Professionals

a. Broker-Dealer Trading Desks. The equity trading activity of larger broker-dealers has expanded significantly in terms of size and investment alternatives over the past 20 years. For example, in 1975, the amount of revenue that broker-dealers derived from trading amounted to $1.3 billion. By 1991, this amount had grown to $22.5 billion.[18] Aided by advances in telecommunications and computer technology, the introduction of derivatives, and the growth of buy-side assets, the equity trading desks of the larger broker-dealers are significant forces in the equity markets. Moreover, they have fueled the growth in program trading and, together with pension funds, have sparked the growth in index derivatives. The Commission's Division of Market Regulation ("Division") understands that, although the October 1987 market break and lower agency commissions have reduced the willingness of the larger firms to commit capital for block positioning, equity trading desks remain important providers of liquidity to the institutional customer.

The derivatives trading desks of the large broker-dealers are among the most significant professional participants in the equity markets. For example, in 1992, program trades in NYSE stocks accounted for 27.6 million shares per day (11% of reported volume). During one week in 1992, these trades averaged 68.4 million shares per day. The firms engaging in these trades also effected other types of derivatives related trades. In addition, the derivatives trading desks of large broker-dealers are among the major dealers in the growing OTC derivatives business.[19]

The large broker-dealers also are a primary factor in the rise of global trading. They have established trading desks in the major market centers around the world. Some of these broker-dealers pass their trading books from the Far East to Europe to the United States as the major markets open and close.

b. Retail Brokers. The equity operations of retail firms have changed dramatically over the past 20 years. The automation of broker-dealer order handling and processing technology, as well as the automation of the order routing, execution, and reporting services of the equity markets, have enabled broker-dealers and the markets to handle an exponentially greater order flow; they do so in a time frame that was unimaginable 20 years ago.[20] For example, a customer's order to buy 100 shares of a listed stock at the market in 1975 would have taken from several minutes to an hour to travel from the branch office that accepted the order to the firm's trading desk, and finally to the firm's broker on the floor of the exchange, who transmitted the order to the specialist post. Between the time that the customer entered the order and the time it was executed, it was possible for the market in the stock to change. An additional delay would occur before the trade was confirmed to the customer. Today, the entire process -- from the entry of the order to its confirmation to the customer -- can take less than a minute, often while the customer is still on the telephone with a sales representative.

The automation of the order handling process also includes the order routing decision. Rather than evaluate the best possible market or market maker among competing markets or market makers for every individual order, most retail firms automatically route their small-size order flow (*e.g.*, all orders under 3,000 shares) to a specified market or market maker, based on the characteristics of the stock and the order. Many factors determine where a small order is routed. For example, broker-dealers will route orders to an affiliated specialist unit on a regional exchange or, for stocks quoted on the National Association of Securities Dealers Automated Quotation ("NASDAQ") system, to their OTC market making desks. Some order flow is routed based on payment for order flow or reciprocal order flow arrangements. Some firms will route orders only to the primary market. A few large broker-dealers internally cross their order flow and then route these orders to regional exchanges. Regardless of the method selected, retail firms generally consider individual order routing decisions to be unduly expensive or inefficient. Whether handled by a discount or a full-service broker, an individual customer's order typically is routed to a specific market or market maker through a predetermined routing algorithm employed by the broker-dealer. The customer's order is viewed by the broker-dealer as part of its overall order flow, which is packaged and distributed to specific locations.[21]

Aside from the automation of order handling, the popularity in discount brokers has also changed the nature of retail operations. Discount brokers act solely as agents in representing customer orders. They do not trade for their own account, underwrite securities, or provide investment advice, as do so-called full service firms. After the Commission in 1975 prohibited fixed commission rates, brokers were able to reduce their commissions to attract retail customer business. The drop in rates led to growth in activity by discount brokers. From 1980 to 1992, discount brokers' market share of retail commissions grew from 1.3% to 12.9%. The available commission rates for retail customers fell substantially, although not nearly to the level for institutional customers.[22]

One result of the reduction in commission rates has been a greater emphasis of retail firms on the money management business. Retail firms have developed cash management accounts and wrap accounts in part to offset the declining profit margin on retail business.[23] They have also expanded their efforts to attract retail money into the mutual funds they manage. These efforts have added to the trading activities of institutions on behalf of individual investors.

c. Specialists and Market Makers. Traditionally, the specialists and floor brokers on the exchanges and the market makers on NASDAQ have played an important role in providing liquidity, depth, and price continuity.[24] Because of their physical presence on the exchange floor or their display of quotations on NASDAQ, it is tempting to view these participants as constituting "the market." This view is no longer accurate because of the participation of institutional investors and equity trading desks in the market and the availability of derivative products. Nevertheless, specialists and market makers still perform an important role in the operation of the markets. On the exchanges, specialists direct the auction on the exchange floor, handle limit orders, and ensure accurate quotations. In the OTC market, NASDAQ market makers establish quotations and execute most orders. Both specialists and market makers are responsible for maintaining markets and, in return, receive certain privileges.[25] Because of their order handling and market maintenance roles, specialists and market makers are subject to special regulatory scrutiny.[26]

d. Options Market Makers. Options market makers use a variety of instruments to hedge their market making risk. Market makers in index options primarily use stock index futures, while market makers in stock options usually hedge with the underlying stocks. Both often hedge by entering into a spread position using several series of options. The hedging orders using individual stocks and the orders from other intermarket options trading strategies may constitute a significant percentage of volume in the underlying stocks. Although precise figures are not available, some market professionals have indicated to the Division that as much as 10% of the overall volume in some stocks is attributable to options hedging orders. One regional exchange even promotes memberships to options market makers as a mechanism to obtain independent access to the Intermarket Trading System ("ITS") for the market makers' hedging orders.

B. Structure of the Equity Markets

The equity markets continually evolve in response to their users, who seek cheaper and quicker markets that provide a variety of services, and are fair and orderly. Users have become more aggressive in pressing the markets to accommodate their demands. The organized markets and entrepreneurs operating outside such markets have enhanced existing services and developed a multitude of new services and products. Because there are so many different types of users, it has proved difficult for any particular market to accommodate them all. Consequently, the U.S. equity market has evolved into a multifaceted structure, with the primary markets -- the NYSE, American Stock Exchange ("Amex"), and NASDAQ -- attempting to accommodate as many users as possible but losing market share to competitors who provide specialized services that the primary markets do not replicate (or do not replicate competitively). Today, the structure of the market for the 3,000 most highly capitalized U.S. stocks depends on factors such as the size of the order, the identity of the customer, the identity of the broker involved, and whether the stock underlies a derivative. The following summary describes the "menu of markets" for U.S. equities, both for listed equities and NASDAQ stocks.

1. Primary Exchanges (NYSE and Amex)

There are seven registered stock exchanges in the United States. The two primary exchanges -- the NYSE and the Amex -- list most of the stocks traded on an exchange. The five U.S. regional stock exchanges include: the Boston Stock Exchange

("BSE"), the Philadelphia Stock Exchange ("Phlx"), the Cincinnati Stock Exchange ("CSE"), the Chicago Stock Exchange ("CHX"), and the Pacific Stock Exchange ("PSE"). These exchanges primarily trade securities that also are listed on the primary markets.[27]

The primary exchanges operate as modified auction markets. In the exchange auction all order flow for a stock is directed to a central location, the trading post for the specialist in the stock, and orders interact to the maximum extent possible. A specialist acts as a market maker by trading for its own account to ameliorate temporary disparities in supply and demand for the stock and also acts as the agent for orders left on the limit order book.[28] This structure proved inadequate to accommodate large block orders in the late 1960s and early 1970s. The NYSE and the Amex responded by modifying their auction rules to enable block orders to be negotiated by the trading desks of member firms off the floor of the exchange. The trading desk would find a customer to take the other side of the block, acting as an agent for both sides in the transaction, or would commit its capital by taking the other side of the block itself. In either event, a negotiated price for the block would be established off the exchange (*i.e.*, upstairs), and the transaction would then be brought down to the trading post and exposed to the trading crowd and to any limit order book interest.

The modified auction structure served the NYSE well when it was practically the sole price discovery mechanism for stock. In 1975, the NYSE captured approximately 86% of the volume in NYSE-listed stocks.[29] This concentration of volume allowed the NYSE to operate as a self-contained auction, albeit modified for block trading, which at the time accounted for only 16.6% of NYSE volume. Third market makers (discussed shortly) garnered a modest share of small customer orders.

In contrast, in the first six months of 1993, the NYSE accounted for only 70% of the total orders and 79% of the volume in NYSE-listed stocks. Moreover, block transactions, which often are negotiated off the floor of an exchange, accounted for half of the NYSE volume. Some blocks are sent to regional exchanges for execution, whereas blocks accounting for over 2 million shares per day are executed off the exchange after the close of regular trading hours. A substantial portion of small orders for public customers (*i.e.*, orders for 3,000 shares or less) is sent to the regional exchanges or third market dealers for execution (Exhibit 11). Proprietary trading systems handle 1.4% of the volume in NYSE stocks, usually in the form of portfolio trades or block trades. Several large institutions or money managers cross portfolio orders internally between accounts. These crosses account for up to 1 million shares on any given day.

Almost 200 NYSE stocks are traded on foreign exchanges. Foreign trading accounts for several million shares per day in these stocks. Ten million shares per day are executed as program trades after the NYSE closes, either on the NYSE's after-hours crossing session or through the foreign desks of U.S. broker-dealers. Perhaps most importantly, active options and index futures markets provide an alternative means of trading NYSE stocks. The aggregate dollar value of trading in these markets far surpasses the dollar value of trading on the NYSE.

Although order flow is dispersed, the NYSE still receives the majority of small orders. Its market share in these orders, however, has eroded steadily over the past decade. The NYSE generally has retained the 3,000 to 25,000 share trades, which are too large for the small order systems of the regional exchanges and third market and too small to be handled by block positioners. These orders benefit from the liquidity provided by the NYSE floor, but they are also often difficult for the NYSE specialists to handle because the orders require capital commitment and trading acumen. In addition, the NYSE attracts orders that need special handling as well as trades for which the institutional customer wants to "see a NYSE print."

Despite the fact that it has lost some volume, the NYSE still plays an important price discovery function as does the Amex. Most securities markets set prices equal to or based on the primary market prices. For example, the regional exchanges and third market makers usually base their quotations on the primary market quote, and many of them simply autoquote the primary markets.[30] Block positioners use the NYSE price as the reference point for negotiating block prices. Much after-hours trading is executed at NYSE closing prices. Similarly, proprietary trading systems often use the NYSE quotes as a pricing reference. The derivatives markets obviously rely on NYSE (as well as Amex and NASDAQ) prices to price options and futures.[31] There are also numerous transactions involving equities that use NYSE prices.[32]

The NYSE also serves as the market of last resort during times of market stress. During volatile market conditions, when normal liquidity is unavailable in the index-derivatives markets, market participants channel their stock orders to the NYSE.[33] Moreover, supplemental sources of liquidity to the floor, such as block positioners, are less active during such periods. The NYSE has attempted to accommodate periodic surges of demand by upgrading the capacity of its automated floor systems and by increasing the amount of capital that specialists are required to have available.[34] At the same time, the NYSE has adopted certain circuit breaker provisions, such as NYSE Rules 80A and 80B, which are designed to dampen these surges. Users of the market must understand that, if the NYSE is to perform the role of market of last resort, they will have to pay for this service in some manner.

2. Regional Exchanges

At an earlier point in their history, the regional exchanges served as "incubator" markets for small, local companies. For the past 20 years, however, the overwhelming percentage of regional stock exchange business has been in the stocks of NYSE- and Amex-listed companies that the regional exchanges trade pursuant to grants of unlisted trading privileges ("UTP").[35] In 1992, over 97% of the regional stock exchanges' volume derived from issues traded pursuant to UTP. Because all of the regional exchanges have UTP in most NYSE and many Amex issues, for the majority of NYSE- and Amex-listed stocks there are five exchanges competing with the primary market. The regional exchanges are linked with the primary markets in UTP issues through ITS, the Consolidated Quotation System ("CQS"), and the consolidated tape.

The regional exchanges captured 20% of the orders in NYSE issues in the first six months of 1993. Most of this market share derives from small orders from individual customers. During the 1970s and 1980s, the regional exchanges built automated systems that enabled member firms to route small customer orders to their specialist posts. Orders routed over these systems generally are executed automatically at the ITS best bid or offer, regardless of the quote of the particular regional specialist. Because of the speed and efficiency of these systems, lower transaction fees, and the guarantee of the ITS best bid or offer, many retail broker-dealers send some of their small order flow to the regional exchanges.

The regional exchanges do not provide vigorous quote competition to the NYSE. Their specialists' quotes rarely are better or deeper than those on the NYSE.[36] Because the regional specialists guarantee an execution as good as the NYSE quotes, however, retail firms believe that they meet their best execution obligations to their customers when sending their small customer orders to regional exchanges.

Small customer order flow benefits the regional exchanges in three ways. First, small order executions are printed on the consolidated transaction tape. The fees paid by subscribers for access to the consolidated tape are apportioned among the various markets based on the percentage of transactions attributable to each market.[37] The more prints an exchange has, the more revenue it garners. Second, small customer market and marketable limit orders are relatively easy to handle and enable a regional specialist to make a "dealer's turn" by buying at the bid and selling at the offer. Third, regional specialists act predominantly as dealers who derive trade and position benefits from a steady order flow.

In recent years, the regional exchanges have solidified further their share of small order business by facilitating the affiliation of their specialists firms with substantial retail order flow. Today almost half of the regional specialists are affiliated with such firms. (Exhibit 29) These firms generally route to their affiliated specialists the small customer orders in stocks traded by the specialists.

The CSE has taken this process one step further through its preferencing rule. Under this rule, which is operating on a pilot basis, a CSE member can send its order flow to a specific designated dealer on the CSE, including its own designated dealer. As a result, a few large firms internalize their small customer order flow by acting as designated dealers on the CSE and "preferencing themselves."[38] In addition, several third market makers that pay for order flow are designated dealers on the CSE and use it to access ITS for stocks that are not subject to exchanges' off-board trading restrictions.

The regional exchanges also attract some block business in listed stocks. A few regional specialists try to make markets in blocks, but most of the regional block business comes from brokers wishing to avoid the limit order book on the primary market. All of the exchanges accord some form of time priority to orders residing on their limit order book. Because limit order protection cannot be provided across all markets, this protection extends only to the particular market's book. Thus, a trade can occur on a regional exchange at the NYSE bid or offer price without satisfying the limit orders on the NYSE at that price. The opposite is also true, in that executions on the NYSE do not have to satisfy the regional limit order books.[39] There are often limit orders in the NYSE limit order book at the best bid or offer; the regional limit order books are much thinner. Thus, a block positioner who desires to execute a block at the prevailing bid or offer but does not want to have one side of the block broken up by the limit order book can send the block to a regional exchange that has no limit orders at the block price.[40]

The regional exchanges also receive non-block order flow that is intended to avoid the limit order book on the primary market. Several broker-dealers have developed internal proprietary crossing networks for their order flow. These networks either cross customer orders against one another or execute them against the firm. Some of the firms operating crossing networks allow other broker-dealers to send their own customer orders into their network. Matches generated by the networks are sent to a predetermined regional exchange for execution. Some of the matches occur between the ITS best bid or offer, while others occur at the ITS bid or offer. The absence of many limit orders at the regional exchanges, along with the willingness of regional specialists to refrain from interfering in these crosses, permits most of these trades to be executed on the regional exchanges. The firm entering the cross can represent to the customer that the transaction received an exchange "execution," and the exchange receives a print for transaction reporting purposes.

Although the regional exchanges may not provide vigorous quote competition to the NYSE, they have provided meaningful and needed service competition.[41] The regional exchanges also have provided vigorous cost competition to the NYSE through lower transaction fees[42] and have developed new products.[43]

3. Third Market

OTC trading of exchange-listed securities is commonly known as "third market" trading. Third market dealers handle order flow sent to them by other broker-dealers. At the time of the Institutional Investor Study, third market volume derived principally from two sources. First, institutional investors desiring to avoid the NYSE fixed commission schedule entered into various order flow arrangements with third market dealers and regional exchange members. The unfixing of commission rates in 1975 caused this business to decline. Second, a few third market dealers acted as block positioners; the services of these firms were especially in demand when the NYSE was closed. Some third market firms continue to act as block positioners, but their role has been partially undercut as NYSE member firms have developed the ability to effect transactions in blocks at their foreign desks.

The past few years have seen third market trading increase, principally from operations established by a few third market makers to handle small customer order flow. The third market makers act much like NASDAQ market makers in that they accept orders of up to a few thousand shares in the most active listed stocks from retail firms or discount brokers.[44] Market orders are executed against the best bid or offer on ITS, and limit orders are handled according to preestablished execution parameters.[45]

Third market makers offer three advantages to firms with large retail order flow. First, third market makers have automated their operations so that they provide virtually instantaneous executions and reports.[46] Second, they do not charge transaction fees, membership fees, or limit order commissions. Third, they usually pay $0.01 to $0.02 per share for order flow.

Third market activity is concentrated in the 400 most active NYSE stocks and a much smaller number of Amex stocks. The remaining NYSE- and Amex-listed stocks are not sufficiently active for third market operations. In 1989, the third market garnered 3.2% of reported NYSE volume and 5% of the reported trades; in 1993, this percentage had increased to 7.4% of reported NYSE volume and 9.3% of the reported trades.

4. NASDAQ

NASDAQ is an interdealer quotation system operated by the National Association of Securities Dealers ("NASD"), which is registered as a national securities association under Section 15A of the Securities Exchange Act of 1934 ("Exchange Act").[47] NASDAQ consists of competing market makers for each security. Customer orders are not normally reflected in the market makers' quotes. Unlike the exchange market, limit orders are handled individually by each market maker.

At the time of the Securities Acts Amendments of 1975, Congress and the Commission found it unnecessary to regulate NASDAQ as an exchange. Although certain trading characteristics of NASDAQ are functionally similar to those of the traditional exchanges, the Commission believed that these similarities did not transform NASDAQ into an exchange.[48] Nevertheless, the NASD is subject to regulation under Section 15A of the Exchange Act that is substantively similar to the regulation for national securities exchanges under Section 6 of the Exchange Act.[49]

At its inception in 1971, NASDAQ publicly displayed only representative bids or offers; nevertheless, it revolutionized OTC trading by increasing the availability of quotes for OTC securities. As a result, spreads for these stocks narrowed, volume increased, and liquidity improved.[50] In addition, NASDAQ led to greater visibility for its issues and expanded coverage in the media. NASDAQ also reduced dealers' reliance on the telephone[51] and enabled integrated firms to compete as market makers with wholesale firms.[52]

NASDAQ has made tremendous strides in automating OTC market making and increasing the efficiency and transparency of the OTC market, including: (1) the display of all market makers' quotes; (2) the implementation of real-time trade reporting for NASDAQ/NMS securities in 1982 and NASDAQ Small-Cap stocks in 1992;[53] (3) the display of market maker quote size; (4) the introduction of its Automated Confirmation Transaction Service;[54] and (5) the development of SelectNet.[55] In addition, all NASDAQ/NMS securities have been marginable pursuant to Federal Reserve Board guidelines since 1984. They also are exempt from state blue-sky registration provisions in most states.

Initially, NASDAQ was considered primarily an "incubator" market. When its companies matured financially, they usually became listed on exchange markets. NASDAQ now is a major market in its own right. Based on volume, it is the second largest securities market in the world after the NYSE. Its dollar volume of trading is 43% of the NYSE's dollar volume. Its NMS market trades 3,104 companies, many of which qualify for listing on the primary exchanges but choose to remain on NASDAQ. Although most of the most highly capitalized companies are listed on the NYSE, a significant portion of the younger, widely held companies are quoted on NASDAQ.[56] The three primary markets compete aggressively for listings.

NASDAQ is not a completely automated market. With the exception of its Small Order Execution System ("SOES") and SelectNet features, order entry and execution for NASDAQ stocks still occur by telephone.[57] Moreover, it is difficult for a customer to have a limit order exposed on NASDAQ. As a result, proprietary trading systems, which offer both automation and limit order exposure, have been able to capture 13% of the volume in NASDAQ/NMS stocks.

NASDAQ now is linked with the exchanges through the interface between ITS and the NASDAQ's Computer Assisted Execution System ("CAES"). Through this linkage, NASDAQ market makers are linked to ITS for listed stocks that are not subject to off-board trading restrictions. The NASD has proposed to expand the linkage to all NYSE and Amex stocks.

5. Automated Trading Systems

Several types of automated trading systems offer institutions and broker-dealers the opportunity to trade off the exchanges and NASDAQ. The first are proprietary trading Systems ("PTSs"), screen-based automated trading systems typically sponsored by broker-dealers. PTSs are not operated as or affiliated with self-regulatory organizations ("SROs") but instead are operated as independent businesses. PTSs currently permit trading in equities, government securities, corporate debt, and options. As a practical matter, participation in these systems is limited to institutional investors, broker-dealers, specialists, and other market professionals.

Advancements in telecommunications and trading technology over the past decade have fostered the growth of PTSs. They have been used by institutional investors to reduce execution costs, avoid the market maker spread, and trade in size without incurring the market impact costs that could result if orders were handled on the organized markets. The popularity of PTSs has been fueled by two phenomena. For listed securities, they are attractive to passive managers or other patient investors who are sensitive to transaction costs, but do not need the instant liquidity that the exchanges provide and do not want to pay the market spread. For NASDAQ securities, they are used by institutional investors who do not want to go through NASDAQ market makers to enter an order or who want to avoid paying the bid-ask spread, but instead prefer to seek liquidity through interaction with other institutional investors.

PTSs have combined technology with features attractive to institutional investors to gain an increasing share of volume in the past few years. For the first half of 1993, the total share volume on PTSs was 4.7 billion shares, which was almost equal to their entire volume in 1992. The total share volume for 1992 was nearly 4.9 billion, an increase of more than 60% from the 1991 volume of 2.9 billion. Trading in NASDAQ stocks represented 87% of PTS volume in the first half of 1993. During this same period, listed stocks were only 13% of PTS volume.

Even though PTS volume is growing rapidly, it is important to keep these numbers in perspective. First, the rising trend in PTS volume is consistent with the increasing volume occurring in the equity markets as a whole. Second, these systems represent only a small segment of primary market activity. The PTS volume in exchange-listed securities represents only 1.4% of the volume in the NYSE stocks. PTS volume in NASDAQ stocks, however, has grown to 13% of the total volume in NASDAQ/NMS stocks. Third, many institutional investors still consider these systems to be experimental and have not sought access to PTSs.

The second type of automated trading systems are, as described above, internal crossing systems operated by several large broker-dealers. These systems cross orders submitted by the broker-dealer's customers and, in some cases, orders from other broker-dealers. The systems route crosses in listed stocks to exchanges for execution. Crosses in NASDAQ stocks are submitted to NASDAQ for trade reporting.

6. Fourth Market

The fourth market refers to the trading of shares directly between institutional investors without the intermediation of a broker-dealer. This type of trading differs from the trading done through PTSs because the latter must either register as broker-dealers or secure the services of a registered broker-dealer in order to process and guarantee the trades. The distinction is important because trades effected through PTSs are, for the most part, subject to transparency rules, and they are subject to oversight by the NASD.[58]

The Division requested data on the extent of fourth market trading, but commentators did not submit any information on this market.[59] The Division understands, however, that the fourth market consists of internal crosses of orders between different accounts of the same institution or money manager. A few large institutions or money managers use this technique to avoid brokerage commissions and to limit the search for alternative sources of liquidity. Internal crossing of orders is used primarily for passively managed accounts that are cost-sensitive but do not need immediate liquidity. Although it is impossible to quantify the amount of fourth market trading, the Division estimates that such trading averages several million shares per day. In addition, some trading may be conducted in a "rolodex market" of institutions that call one another to solicit contra-side interest to an order, but this activity does not appear to involve significant volume.

7. Foreign Markets

Over the past 20 years it has become easy to trade securities around the world because of advances in telecommunications. Hundreds of U.S. equities are traded on foreign stock exchanges by the larger U.S., Japanese, and European broker-dealers, which have established trading desks at the major securities markets around the world.

The trading of U.S. equities by U.S. broker-dealers on foreign exchanges amounts to several million shares per day. Most of this trading is done abroad because of time zone differences between the major markets in New York, Tokyo, and London. Institutional investors that wish to trade when U.S. markets are closed seek the markets open at the time. By and large, this trading is concentrated on the London Stock Exchange ("LSE") and occurs shortly before the opening of the NYSE. Most additional trading abroad is not done on foreign markets but results from orders faxed by U.S. broker-dealers to their foreign desks.[60] These orders usually involve a large block in a single stock or a large basket of multiple stocks.[61] Currently, this "fax" trading amounts to approximately 7 million shares per day in NYSE stocks.

8. Block Positioning

Most transactions involving block trades over 50,000 shares (and many from 25,000 to 50,000 shares) are effected with block positioning firms. Block prices are negotiated based on current prices disseminated from the exchange floor or NASDAQ, with a block premium added or subtracted. Block positioners supplement the liquidity of the NYSE and NASDAQ by "shopping" their customer's block order upstairs to find a contra-side. They also take the other side of the transaction, keeping the block as a proprietary position.[62]

Once price is negotiated for a block of NYSE stock, the transaction is executed on the exchange floor. Block positioners who are not members of the NYSE are not required to execute the block transaction on the exchange. When a block transaction is executed on the NYSE floor, it is subject to special auction market procedures designed to allow the limit order book or the trading crowd to participate. Block positioners prefer not to have the block broken up by the trading crowd or the limit order book. In some cases they use a regional exchange to execute the transaction (*i.e.*, "print the block"). Because some institutions request an NYSE execution for their trade, block positioners can wait for a trade to clear the auction on the NYSE floor and then invoke precedence based on size under NYSE rules if the block is larger than the interest on the limit order book.[63] In other cases, block positioners work part of a block on the NYSE floor if contra interest upstairs is insufficient and the firm does not want to take the other side of the block trade.

Until the October 1987 market break, upstairs firms often would commit capital to position a block. The market break and volatility that followed dampened the enthusiasm to commit capital. In addition, some commentators have suggested that the shrinking level of commission dollars and the rise in soft dollar practices have further reduced block positioning liquidity.[64] Block positioners today are more likely to attempt to find contra-side interest for the block order, execute the cross, and collect agency commissions than to position the block.

Most blocks in NYSE stocks are negotiated off the exchange (*i.e.*, "upstairs") but are executed on the exchange. A small percentage is executed on the regional exchanges. Indeed, the NYSE captures over 90% of the blocks in its stocks during regular trading hours. Some blocks, comprising approximately 2 million shares per day, are faxed by NYSE member firms to their foreign desks, where they are executed nominally in a foreign OTC market in order to comply with the NYSE's off-board trading restrictions. Because these trades are not reported to the consolidated tape, they avoid U.S. transparency requirements.

C. Equity Derivatives Markets

The derivatives markets, especially the stock index futures market, are sizeable and surpass the NYSE in terms of dollar trading volume. It is well established that the equity, options, and futures markets are linked by their participants and strategies.[65] Indeed, many of the equity strategies employed by large broker-dealers, pension funds, and money managers utilize derivative products in combination with stock transactions. On an average day in 1992, program trading strategies alone accounted for 11% of reported NYSE volume, and on expiration weeks of options and futures, this figure was 15%. When combined with options hedging orders and hedge fund derivatives activity, a substantial portion of NYSE activity is attributable to derivatives-related strategies.[66]

The equity markets themselves have helped to facilitate the development of the derivatives markets by joining in the creation of new derivative products and by enhancing their order routing systems to accommodate derivative-related strategies. For example, the NYSE's LIST processing enhancement to its Designated Order Turnaround System ("DOT") has made it easier to send index arbitrage orders to the NYSE floor.[67] At the same time, the equity markets have adopted a number of features designed to cope with derivative-related strategies, including circuit breakers, special Expiration Friday order handling, and imbalance dissemination procedures for days when index derivatives expire.

The Commission has produced many reports and studies as well as Congressional correspondence concerning the effect of the derivatives markets.[68] A primary finding in all of these is that the stock index futures market has evolved from a market primarily used for the hedging of market risks for institutional stock portfolios into a vast market for trading by professional and institutional accounts. The stock index futures market now often functions as the dominant price discovery mechanism for the stock market. The lower transaction costs, higher leverage, and apparent liquidity of the stock index futures market make these products the preferred trading vehicles for many institutional investors. Index arbitrage and other strategies transmit prices discovered in the derivatives markets to the underlying stock market. When concentrated selling or buying strains the liquidity of the futures market, however, institutions expect to rely on the equity market as the provider of liquidity of last resort.

The Commission's focus on intermarket regulation between the derivatives and cash markets has been directed to issues regarding systemic risk, surveillance of trading abuses, and the bifurcated regulatory structure for securities and futures. The Commission has proposed many recommendations for market reform in these areas, some of which have been adopted and others that have not been acted upon. Several commentators suggested that the Commission pursue the market reform initiatives, especially those relating to regulatory structure, in the context of the Market 2000 Study.[69] Because the Commission has examined these issues thoroughly before and is continuing to advocate them in other fora, the Division did not focus on them in the Market 2000 Study. Similarly, issues involving the capital treatment of derivatives transactions and OTC derivatives activity currently are receiving separate attention from the Division and therefore are not included in the Market 2000 Study.[70]

The Division has attempted to recognize the importance of the derivatives markets when examining specific issues in this Study. For example, it is difficult to analyze fragmentation and competition between equity markets without considering the existence of alternative equity trading on the derivatives markets. Similarly, the derivatives markets play a significant role in determining the adequacy of liquidity and price discovery. In addition, many of the recommendations made by the Division are equally applicable to the derivatives markets (*e.g.*, recommendations on soft dollars, payment for order flow, and the treatment of PTSs).

1. SEC, INSTITUTIONAL INVESTOR STUDY REPORT, H.R. DOC. NO. 64, 92nd Cong., 1st Sess. (March 10, 1971).

2. This trend, however, may be beginning to level off. *See* Leslie Scism, *Institutional Share of U.S. Equities Slips*, WALL ST. J., Dec. 8, 1993, at Sec. C, p.1, col. 4.

3. The October 1987 market break caused concerns that the individual investor was abandoning the equity marketplace. DIVISION OF MARKET REGULATION, SEC, OCTOBER 1987 MARKET BREAK REPORT (1988) ("October 1987 Study"). Observers suggested that increased market volatility and the perception that individuals are at a disadvantage to large institutions using computer-directed trading strategies have created a disincentive for individuals to participate in the equity market. Indeed, after the October 1987 market break, the large retail broker-dealers experienced a temporary decline in small customer business.

4. Mutual funds' activities in the equity market are subject to regulation under the Investment Company Act of 1940, 15 U.S.C. §§ 80a-1 to 80a-64 (1988).

5. In a defined-contribution retirement plan, an employee invests a certain amount of income in a retirement plan and receives the value of the accumulated investments upon retirement. In contrast, a defined benefit retirement plan requires the employer to provide a specified level of benefits to the employee upon retirement, regardless of how much the employee has contributed to the plan.

6. Section 1002 of the Employment Income Security Act of 1974 ("ERISA"), 29 U.S.C. § 1002 (34) (1993) allows employers to set up pension plans providing for individual accounts for each participant and for benefits based solely upon the amount contributed to the participant's account. Employees can make voluntary pre-tax contributions to a plan, and employers usually match a percentage of contributions. Employees are able to exert some control over how their 401(k) plan contributions are invested.

7. The value of equity held by state and local retirement funds in 1975 was $25.8 billion. *See* SEC, 42ND ANNUAL REPORT 188 (1976). In contrast, the California Public Employees Retirement System stated in its comment letter that it had $22 billion invested in equities. Letter from DeWitt F. Bowman, Chief Investment Officer, CalPERS, to Jonathan G. Katz, Secretary, SEC 1 (Oct. 15, 1992).

8. Josef Lakonishok et al., *The Structure and Performance of the Money Management Industry*, Brookings Papers: Microeconomics 2 (1992).

9. A soft dollar arrangement involves a relationship between a money manager and a broker-dealer whereby the money manager uses the commissions generated from trades of its client accounts to obtain research, brokerage, or other services from or through a broker-dealer. *See* Study V for a discussion of soft dollar practices.

10. Lakonishok, *supra* note 8, at 373-374.

11. Compiled from various PENSIONS & INVESTMENTS AGE surveys.

12. *See* Barry Riley, *International Fund Managers; Models Which May Be Ahead of Their Time - Quantitative Management*, FIN. TIMES, Nov. 25, 1991, p. V.

13. October 1987 Study, *supra* note 3, at 3-4 to 3-9.

14. The short-term investment horizon of some investment managers may, in part, be responsible for the rise in the turnover rate for NYSE stocks from 21% in 1975 to 48% in 1992.

15. Investment interests in hedge funds generally are offered to accredited investors and thus are not registered under the Securities Act of 1933. To avoid registration as an investment company under the Investment Company Act of 1940, hedge funds generally restrict participation to fewer than 100 persons in order to avail themselves of the so-called investment company exception contained in Section 3(c)(1) of the Investment Company Act of 1940. Many hedge fund managers avail themselves of the "small advisor" exception to registration contained in Section 203(b)(3) of the Investment Advisors Act of 1940. Finally, hedge funds generally rely on the "trader" exception to avoid registration as dealers under Section 15(a) of the Exchange Act.

16. *See* Letter from Richard C. Breeden, Chairman, SEC, to Edward J. Markey, Chairman, Subcomm. on Telecommunication and Finance, U.S. House of Representatives (June 12, 1992) (discussing hedge funds).

17. The Commission has proposed Rule 13h-1 under the Exchange Act which would establish an activity-based large trader reporting system. Securities Exchange Act Release No. 29593 (Aug. 22, 1991), 56 FR 42550 (Aug. 28, 1991). Such a system would establish a definition for large traders and require large traders to submit certain information to the Commission. In addition, the system would require registered broker-dealers to maintain account and transaction records for each large trader and to report such transactions, upon request, to the Commission or a designated self-regulatory organization. It is likely that large hedge funds would be designated as large traders under the rule.

18. *See* SEC, 42ND ANNUAL REPORT (1976); SEC, 58TH ANNUAL REPORT (1992).

19. *See* Global Derivatives Study Group, Group of Thirty, Derivatives: Practices and Principles (1993).

20. Nevertheless, this capacity still has the potential to become overloaded during peak volume periods, such as the October 1987 market break.

21. An investor's order that is large in size likely will receive individual handling by the broker-dealer. In addition, an investor has the option (rarely exercised in practice) of asking the broker-dealer to route a small order to a specific market.

22. A 1992 study on equity trading costs found that, over the 1980s, trading volume increased and commission costs relative to public volume decreased. The study estimated that commissions per share traded on exchanges by the public declined from 21.35 cents to less than 10 cents; for shares traded OTC, commissions declined from 8.09 cents to less than 6 cents. *See* HANS R. STOLL, EQUITY TRADING COSTS IN-THE-LARGE AND IN-THE-SMALL (Working Paper 91-01, 1992). In a 1992 report, Greenwich Associates indicated that weighted average commission rates for institutional investors had declined from 6.7 cents in 1990 to 6.4 cents in 1991 despite expectations to the contrary and that institutional investors envisioned a further decline to 6.3 cents in 1992. *See* Greenwich Reports, Peace Reigns - for Now (1992).

23. In a wrap account, the broker-dealer selects a money manager for the retail customer's account, pays the advisory fee, and executes trades for the account. The customer pays no commissions, but instead pays the broker-dealer an annual fee that usually is set at a small percentage of the account's assets.

24. October 1987 Study, *supra* note 3, at 4-1 to 4-4.

25. For example, both generally receive special margin treatment. *See* 12 C.F.R. § 220.12 (1993) (Regulation T, Market Functions Account). In addition, specialists have control over the limit order book and are able to trade for their own account on the floor. *See* NYSE Rule 104 (Dealings by Specialists), 2 NYSE Guide (CCH) ¶ 2104. Similarly, only market makers can enter quotations into NASDAQ. *See* NASD Manual (CCH), Sch. D, § 1(a), ¶ 1818.

26. *See* Exchange Act Sections 11(a) and 11(b), 15 U.S.C. § 78k(a), (b).

27. The Chicago Board Options Exchange ("CBOE") since 1990 has been authorized to trade stocks, but to date it trades only options. *See* Securities Exchange Act Release No. 28556 (Oct. 19, 1990), 55 FR 43233 (Oct. 26, 1990).

28. October 1987 Study, *supra* note 3, at 4-1 to 4-4.

29. This figure assumes that regional stock exchange volume in 1975 was overwhelmingly in NYSE stocks. The available 1975 data does not separate the actual percent of volume in NYSE-listed stocks executed on the regional exchanges.

30. A regional specialist (and third market maker) autoquotes by setting its quotes to match automatically the primary market quotes or, more likely, to be an 1/8 point outside of the primary market quotes. When the primary market's quotes change, the autoquote program will change the regional specialist's quotes accordingly.

31. While the NYSE, Amex, and NASDAQ are the primary price discovery markets for individual stocks, the stock index futures market provides a partial price discovery mechanism for the equity market as a whole. *See* pages 15 to 16 on derivatives.

32. For example, settlements of stock options, stock index options, and stock index futures contracts are based on NYSE, Amex, and NASDAQ prices. Similarly, mutual fund redemptions use NYSE, Amex, and NASDAQ prices for valuation purposes. In 1992, there were $63 billion worth of redemptions in equity funds.

33. DIVISION OF MARKET REGULATION, SEC, TRADING ANALYSIS OF OCTOBER 13 AND 16, 1989, at 1 (1990).

34. *See* Securities Exchange Act Release No. 25677 (May 6, 1988), 53 FR 17286 (May 16, 1988) (order approving NYSE proposal to raise the capital requirements for specialists); Securities Exchange Act Release No. 27445 (Nov. 16, 1989), 54 FR 48703 (Nov. 24, 1989) (announcing the creation of the Automation Review Policy); *Grasso Says Securities Markets Prepared to Handle Future Challenges*, Sec. Reg. & L. Rep. (BNA) No. 25, at 188-189 (Feb. 5, 1993).

35. The grant of UTP allows a market to trade a particular security, even though the issuer is not listed on that market. *See* Exchange Act Section 12(f), 15 U.S.C. § 78l(f). An issuer does not pay listing fees to the exchange trading it via UTP.

36. In a paper entitled *Price Discovery, Volume and Regional/Third Market Trading*, Professors Thomas McInish and Robert Wood attempt to demonstrate that the regional exchanges provide some quote competition for listed stocks. Their results, however, indicate that the regional exchanges and the third market have better quotes than the NYSE or Amex only five percent of the time. Letter from Thomas H. McInish, Professor, and Robert A. Wood, Professor, Memphis State University, Fogelman College of Business and Economics, to Jonathan G. Katz, Secretary, SEC (Nov. 4, 1992) (paper attached to letter).

37. *See* Appendix III for a description of the consolidated tape.

38. The designated dealer could not trade as principal against a customer's order if there is a preexisting customer order on the CSE against which the first customer order could be executed. There are few limit orders at the ITS best bid or offer on the CSE, so this poses only a minor hindrance to internalizing order flow on the CSE.

39. In addition, under certain circumstances, an order on the NYSE can claim precedence based on its larger size. Such an order can trade ahead of previously-placed orders at the same price on the NYSE limit order book. *See* Securities Exchange Act Release No. 30920 (July 14, 1992), 57 FR 32587, n.62 (July 22, 1992) ("Concept Release").

40. To avoid losing market share in block transactions, the NYSE proposed to allow crosses of public customer orders of 25,000 shares or greater at the prevailing bid or offer, without the block having to take out preexisting limit orders at that price. The Commission approved the proposal in 1992. Securities Exchange Act Release No. 31343 (Oct. 21, 1992), 57 FR 48645 (Oct. 27, 1992).

41. *See* Letter from William G. Morton, Jr., BSE, John L. Fletcher, MSE, Leopold Korins, PSE, and Nicholas A. Giordano, Phlx, to Jonathan G. Katz, Secretary, SEC (Dec. 11, 1992).

42. In response, the NYSE reduced some transaction charges last year. *See, e.g.*, Securities Exchange Act Release No. 31795 (Jan. 29, 1993), 58 FR 9244 (Feb. 19, 1993) (approving NYSE rule change that decreased transaction charges).

43. For example, the PSE operates an after-hours auction market until 4:50 p.m. (EST). Recently, the CHX began trading a basket of 20 stocks.

44. Under Rule 19c-1 of the Exchange Act, the NYSE's off-board trading restrictions do not apply to orders handled by the member as agent (other than agency crosses). This enables members to send such orders to third market makers, who execute the orders as dealers.

45. Some third market operations are more elaborate and offer procedures for stopping market orders to offer the possibility of price improvement. *See, e.g.*, Letter from Bernard L. Madoff and Peter B. Madoff, Bernard L. Madoff Investment Securities, to Jonathan G. Katz, Secretary, SEC (Oct. 16, 1992).

46. For example, the largest third market dealer reportedly has a turnaround time of several seconds for market orders, while the NYSE's DOT system can take 50 seconds just to get the order to the specialist's post.

47. 15 U.S.C. § 78o-3.

48. *See* Securities Exchange Act Release No. 17744 (Apr. 21, 1981), 46 FR 23856 (Apr. 28, 1981).

49. 15 U.S.C. § 78f.

50. Letter from Joseph R. Hardiman, President, National Association of Securities Dealers, to Jonathan G. Katz, Secretary, SEC (Nov. 20, 1992).

51. Prior to the introduction of NASDAQ, retail broker-dealers were forced to call market makers to find quotes for OTC stocks. With NASDAQ, broker-dealers could check quotes instantly, and only resort to telephones for trading purposes. *See* Michael J. Simon & Robert L.D. Colby, *The National Market System for Over-the-Counter Stocks*, 55 GEO. WASH. L. REV. 17, 29, 38-44 (1986).

52. Prior to NASDAQ, large wholesale firms making markets had dominated the OTC market. Other market participants, including integrated firms (*i.e.*, those with retail customers), made markets in only a few stocks each. With the advent of NASDAQ, integrated firms no longer had to rely on wholesale firms for prices and executions. Ultimately, integrated firms began making markets in hundreds of NASDAQ stocks.

53. NASDAQ/NMS is the top tier of NASDAQ securities in terms of capitalization, number of shareholders, and activity; NASDAQ Small-Cap is the bottom tier. The companies on the NASDAQ/NMS market comprise 96% of the capitalization of all NASDAQ companies.

54. This is an electronic system that enables dealers to report trades through NASDAQ.

55. SelectNet allows market makers to negotiate and execute orders with one another through NASDAQ terminals rather than through the telephone. The system raises transparency issues and other concerns that are discussed in Study IV.

56. As of November 11, 1993, 458 of the companies in the S&P 500 Index are NYSE companies, 37 are NASDAQ companies, and 5 are Amex companies.

57. During the October 1987 market break, due to record volume, unreliable quotations, and delayed transaction reports, market makers received an unusually high volume of calls both to verify quotes and to execute agency orders. Increasingly overwhelmed with calls, market makers were unable and, in the face of volatile market conditions, perhaps unwilling to answer the telephone and provide market prices. Indeed, even when reached, market makers were only willing to provide prices for a nominal amount of shares. Thus, it was necessary, for example, to make several calls to execute a single order of 1000 shares. Dealer participation - and hence, market liquidity - also suffered as a record number of market makers withdrew from the NASDAQ system. *See* October 1987 Study, *supra* note 3, at 9-1 to 9-21.

58. *See* Memorandum from William H. Heyman, Director, Division of Market Regulation, SEC, to Richard Breeden, Chairman, SEC 8 (July 11, 1991) (attached as an exhibit to Letter from Richard Breeden, Chairman, SEC, to Edward J. Markey, Chairman, Subcomm. on Telecommunications and Finance, Comm. on Energy and Commerce, U.S. House of Representatives (July 11, 1991)).

59. *See* Securities Exchange Act Release No. 30920 (July 14, 1992), 57 FR 32587 (July 22, 1992).

60. Generally, NYSE Rule 390, 2 NYSE Guide (CCH) ¶ 2390, prohibits NYSE members from trading NYSE stocks off an exchange. The rule does not apply to trading in a foreign market outside of NYSE trading hours. A discussion of Rule 390 is included in Study III.

61. The basket trade usually is in the form of an "exchange for physical" ("EFP"). An EFP involving stocks is the exchange for a long (short) futures position for an equivalently long (short) stock position. The EFP normally takes place after the NYSE close and is privately negotiated between the parties.

62. *See* October 1987 Study, *supra* note 3, at 4-23 to 4-24, 4-26 to 4-27.

63. *See* Securities Exchange Act Release No. 31343 (Oct. 21, 1992), 57 FR 48645 (Oct. 27, 1992) (approving the NYSE clean cross rule) for a discussion of how block traders avoid the limit order books.

64. Introduction and Transcript of National Organization of Investment Professionals Meeting (Dec. 8, 1992); *Oversight Hearing on the Future of the Stock Market focusing on Soft Dollar Practices Before the Subcomm. on Telecommunications and Finance of the House Comm. on Energy and Commerce*, 103d Cong., 1st Sess. (July 13, 1993) (Testimony of Chairman Edward J. Markey)

65. *See, e.g.*, October 1987 Study, *supra* note 3; Presidential Task Force on Market Mechanisms, Report to the President of the United States (1988).

66. The impact of index derivatives-related strategies is less pronounced for NASDAQ stocks because the most widely used stock index futures contracts are comprised primarily of NYSE stocks. This may change as more NASDAQ stocks are included in the major indexes or as indexation techniques expand to the midcap and small capitalization stocks. Nevertheless, the hedging orders of options market makers are quite significant for NASDAQ stocks. By the middle of 1993, approximately 250 NASDAQ stocks had standardized options overlying them.

67. LIST order processing is the DOT feature that enables NYSE member firms to send orders through DOT in a list of securities. LIST is important in program trading strategies because it allows members to rapidly enter buy or sell orders in a large number of previously-identified securities.

68. *See, e.g.*, SEC, REPORT ON INTERMARKET COORDINATION PURSUANT TO THE MARKET REFORM ACT OF 1990 (1993, 1992, 1991); DIVISION OF MARKET REGULATION, SEC, TRADING ANALYSIS OF NOVEMBER 15, 1991 (1992); DIVISION OF MARKET REGULATION, SEC, MARKET ANALYSIS OF OCTOBER 13 AND 16, 1989 (May 1990); October 1987 Study, *supra* note 3; DIVISION OF MARKET REGULATION, SEC, THE ROLE OF INDEX-RELATED TRADING IN THE MARKET DECLINE ON SEPTEMBER 11 AND 12, 1986 (Mar. 1987); SEC, Roundtable on Index Arbitrage (1986); SEC, REPORT OF THE SPECIAL STUDY OF THE OPTIONS MARKETS (1978); SEC, 1988 REPORT TO CONGRESS ON ACTIONS BY THE SELF-REGULATORY ORGANIZATIONS SINCE THE 1987 MARKET BREAK (1988); *The Futures Trading Practices Act of 1991: Hearings on the Senate Comm. on Banking, Housing and Urban Affairs* (Apr. 16, 1991) (Testimony of Richard C. Breeden, Chairman, SEC); *Hearings on Intermarket Regulation Before the Senate Comm. on Banking, Housing and Urban Affairs* (Mar. 29, 1990) (Testimony of Richard C. Breeden, Chairman, SEC); *The Stock Market Reform Act of 1989: Hearing Before the House Subcomm. on Telecommunications and Finance of the House Comm. on Energy and Commerce* (Oct. 25, 1989) (Testimony of Richard C. Breeden, Chairman, SEC).

69. *See, e.g.*, Letter from Robert E. Rubin, Senior Partner, Goldman, Sachs & Co., to Jonathan G. Katz, Secretary, SEC (Oct. 20, 1992); Letter from Thomas M. O'Donnell, Chairman and Marc E. Lackritz, President, Securities Industry Association, to Jonathan G. Katz, Secretary, SEC (July 1, 1993); Letter from Richard B. Gunter, Jr., Chairman, and John L. Weston III, President, Security Traders Association, to Jonathan G. Katz, Secretary, SEC (Nov. 24, 1992).

70. *See, e.g.*, Securities Exchange Act Release No. 32256 (May 4, 1993), 58 FR 27486 (May 10, 1993) (Concept Release on derivative products); SEC, Papers Relating to the Capital Adequacy of Securities Firms, Submitted to the Technical Comm. of IOSCO (July 16-17, 1991); Richard C. Breeden, Address Before the International Swap Dealers Association Annual Meeting (Mar. 11, 1993); Mary L. Schapiro, The Growth of the Synthetic Derivative Market: Risks and Benefits, Address Before the National Options & Futures Society (Sept. 24, 1991).

Study III

Market Fragmentation, Competition, and Regulation

A. Market Fragmentation and Competition

An array of markets, dealers, and products, described in Study II, have become available for trading securities. Many operate outside the registered exchanges and the National Association of Securities Dealers Automated Quotation ("NASDAQ") system. Some market participants are concerned that the splintering of trading among various markets and dealers has fragmented the equity markets.[1] Those concerned believe that liquidity is diminished when buying and selling interest is dispersed and does not have the possibility of interacting. This dispersal, it also is thought, prevents customer orders from being executed without the participation of a dealer, weakens transparency as trades are conducted in markets that are not subject to transaction reporting, and raises concern about whether customers receive best execution of their orders.

The Securities and Exchange Commission's ("Commission") Division of Market Regulation ("Division") has found that the market for major U.S. equities has become dispersed among various competitors because market participants have different needs and problems. It is difficult for any one trading system to accommodate all the demands of various customers.[2] Some users want to trade in a low impact, high anonymity environment. Some want to avoid dealer intervention, while others want dealer liquidity but at a lower cost. Some want liquidity on demand, while other users are patient but cost-sensitive. Retail broker-dealers, for example, want faster and cheaper execution of their order flow, while trading desks want profitable block positioning in an era of shrinking commissions. Many of these users have looked beyond the registered exchanges and NASDAQ when these markets would not or could not meet their demands. Technology has allowed these demands to be met outside of those markets.[3]

As a result, there exists today a "menu" to choose from in the equity markets.[4] Varied markets competing for order flow are consistent with the longstanding Congressional and Commission objective of enhancing competition in the equity markets.[5] Competition for equity market share has resulted in notable service improvements and efficiencies, and has forced the primary markets to respond to their users.

Many beneficial effects result from this phenomenon.[6] First, the markets have become more efficient. Trade routing, execution, and reporting have accelerated and trade processing has improved. Second, costs have been reduced, and in particular Commission rates and transaction fees have declined. Third, a wider range of services has become available to investors and professionals. Market participants are not limited to the primary markets, but can select from a variety of options to satisfy their needs.

This development is an outgrowth of intensified market competition. Alternative markets over the past 20 years have often produced improved trading services and enhancements, and have continually put pressure on the primary markets to operate more efficiently. Fourth, the equity markets have been able to accommodate an enormous increase in trading volume and demand. Although the market breaks of October 1987 and 1989 are, however, a sobering reminder of the system's limits, the equity markets consistently handle volume that years ago would have strained them severely. While most of the credit must go to efforts by the primary markets to improve their infrastructure, some credit also must go to the existence of alternative trading mechanisms.

In considering these benefits, the Division is aware that markets can fragment to the point where price discovery is impaired and maintenance of fair and orderly markets is difficult. For example, the more fragmented a market becomes, the more difficult it is to adhere to time priority principles. A lack of time priority reduces the fairness and orderliness of the market, and hurts liquidity by reducing the incentive to place limit orders.[7] Fragmented markets can also increase dealer intervention in the handling of customer orders.

The Division does not believe that the U.S. equity markets are fragmented to the point that price discovery and liquidity have been affected adversely. Over the past several years, spreads for New York Stock Exchange ("NYSE") listed stocks have narrowed and depth has increased (Exhibits 30-32, 34-36). This is true both for Standard & Poor's ("S&P") 500 stocks and non-S&P 500 stocks. Although the percentage of volume and trades captured by the NYSE in its stocks has declined over the past eight years, the quality of the market in NYSE stocks has not been affected negatively.[8] The Division's experience in both the stock and options markets further indicates that a certain, critical mass of trading gravitates to the primary market.[9] With all the various alternatives available, the fact that most trading still occurs on the primary markets or through markets linked by the Intermarket Trading System ("ITS") demonstrates the limited extent of fragmentation.

Although the existence of multiple competing market centers has provided benefits without impairing market quality, the primary markets argue that this structure is supported by "externalities" emanating from the primary markets.[10] They believe that these externalities unfairly subsidize their competitors.

The first externality derives from the price discovery function performed by the primary markets for individual stocks. Price discovery involves the determination of the price of a security through the interaction of supply and demand. In contrast, passive or derivative pricing uses prices discovered in other markets as the basis for trading.[11] Most trading that occurs off the primary markets can be considered passive to some extent, in that parties rely on the primary market prices in setting the price for individual stocks. While price discovery can be said to occur wherever traders meet to bargain,[12] the starting point (and often the market clearing price) is the price disseminated by the primary market. For example, regional exchange specialists and third market makers use automated systems to track quotes from the NYSE and the American Stock Exchange ("Amex"), and guarantee executions of limit orders based on NYSE and Amex transactions. Block positioners base their negotiations on the current primary market quotations. After-hours program trades often rely upon NYSE closing prices of the stocks included in the program. Crossing systems operated by Instinet, Inc. and Jefferies & Co. (*i.e.*, the Portfolio System for Institutional Trades or "POSIT") use NYSE prices as the basis of their executions.[13] The derivatives markets use primary market prices extensively.

Passive pricing systems have developed because some market users value factors other than price negotiation. For example, participants using indexing strategies are primarily interested in matching (or exceeding) the price performance of specific indexes, and affirmatively seek to avoid the trading and execution costs of the price discovery process.[14] Similarly, some investors may believe that the opportunity for obtaining price improvement in the primary market is slight and outweighed in value by the certainty of assured and speedy executions that match primary market quotes.[15] Nevertheless, all of these users' executions depend on a reliable price discovery function performed by the primary markets.

The second externality provided by the primary markets derives from regulatory and self-regulatory obligations. The Securities Exchange Act of 1934 ("Exchange Act") and the rules thereunder impose various regulatory obligations upon market participants. The primary markets bear the brunt of these obligations. For example, the primary markets support self-regulatory activities with extensive automated surveillance systems and large surveillance staffs. These self-regulatory organizations ("SROs") also perform most of the broker-dealer examinations, administer qualification examinations, and monitor net capital compliance. They are required to maintain extensive and elaborate rules governing the conduct of participants in the equity markets. These activities benefit all market systems in that they maintain the integrity of the equity markets at large, and ensure a fair and orderly market.

The Division recognizes the benefits provided by the primary markets. To a large extent, however, the costs associated with these externalities are offset by the revenues obtained by the primary markets. Their membership dues and fees, consolidated tape revenue, and listing fees are sources of income, not available to all other market centers, that provide for regulatory services and compensate the primary markets for furnishing price discovery and regulatory services.[16] The primary markets generally have operated quite profitably over the past few years; indeed, the NYSE reported record earnings in the first half of 1993.[17]

In summary, the U.S. equity markets today include multiple, varied market centers. The competition among these market centers provides many benefits for the users of the markets. Moreover, the dispersion of order flow among market centers has not impaired price discovery or market quality. While primary market competitors use the externalities provided by the primary markets, the latter are adequately compensated for their primary market status. Thus, in examining whether the framework for equity market regulation needs revision, it is important to bear in mind that the equity market as a whole is operating efficiently.

B. Existing Regulatory Structure

The primary provisions governing the regulatory structure of the equity trading markets are found in Sections 5, 6, 11, 11A, 15A, and 19 of the Exchange Act and the rules promulgated thereunder.[18] Section 11A, in particular, directs the Commission to facilitate a national market system ("NMS") for securities, having due regard for the public interest, protection of investors, and maintenance of fair and orderly markets. The term "national market system" is not defined in Section 11A because Congress believed that it was essential to provide the Commission with "maximum flexibility in working out specific details" of the system.[19] Nevertheless, Congress provided the Commission with some guidelines in establishing the NMS. Section 11A(a)(1) states that Congress recognized that it is in the public interest and appropriate for the protection of investors and the maintenance of fair and orderly markets to ensure:

(i) economically efficient execution of securities transactions;

(ii) fair competition among brokers and dealers, among exchange markets, and between exchange markets and markets other than exchange markets;

(iii) the availability to brokers, dealers, and investors of information with respect to quotations for and transactions in securities;

(iv) the practicability of brokers executing investors' orders in the best market; and

(v) an opportunity, consistent with the provisions of clauses (i) and (iv), for investors' orders to be executed without the participation of a dealer.[20]

Congress also found that the linking of all markets for qualified securities through communication and data processing facilities will foster efficiency; enhance competition; increase the information available to brokers, dealers, and investors; facilitate the offsetting of investors' orders; and contribute to best execution of such orders.

These standards are broad and encompass many objectives. Although all these objectives are worthwhile, the particulars of their application can raise conflicts. For example, some commentators think that the Commission should place more emphasis on certain of the statutory objectives than others. The National Association of Securities Dealers, Inc. ("NASD") views the Exchange Act as containing a heavy presumption in favor of competition.[21] The Amex suggested that the Commission focus on ensuring equal regulation.[22] While competition and equal regulation are important goals, the Exchange Act does not assign priority weights to them; rather, the Exchange Act's overriding objective is the protection of investors and the maintenance of fair and orderly markets.

The strength of the U.S. equity markets are evidence of the effectiveness of the markets' and Commission's efforts since 1975, and the viability of the standards embodied in the Securities Acts Amendments of 1975 ("1975 Amendments").[23] The challenge in 1975 was to correct a market structure that could not accommodate the increase in institutional activity or technological change. The Commission and Congress met that challenge with the 1975 Amendments. As a result, markets now fulfill the needs of an ever-expanding universe of investors. The current problems of the U.S. equity market present a different challenge: maintaining the benefits of competition by accommodating as many classes of users as possible while simultaneously preserving investor protection and reliable and efficient price discovery.

These goals -- accommodating different users, preserving core investor protections, and ensuring reliable and efficient price discovery -- are consistent with the principles contained in Section 11A of the Exchange Act and reflect the Congressional intent embodied in the statute. Accordingly, the Division does not believe that the statutory mandate for an NMS needs revision.[24] In reaching this conclusion, it is important to recognize that underlying many of the goals of Section 11A is the assumption that, to perform their role in the capital allocation process, the equity markets should be active and liquid. To date, the markets have responded to the increased demand for liquidity from institutional investors by expanding the capacity of their systems to handle exponentially larger loads. The provision of instant liquidity does not, however, come without cost. The users of the market need to understand that, if they demand immediacy, they will have to pay for it in terms of larger commissions and spreads, or greater price movements. This is especially true during times of market stress, when order flow is channeled back to the primary market because it provides the most reliable source of liquidity.

C. Alternative Regulatory Approaches

1. Single Market

Various approaches have been suggested as to how the Commission should implement the principles contained in Section 11A. At one end of the spectrum is what can be called the "single market approach." The Commission would, under this approach, drive trading interest from various competitors in a security into a single, interactive "market" with identical trading rules and protections applicable to all competitors. All orders for a security would interact under fixed priority rules and limit orders would reside in a single systemwide order book. The single market system would apply to all exchange-listed securities, and perhaps NASDAQ issues above a minimum capitalization size. The Commission would impose identical regulatory obligations on the various participants in the single market: SROs, third market makers, and proprietary trading systems ("PTSs").

A single market system is technologically feasible. This system could enhance linkages among markets and dealers and improve best execution opportunities. The Division is, however, reluctant to recommend a single market system for several reasons. First, this course of action could, over time, stifle innovation and competition. As early as the 1963 Special Study of Securities Markets, the Commission expressed its view that the benefits of competition should not be discarded in an attempt to capture the advantages of a single system.[25] Forcing all order flow into a single system would enable the operators of the system to ignore the users. In fact, many market innovations that have occurred over the past 20 years have originated either outside of the primary markets or in response to competitive pressure from alternative markets. For these reasons, Congress in 1975 did not want the Commission to become an "economic czar" of the markets, mandating through a central planning process the precise form of the nation's equity markets.[26]

Second, it is unlikely that any single market could meet the challenge of accommodating the demands of various users. With the increase of institutional activity and the growth of passive investing, it may be difficult to force all users into a single system. Congress anticipated this in 1975 when it determined *not* to mandate the homogenization of all markets in the NMS.[27] Similarly, this reality has been reflected in the NYSE's decisions over the past 20 years to modify its auction market design to accommodate various sectors of its membership and customer base.[28]

Third, even if all equity trading occurred in a single system, the existence of derivative products, after-hours trading, and international markets would make it possible to avoid the system. It is likely that forcing a single equity market system would divert additional volume to these markets.

Accordingly, the Commission should be reluctant to impose a single design on the markets absent evidence of a significant market failure. The current equity markets are relatively strong and have improved substantially since 1975. The Division does not believe that a justification exists for a radical overhaul of the entire system.

The Commission should, however, be receptive to reasonable and pro-competition designs for unifying markets and dealers put forth by the organized markets. Based on prior experience, it is unclear whether the existing markets will make such proposals. For example, the Commission proposed a marketwide consolidated limit order book ("CLOB") in the 1970s.[29] The exchanges vigorously opposed the creation of a CLOB and continue to oppose it in their comment letters to the Market 2000 Study.[30] It is probably difficult for the exchanges to endorse a CLOB. Floor members likely fear that a CLOB would be the first step toward a complete automation of the exchanges. Likewise, broker-dealers with large trading desks would oppose automated executions of large trades and adherence to market-wide time priority.[31] Moreover, the exchanges include a variety of members and constituencies, and would find it difficult to accommodate all of them through a CLOB.[32]

2. Deregulatory Approach

At the other end of the spectrum from the single market approach is the deregulatory approach. This approach contains three major features. First, regulations on transactions among sophisticated entities such as institutions and large dealers would be relaxed. Second, all restraints on making markets in listed securities would be removed, so that competition would be intensified and more capital committed to providing liquidity. Third, all barriers to the creation of new trading systems would be removed so that technological innovations in trading structures could flourish without impediment.

As discussed in more detail in Study VI, while the Division believes that restraints on competition should to be reduced, a total deregulatory approach is not warranted at this time. Most current restrictions serve valid regulatory purposes. Removing them could likely result in unfair markets and an erosion of the NMS. Contrary to the situation that existed at the time of the 1971 Institutional Investor Study,[33] when fixed commission rates were exerting a corrosive effect on the equity markets, the regulatory structure in 1994 does not appear to be hampering innovation and competitiveness. Instead of a vast deregulation, therefore, the Division recommends that restraints on competition be reexamined, with a view toward elimination of those that no longer serve regulatory purposes.

D. The Division's Regulatory Approach

While arguments can be made both for the single market approach and the deregulatory approach, the Division does not believe that either approach should be imposed upon the markets by regulatory fiat. Instead, the Commission should pursue discrete, incremental market improvements within the ambit of its historical regulatory role: protecting investors, facilitating fair market competition, and promoting full disclosure. The Division believes that, to advance these objectives, the Commission and the markets should pursue improvements in four areas: (1) transparency, (2) fair treatment of investors, (3) fair competition, and (4) open market access. The remainder of this Study and the other Studies address issues in these areas.

1. Transparency

Transparency refers to the real-time dissemination of information about prices, volume, and trades. Transparency plays a fundamental role in the fairness and efficiency of the securities markets. The Division believes that enhanced transparency would help to link the various market segments and make it unnecessary to require orders to be routed to a single market or facility. In addition, enhanced transparency should increase the fairness and efficiency of the equity markets and limit the extent to which the equity markets can be "balkanized" or unlinked in an economic sense. The Division's approach to transparency is discussed in Study IV.

2. Fair Treatment of Investors

As the markets have evolved, various practices have developed that raise investor protection concerns. Practices such as payment for order flow, soft dollars, and automated order routing procedures raise questions about whether agents are obtaining best execution of their customers' orders. Questions about the fair handling of customer orders also emanate from dealer trading of highly capitalized, widely-held stocks. As third market trading of listed stocks grows, and more major stocks are quoted on NASDAQ, it is important for the Commission to ensure that professional intermediaries put customers' interests first. The Division's recommendations in this area are discussed in Study V and in a release issued on October 7, 1993, proposing additional disclosure of payment for order flow.[34]

3. Open Market Access

As competition for order flow becomes increasingly fierce, the markets may seek to restrict the activities of their competitors. The Commission must ensure that measures taken in response to competition are consistent with fair competition. Based on past experience, the Division is aware that competitive pressures can cause an SRO to take action to disadvantage competitors, while cloaking the actions with regulatory purposes.[35] Regulatory and self-regulatory proposals must be examined with this in mind. At a minimum, the Commission needs to ensure that proposals by the markets do not impose unnecessary restrictions on where the users of the market can effect transactions. Two such restrictions are discussed below, and others are addressed in Study VI and Appendix II.

a. Off-Board Trading Restrictions. NYSE Rule 390 prohibits NYSE members from effecting certain transactions in NYSE-listed securities off an exchange.[36] The prohibition does not affect the NYSE members' ability to effect transactions on any of the regional exchanges. Rule 390 allows NYSE members to trade as principal or agent in any listed stock on an organized exchange in a foreign country at any time, and in a foreign over-the-counter ("OTC") market after NYSE trading hours in the United States.

The scope of Rule 390 was narrowed considerably by rules adopted by the Commission following the 1975 Amendments to the Exchange Act. In 1977, the Commission promulgated Rule 19c-1, which prohibits the application of off-board trading restrictions, such as Rule 390, to trades effected by a member as agent.[37] Consequently, exchange members may send such trades to a third market maker for execution. In 1980, the Commission promulgated Rule 19c-3, which prohibits the application of any off-board trading restrictions to securities newly listed on an exchange after April 26, 1979.[38] As a result of these two Commission rules, the practical effect of Rule 390 is to prevent NYSE member firms from directly internalizing order flow during exchange hours in stocks listed before April 26, 1979, and to force such members to effect transactions overseas in these stocks when the NYSE is closed ("after-hours trading").

Commentators have criticized the anti-competitive effects of Rule 390 throughout the years.[39] They point out that the NYSE rule prevents exchange members from making markets in competition with specialists to the detriment of price competition. In addition, commentators argue that the rule limits market making by discouraging member firms from committing capital to compete for orders in listed stocks. Further, they contend, that the rule discourages development of new and more automated trading systems.

The NASD is among those commentators that view the anti-competitive effects of the rule as detrimental to the markets. The NASD believes that restrictions on competition for order flow such as Rule 390 should not be allowed unless it can be shown that the competition for order flow has led to palpable harm and that a monopolistic approach would lead to palpable improvement.[40] The NASD maintains that Rule 390 fails this test because competition for order flow in listed stocks has improved the markets by promoting technological innovation that has been accompanied by a steady improvement in market quality measures.[41]

The NYSE characterizes Rule 390 as a pro-customer rule intended to ensure that investors have the benefits of agency-auction trading in exchange-listed stocks.[42] By requiring centralization of order flow, the rule places the interests of investors ahead of the interests of dealers, in the NYSE's view. The NYSE further argues that, because the rule prevents internalization of customer orders (which, in its opinion, leads to fragmentation of the markets), the rule promotes pricing efficiency and customer protection.

The NYSE questions whether the public has benefited from the additional competition between market centers resulting from the adoption of Exchange Act Rule 19c-3. In its view, the additional competition has been offset by decreased pricing efficiency and inferior executions resulting from increased internalization by integrated broker-dealers. This internalization, it argues, has increased fragmentation of the markets. The NYSE believes that further removal of off-board trading restrictions will only exacerbate those concerns; it recommends instead that Rule 19c-3 be repealed.[43]

The Commission consistently has questioned the effects on competition from off-board trading restrictions.[44] Although the Commission has been concerned in the past that a complete removal of Rule 390 might result in increased internalization, it also has believed that a reasonable resolution to this concern could be achieved. In keeping with this view, it has sought to curtail the scope of off-board trading restrictions in a manner designed to achieve the goals delineated by Congress in the 1975 Amendments to the Exchange Act, while preserving the option to reexamine the issue of a complete removal of off-board trading restrictions.[45]

The Division believes that developments since the Commission last addressed off-board trading restrictions warrant elimination of off-board trading restrictions for after-hours trading. The Division cannot identify a convincing justification for maintaining off-board trading restrictions for trading after hours. The after-hours restrictions force NYSE member firms wishing to deal as principal to trade with U.S. customers overseas, where the trades do not benefit from exchange surveillance and are deprived of the protections offered by the Commission's oversight of the markets.[46] Moreover, the anti-competitive effect of the after-hours restriction within the United States is total: NYSE member-firms either must trade overseas or be forced to use the NYSE's after-hours Crossing Sessions, which are limited in time and scope.[47] As a result, NYSE firms send orders after-hours via fax or telephone to their overseas trading desks.

The Division believes that eliminating after-hours restrictions will not result in a significant increase in internalization or market fragmentation. After-hours trading is, in practice, limited to a small group of broker-dealers and institutional investors. The great majority of investors prefer to trade during regular trading hours when prices are "ratified" by price discovery in the NMS. In addition, the Division's recommendation that all after-hours trades be accorded full transparency would address some surveillance concerns associated with after-hours trading. Consequently, the Division recommends that the NYSE and other exchanges submit a proposed rule change to lift the off-board trading restrictions as they apply to after-hours trading. If the NYSE were to develop another viable after-hours trading session, however, the Division would be willing to reconsider whether off-board trading restrictions could apply when the system was operating.

With respect to off-board trading restrictions during regular trading hours, an analysis by the Division reveals that the exchange markets have remained the primary marketplace for securities that are not subject to off-board trading restrictions. The Division examined data on off-board trading for the 100 most active NYSE issues during 1992. Of these stocks, 20 are not subject to off-board trading restrictions ("Rule 19c-3 stocks") and 80 are covered by NYSE Rule 390. The mean proportion of reported share volume executed OTC for the 20 Rule 19c-3 stocks was 8% versus 5.2% for the 80 stocks subject to off-board restrictions. Even if the 2.8% difference between the figures is wholly attributable to internalization by NYSE firms, it is not a large figure. It is less than the volume in these stocks sent by NYSE members to affiliated specialists at regional exchanges. Moreover, 25% of the small order volume in these Rule 19c-3 securities executed OTC was diverted from the regional exchanges. Finally, by historical standards the amount of 1992 third market trading in 19c-3 stocks is not high. While it is larger than over the previous decade, it is slightly less than the amount of third market trading at the time of the Institutional Investor Study. The data for the first six months of 1993 reveals that the OTC market accounts for 6% of the volume in listed stocks, and most of this is attributable to third market dealers that are not NYSE members.

In light of the limited amount of internalization, it is not surprising that studies both have failed to show a strong negative effect from Rule 19c-3 or strong evidence that the additional competition in these stocks has appreciably improved their markets.[48] In this regard, it should be recognized that the actual competitive effect on NYSE members of off-board trading restrictions during regular trading hours is somewhat less burdensome than it may appear. Numerous large NYSE member firms have become affiliated with regional specialist firms or dealers in recent years. The NYSE member firms often route their small orders to their regional specialists or dealers instead of to the NYSE. This practice allows a NYSE member firm to internalize its order flow without running afoul of off-board trading restrictions. Furthermore, the anti-competitive effect of off-board trading restrictions has been reduced to the extent that NYSE members can route orders to third market makers for execution.

In the Division's view, these alternatives reduce the urgency with which off-board trading restrictions during regular trading hours need to be addressed. Moreover, there continues to be a legitimate concern that wholesale elimination of off-board trading restrictions could lead to a more radical restructuring of the equity markets. The Division does not believe that the equity markets are in such a state of crisis that it would be appropriate to recommend taking such a risk at this time. Although off-board trading restrictions during trading hours may limit competition among markets, the other issues addressed in this study are more pressing. Consequently, the Division recommends only removing off-board trading restrictions for after-hours trading.

b. Competing Dealers. A proposal by the Amex regarding competing dealers also presents intermarket access issues. In December 1990, the Amex filed a proposed rule change to impose restrictions on so-called competing dealers (*i.e.*, a regional exchange specialist or third market maker) in Amex securities.[49] The original proposal would have required that orders for the account of a competing dealer (1) yield priority and parity to all other off-floor orders, (2) accept parity with orders for an account of an Amex specialist, and (3) be excluded from the Amex's order routing system, the Post Execution Reporting system ("PER").[50] The Amex subsequently amended its proposal in December 1991, among other things, to (1) provide that orders for the account of a competing dealer that better the existing market do not have to yield priority and parity to off-floor orders, (2) withdraw the portion of the proposal that would place orders for the account of a competing dealer on parity with orders for the account of an Amex specialist, and (3) request that the Commission temporarily defer its consideration of the proposed prohibition of competing dealer access to PER.[51]

In its current form, the Amex proposal raises significant intermarket access issues because the proposal would apply only to competing dealers, such as regional specialists and third market makers, and not to other off-floor broker-dealers trading for their own accounts. In addition, the proposal's restrictions are imposed primarily for competitive reasons. Accordingly, the Division recommends that the Amex amend or withdraw the proposal.

4. Fair Competition

Many alternative markets and services for equity trading have developed as various users find existing markets to be inadequate for their particular needs. Although this trend is healthy, it is important to recognize that most of the alternative markets often rely on prices from the primary markets. While the primary markets derive benefits from their status as such (*e.g.*, listing fees, majority of order flow, membership and tape fees, etc.), they also bear many of the regulatory costs of the equity markets. Moreover, in times of crisis they are the markets of last resort.[52] Some commentators have suggested that the primary markets should be compensated for the provision of price discovery by charging for transaction and quote information.[53] This suggestion ignores the substantial revenues and benefits that the primary markets currently receive, and would force market structure regulation into a series of ratemaking procedures. Instead, the Division believes that the regulatory responsibilities of the primary markets versus their competitors should be examined to determine if the responsibilities are commensurate with the functions the various markets perform. Any reallocation of responsibilities should not stifle the ability of alternative markets and services to emerge. This analysis is especially pertinent for PTSs and for third market trading of listed stocks.

a. Proprietary Trading Systems. To date, almost all PTSs are regulated as broker-dealers rather than as exchanges. As broker-dealers registered under the Exchange Act, sponsors of PTSs must comply with the requirements of the Exchange Act applicable to broker-dealers. Sponsors of PTSs have requested and received assurances from the staff of the Division that the Division will not recommend enforcement action if the PTS operates without registering as an exchange or other

SRO ("no-action letters"). The no-action position is predicated on the sponsor's agreement to certain undertakings, such as supplying the Commission with information on the system's operations and activity.[54]

While most PTSs resemble highly automated broker-dealers, the exchanges argue that many of the PTSs compete with them for order flow and should be subject to comparable regulation. The Division continues to disagree with this assessment, and believes that most PTSs do not function as exchanges. Section 3(a)(1) of the Exchange Act defines an exchange as:

> any organization, association, or group of persons, whether incorporated or unincorporated, which constitutes, maintains, or provides a marketplace or facilities for bringing together purchasers and sellers of securities or for otherwise performing with respect to securities the functions commonly performed by a stock exchange as that term is generally understood, and includes the marketplace and the market facilities maintained by such exchange.[55]

A broad reading of the "exchange" definition to include most PTSs would also capture most other brokers, a block trading desk, or even a quotation vendor. Such a reading would bring within the ambit of exchange regulation entities that Congress did not intend to subject to the requirements of exchange regulation. In addition, a broad reading of the exchange definition would have the perverse effect of punishing efficiency -- the more efficient and automated a broker-dealer's operations, the more it brings together purchasers and sellers.

For these reasons, the Commission has interpreted the definition of "exchange" to capture the entities that perform the function of an exchange. The Commission has determined this function to be the provision of a trading market that is designed, whether through trading rules, operational procedures, or business incentives, to centralize trading and provide buy and sell quotations on a regular and continuous basis so that purchasers or sellers have a reasonable expectation that they can regularly execute their orders at such quotations.[56] The Division sees no reason to deviate from this interpretation. It has not harmed investors, and has facilitated the development of innovative trading systems.

Because of concerns perceived in the 1980s regarding these novel trading systems, the Commission proposed Rule 15c2-10 in 1989 to provide enhanced oversight of PTSs. Under that proposal, a PTS would have been required to file a plan with the Commission describing its proposed operations and would have been subject to regulatory undertakings that went beyond existing requirements that apply to broker-dealers and that instead somewhat resembled SRO regulation. In light of the Division's experience since 1989 in oversight of these systems, the Division does not believe that such an extensive regulatory structure is appropriate for PTSs at this time.

The Division recognizes, however, that PTSs use technologies for order execution that differ from the activities of traditional broker-dealers. Moreover, several large, integrated broker-dealers operate automated trading systems that function in a manner similar to systems operated by PTSs. The proliferation of PTSs and other broker-dealer automated trading systems may have effects on the NMS that should be closely monitored to determine whether additional regulation is warranted. This will be especially true as technology enables customers to interact globally through computer linkages.

The Division believes that more enhanced recordkeeping and reporting by sponsors of PTSs, and other automated trading systems, are needed. At a minimum, the Commission needs to receive better information on the operation of PTSs and automated trading systems to monitor their activities and development. Accordingly, the Division recommends that the Commission propose for comment a new recordkeeping and reporting rule for broker-dealers that operate certain automated trading systems (including PTSs). Such a rule should impose reporting and recordkeeping requirements on broker-dealers that operate trading systems that permit: (1) other broker-dealers or customers of the sponsoring broker-dealer to effect transactions with the sponsor of the system, or (2) permit trading directly between customers using the system. The Division believes that such a rule would enhance the Commission's access to consolidated information regarding the sponsorship, participant base, operations, trading, clearing activity, and other material aspects of these systems.

b. Third Market. The third market is regulated under rules designed for OTC trading.[57] As a result, third market makers are treated simply as competing dealers. In reality, they act somewhat as competing markets to the registered exchanges. Indeed, one third market maker receives for execution more order flow than any regional exchange and has implemented a sophisticated routing and execution system that is linked to dozens of brokers. At the same time, the Division does not believe that today's third market makers perform the functions of an exchange. Moreover, third market makers do not receive many of the benefits of the exchange markets, such as listing fees, regulatory fees, or transaction tape revenue. Because of their growth, however, they should be subject to a minimum of regulatory safeguards designed to ensure the integrity of their operations.

The Future Structure Statement recommended that the Commission integrate third market firms into the NMS by including them in price reporting and subjecting them to appropriate market responsibilities commensurate with the benefits they realize.[58] Although these firms are, for the most part, included within the price reporting system,[59] the Division is of the opinion that they should fulfill certain regulatory responsibilities commensurate with the functions they perform in the price discovery process. First, there should be adequate oversight of their operations as a market. This monitoring should be performed primarily by the NASD as the oversight SRO for third market firms. Although the NASD currently examines these firms, it scrutinizes them only in the context of broker-dealer examinations. The NASD does not conduct oversight of these firms as markets. For example, the NASD does not include a review of market making performance or order handling practices in its examination of third market makers, or verify the integrity of their automated systems. This observation is not intended to criticize the NASD's past performance, for the surge in third market making of retail orders has occurred only recently. Nevertheless, the

Division recommends that the NASD submit a comprehensive program for examining third market activity to the Commission.[60]

Second, the Division believes that all market makers in listed stocks, including third market makers and firms internalizing order flow, should adhere to minimum order handling principles to ensure that they treat customers fairly. Specifically, the Division recommends that five principles be adhered to by all dealers in listed securities,[61] including exchange specialists and dealers, third market makers, and firms internalizing order flow. First, dealers should expose customer limit orders that are better than the existing ITS best bid or offer unless a customer expressly requests that the order not be exposed. Second, dealers should not trade ahead of customer limit orders. Thus, if a dealer is holding a customer limit order to buy (sell), it cannot buy (sell) the stock for its own account at a price at or below (above) the limit order. Third, if a dealer holds a customer buy order and a customer sell order that can be crossed, the dealer should cross them without interposing itself as dealer. Fourth, dealers should establish and adhere to fixed standards for queuing and executing customer orders. Fifth, dealers should not trade at a price outside the ITS best bid or offer without satisfying the market interest at that price in accordance with ITS trade-through and block policies.

The first four principles address the potential for self-dealing when making a market and acting as agent in an auction system. The fifth principle currently applies to the primary and regional exchanges and market makers on the ITS Computer Assisted Execution System ("CAES") linkage, and is a key safeguard against fragmentation; it should apply to all third market trading. The five principles should be adopted as SRO standards and monitored and enforced by the SROs. At present, the exchanges have rules that comport with most of these standards. The NASD's Schedule G, which contains the rules governing third market trading, does not include many of them.[62] Accordingly, the NASD should submit a rule change to the Commission to incorporate these standards into Schedule G of the NASD By-Laws. Likewise, the exchanges should review their rules to ensure that specialists are held to the same standards. If not, the exchanges should submit proposed rule changes to cure this deficiency.

c. Other Fair Competition Issues. In addition to fair competition questions involving third market making and PTSs, several existing regulatory costs imposed on various markets and market participants need to be addressed to further the objective of fair competition. These include Commission review of SRO system changes, the allocation of transaction fees, and SRO delisting procedures, among others. These issues and the Division's recommendations are discussed in Study VI.

E. Conclusion

The Division believes this four-part approach is the right one to address market structure problems in light of the healthy condition of the equity markets. Various market competitors' perceptions of regulatory inequality, coupled with the evolution of market technologies, may cause some to fear the developments that are occurring in the market. Nonetheless, the markets themselves are performing their economic functions in a most satisfactory way. Accordingly, the primary responsibility to respond to these developments must rest with the markets themselves.

1. Letter from Richard Breeden, Chairman, SEC, to Edward J. Markey, Chairman, Subcomm. on Telecommunication and Finance, Comm. on Energy and Commerce, U.S. House of Representatives (July 11, 1991) ("Markey Letter"); Letter from William H. Donaldson, Chairman and Chief Executive Officer, New York Stock Exchange, to Jonathan G. Katz, Secretary, SEC (Nov. 24, 1992) ("NYSE Letter").

2. Lawrence Harris, Consolidation, Fragmentation, Segmentation, and Regulation (Mar. 1992) (unpublished manuscript); *see also* Steven Wunsch, ... *Or the Cartel's Clever Ruse*, WALL ST. LETTER, June 29, 1992, at 2-ss.

3. *See* Letter from DeWitt F. Bowman, Chief Investment Officer, California Public Employees Retirement System, to Jonathan G. Katz, Secretary, SEC (Oct. 15, 1992).

4. HANS R. STOLL, DEBATE OVER THE ORGANIZATION OF THE STOCK MARKET: COMPETITION OR FRAGMENTATION? 2 (Financial Markets Research Center Policy Paper 92-01, 1992).

5. *See* SEC, Statement of the Securities and Exchange Commission on the Future Structure of the Securities Markets (Feb. 2, 1972), 37 FR 5286 (Feb. 4, 1972) ("Future Structure Statement"); S. REP. NO. 75, 94th Cong., 1st Sess. (1975) ("Senate Report"); H.R. REP. NO. 3, 94th Cong., 1st Sess. 44 (1975); and Exchange Act Section 11A(a)(1), 15 U.S.C. § 78k-1(a)(1) (1988).

6. *See* Letter from Jeffrey R. Larsen, Senior Legal Counsel, Fidelity Investments, to Jonathan G. Katz, Secretary, SEC (Nov. 5, 1992).

7. Hans R. Stoll, *Principles of Trading Market Structure*, 6 J. OF FIN. SERVICES RES. 75, 92 (1992) ("Stoll Principles") (attached as an exhibit to Letter from Hans R. Stoll, Professor, Vanderbilt University, Owen Graduate School of Management, to Jonathan G. Katz, Secretary, SEC (Nov. 2, 1992)).

8. The U.S. General Accounting Office ("GAO") also recently examined the extent of market fragmentation. The GAO found that, while fragmentation of exchange-listed stocks has increased, there is no conclusive evidence that it has had adverse effects on market quality. GAO, SECURITIES MARKETS: SEC ACTIONS NEEDED TO ADDRESS MARKET FRAGMENTATION ISSUES (June 1993); *See also Oversight Hearings on the Future of the Stock Market Focusing on the Results of a GAO Study on Market Fragmentation Before the Subcomm. on Telecommunications and Finance of the House Comm. on Energy and Commerce*, 103d Cong., 1st Sess. (1993).

9. *See* Memorandum from William H. Heyman, Director, Division of Market Regulation, SEC, to Richard Breeden, Chairman, SEC (July 11, 1991) ("Heyman Memorandum") (attached as an exhibit to Markey Letter, *supra* note 1).

10. By externalities, the Division means the public benefits or social goods produced by the operation of the primary market. They benefit the spectrum of equity markets users, regardless of whether they trade in the primary market.

11. *See* Heyman Memorandum, *supra* note 9, at 8-9.

12. Letter from Frank E. Baxter, Chairman, Jefferies & Co., Inc., and Raymond L. Killian, Jr., President, Investment Technology Group, Inc., to Jonathan G. Katz, Secretary, SEC 17 (Oct. 8, 1992).

13. The Arizona Stock Exchange operates an after-hours call auction that provides price discovery, in that participants may obtain prices different from the closing prices on the NYSE, Amex, and NASDAQ.

14. Such costs could take the form of paying the bid/ask spread or having to accept an inferior price for a block size order. Execution costs include, for example, the brokerage commissions incurred in active trading strategies.

15. For a different view, see Letter from Robert A. Schwartz, Professor, New York University, Stern School of Business, to Jonathan G. Katz, Secretary, SEC 2 (Oct. 19, 1992) ("Far too much attention has been given to the provision of immediacy, the price of which includes not only high commissions and spreads, but also excess volatility.").

16. *See, e.g.*, Letter from Bernard L. Madoff and Peter B. Madoff, Bernard L. Madoff Investment Securities, to Jonathan G. Katz, Secretary, SEC (Oct. 16, 1992); Letter from Junius W. Peake, Professor, University of Northern Colorado, College of Business Administration, and Morris Mendelson, Professor, University of Pennsylvania, Wharton School, to Jonathan G. Katz, Secretary, SEC (Nov. 3, 1992).

17. The NYSE reported that it expects to post record earnings of $33 million for the first six months of 1993.

18. Exchange Act Section 5, 15 U.S.C. § 78e, contains the registration requirements for national securities exchanges. Section 6, 15 U.S.C § 78f, describes the regulatory responsibilities of a registered exchange. Section 11, 15 U.S.C. § 78k, governs trading on registered exchanges. Section 15A, 15 U.S.C. § 78o-3, contains the registration and regulatory requirements for national securities associations. Finally, Section 19, 15 U.S.C. § 78s, sets forth the responsibilities of SROs as well as the Commission's oversight responsibilities over SROs. Exchange Act rules are found in 17 C.F.R. pt. 240 (1993).

19. Senate Report, *supra* note 5, at 7.

20. Exchange Act Section 11A, 15 U.S.C. § 78k-1.

21. Letter from Joseph R. Hardiman, President, National Association of Securities Dealers, to Jonathan G. Katz, Secretary, SEC 1 (Nov. 20, 1992) ("NASD Letter").

22. Letter from James R. Jones, Chairman and Chief Executive Officer, American Stock Exchange, to Jonathan G. Katz, Secretary, SEC (Dec. 8, 1992).

23. Pub. L. No. 94-29, 89 Stat. 97 (1975).

24. Letter from David Humphreville, Co-Chairman, and Caroline B. Austin, Co-Chairman, National Specialist Association, to Jonathan G. Katz, Secretary, SEC 3 (Dec. 11, 1992) ("National Specialist Association Letter").

25. SEC, REPORT OF THE SPECIAL STUDY OF THE SECURITIES MARKETS, H.R. Doc. No. 95, 88th Cong., 1st Sess. (1963).

26. Senate Report, *supra* note 5, at 12.

27. Donald L. Calvin, *The National Market System: A Successful Adventure in Industry Self-Improvement*, 70 VA. L. REV. 785, 789, 791 (1984); David M. Schizer, *Benign Restraint: The SEC's Regulation of Execution Systems*, 101 YALE L.J. 1551, 1568 (1992); *see also* Milton H. Cohen, *The National Market System -- A Modest Proposal*, 46 GEO. WASH. L. REV. 743, 774 (1978) ("But to accord ultimate and total benefit of the auction process to all orders is impossible unless that process is concentrated in one location (which Congress certainly did not set as a goal of the NMS) . . .").

28. *See* Letter from Harold S. Bradley, Director of Equity Trading, Investors Research Corporation, to Jonathan G. Katz, Secretary, SEC (Nov. 18, 1992).

29. Securities Exchange Act Release No. 11942 (Dec. 19, 1975); Securities Exchange Act Release No. 12159 (Mar. 2, 1976); and Securities Exchange Act Release No. 15671 (Mar. 22, 1979). The CLOB would have been a nationwide system for limit order protection by incorporating public and professional limit orders and providing time priority to limit orders.

30. NYSE Letter, *supra* note 1; Letter from William G. Morton, Jr., Boston Stock Exchange, John L. Fletcher, Midwest Stock Exchange, Leopold Korins, Pacific Stock Exchange, and Nicholas A. Giordano, Philadelphia Stock Exchange, to Jonathan G. Katz, Secretary, SEC (Dec. 11, 1992).

31. *See* Stoll Principles, *supra* note 7, at 88 (stating that large traders would oppose automation of large trades due to problems of risk bearing, free options, and informational trading).

32. Stanley Ross, *Market-Making -- A Price Too Far (III): The March of Technology*, J. INT. SEC. MARKETS 109 (1992).

> It will almost certainly be necessary to provide different market mechanisms to meet the needs of different market users, rather than try to force all into a single formula. Such an approach is difficult to orchestrate through a traditional stock exchange whose membership structure inevitably means that there are a wide range of interests to protect and reconcile.

Id. at 113.

33. SEC, INSTITUTIONAL INVESTOR STUDY REPORT, H.R. DOC. NO. 64, 92nd Cong., 1st Sess. (1971).

34. Securities Exchange Act Release No. 33026 (Oct. 7, 1993), 58 FR 52934 (Oct. 13, 1993).

35. Sam Scott Miller, *Self-Regulation of the Securities Markets: A Critical Examination*, 42 WASH. & LEE L. REV. 853, 875 (1985).

36. Other exchanges impose similar prohibitions on their respective members. *See* Boston Stock Exchange Section 23, Chapter II, BSE Guide (CCH) ¶ 2036; Chicago Stock Exchange Rule 9, Article VIII, CHX Guide (CCH) ¶ 1539; Pacific Stock Exchange Rule 5.43, PSE Guide (CCH) ¶ 4435; and Philadelphia Stock Exchange Rule 132, PHLX Guide (CCH) ¶ 2132. The discussion regarding NYSE Rule 390 applies to all other similar rules.

37. Rule 19c-1, 17 C.F.R. § 240.19c-1, permits the exchanges to prohibit in-house agency crosses effected off an exchange.

38. Rule 19c-3, 17 C.F.R. § 240.193-3.

39. *See* GAO, SECURITIES TRADING: SEC ACTION NEEDED TO ADDRESS NATIONAL MARKET SYSTEM ISSUES (1990).

40. *See* NASD Letter, *supra* note 21; Letter from Richard B. Gunter, Jr., Chairman, and John L. Weston III, President, Security Traders Association, to Jonathan G. Katz, Secretary, SEC (Nov. 24, 1992); *see also* Letter from Mark D. Shefts, President, All-Tech Investment Group, Inc., to Jonathan G. Katz, Secretary, SEC (Oct. 16, 1992); Letter from Christopher J. Murphy III, Chairman, and Brian T. Borders, President, Association of Publicly Traded Companies, to Jonathan G. Katz, Secretary, SEC (Jan. 29, 1993); Letter from Robert E. Rubin, Senior Partner, Goldman, Sachs & Co., to Jonathan G. Katz, Secretary, SEC (Oct. 20, 1992); Letter from Charles R. Hood, Senior Vice President and General Counsel, Instinet Corporation, to Jonathan G. Katz, Secretary, SEC (Oct. 19, 1992); Letter from Leonard Mayer, President, Security Traders Association of New York, Inc., to Jonathan G. Katz, Secretary, SEC (Mar. 12, 1993); and Letter from Donald E. Weeden, Chief Executive Officer, Weeden & Co., to Jonathan G. Katz, Secretary, SEC (Sept. 1, 1992).

41. The NASD believes that competition has resulted in numerous technological innovations by the exchanges. With respect to market quality measures, the NASD believes that there are no credible statistics showing that market quality has been adversely affected by competition. The NASD believes market quality has improved generally and points out that recent studies have shown that spreads in NYSE-listed stocks have narrowed, execution costs have consistently declined, and intra-

market quality or competition has not been undermined by multiple market competition. NASD Letter, *supra* note 21, at 4-6.

42. NYSE Letter, *supra* note 1, at 20.

43. *Id.* at 20-21.

44. *See In re* The Rules of The New York Stock Exchange, 10 S.E.C. 270 (Oct. 4, 1941); SEC, *Report: Rule 394* (Sept. 14, 1965), *in* Study of the Securities Industry, pt. 6, *Hearings Before the Subcomm. on Commerce and Finance of the House Comm. on Interstate and Foreign Commerce*, H.R. SERIAL No. 37e, 92d Cong., 2d Sess. 3293 (1972); SEC, REPORT ON RULES OF NATIONAL SECURITIES EXCHANGES WHICH LIMIT OR CONDITION THE ABILITY OF MEMBERS TO EFFECT TRANSACTIONS OTHERWISE THAN ON SUCH EXCHANGES (1975); and Securities Exchange Act Release No. 16888 (June 11, 1980), 45 FR 12391.

45. *See* Study I.

46. NYSE Rule 410B requires NYSE members to submit reports to the NYSE of their transactions in NYSE stocks that occur outside of the NMS (including foreign trades). While this provides some oversight of after-hours trades, it is not a substitute for the full surveillance of domestic trades.

47. In 1991, the NYSE commenced two after-hours crossing sessions, in part to attract back to the U.S. the order flow currently being executed overseas. Crossing Session I permits the execution of single-stock, single-sided closing-price orders and crosses of single-stock, closing-price buy and sell orders. Crossing Session II allows the execution of crosses of multiple-stock aggregate-price buy and sell orders. Crossing Session II was designed to attract institutional trades now being executed overseas. Securities Exchange Act Release No. 29237 (May 24, 1991), 56 FR 24853 (May 31, 1991). The NYSE's two after-hours sessions together averaged slightly under five million shares per day over the first six months of 1993.

48. *See, e.g.*, Kalman J. Cohen & Robert M. Conroy, *An Empirical Study of the Effect of Rule 19c-3*, 33 J.L. & ECON. 277 (1990); Robert A. Wood & Thomas H. McInish, The Effect of NYSE Rule 390 on Spreads, Premiums and Volatility, Fogelman College of Business and Economics, Memphis State University (Oct. 1992) (unpublished manuscript financed in part by the NASD). The Commission's monitoring of the initial phase of trading under Rule 19c-3 did not reveal any undue harm to the markets. SEC, A Monitoring Report on the Operation and Effects of Rule 19c-3 under the Securities Exchange Act of 1934, Securities Exchange Act Release No. 18062 (Aug. 25, 1981). While the report noted that trading in Rule 19c-3 stocks had been limited, it also concluded that the rule had not, in a statistical sense, affected the market quality of the primary markets. The report indicated that the low level of market making participation was attributable to different factors, the most important of which was the absence of an automated interface with ITS. In addition, market makers indicated that they viewed their firms' participation as an "experiment" which did not justify additional long range expenditures in terms of personnel. They also cited the lack of internal automation to monitor their market making to prevent overreaching when dealing with customers.

49. *See* Securities Exchange Act Release No. 28741 (Jan. 3, 1991), 56 FR 1038 (Jan. 10, 1991). The Commission received eight adverse comment letters. The Amex subsequently filed a response to the comment letters and the Commission received four additional comment letters opposing the proposal. For copies of these letters, see SEC File No. SR-Amex-90-29.

50. The proposal would have defined a competing dealer as a specialist or market maker registered as such on a regional exchange, or a market maker bidding and offering over-the-counter, in an Amex-traded security. The Post Execution Routing System is an order routing system that allows member firms to route market and limit orders directly from their offices to specialist posts, thereby bypassing the member firm's trading desk and floor broker.

51. *See* Securities Exchange Act Release No. 30161 (Jan. 7, 1992), 57 FR 1502 (Jan. 14, 1992). The Commission received 30 additional comment letters opposing approval of the proposal. For copies of these letters, see SEC File No. SR-Amex-90-29.

52. *See* Heyman Memorandum, *supra* note 9, at 16-18 (discussing what has been described as the "cherry-picking" or "cream skimming" of the primary markets).

53. *See, e.g.*, CORINNE BRONFMAN & JAMES A. OVERDAHL, WOULD THE INVISIBLE HAND PRODUCE TRANSPARENT MARKETS? (CFTC Working Paper No. 92-10, 1992) (from the Commodities Futures Trading Commission, Division of Economic Analysis Working Paper Series).

54. The undertakings include: (1) submission of quarterly operational data, including reports on share and trade volume; (2) notification, at least 30 days in advance, of any material change to the system; (3) systems capacity testing, contingency planning and security procedures; and (4) additional reporting requirements tailored to the specific characteristics of each system.

55. Exchange Act Section 3(a)(1), 15 U.S.C. § 78c(a)(1).

56. Securities Exchange Act Release No. 27611 (Jan. 12, 1990), 55 FR 1890 (approving registration of Delta Options as a clearing agency). The Commission's interpretation of the "exchange" definition was upheld in Board of Trade of the City of Chicago v. SEC, 923 F.2d 1270 (7th Cir. 1991), *rehearing en banc denied*, No. 90-1246 (7th Cir. 1991).

57. *See* Exchange Act Section 15(c), 15 U.S.C. § 78o(c) (1988); NASD Rules of Fair Practice, Schedule G, NASD Manual (CCH) ¶ 1917.

58. Future Structure Statement, *supra* note 5.

59. *See* NASD Rules of Fair Practice, Schedule G, NASD Manual (CCH) ¶ 1917 (requiring third market makers to report trades in listed stocks).

60. This program would include exchange member firms that internalize order flow pursuant to Rule 19c-3 of the Exchange Act.

61. National Specialist Association Letter, *supra* note 24.

62. NASD Rules of Fair Practice, Schedule G, NASD Manual (CCH) ¶ 1917.

Study IV

Transparency

The Commission has long believed that transparency -- the real-time, public dissemination of trade and quote information -- plays a fundamental role in the fairness and efficiency of the secondary markets.[1] Accordingly, for the past three decades the Commission has worked to ensure that data concerning trading interest, volume, and prices is available to investors, analysts, and all other participants in the U.S. equity markets. For example, in its 1963 Special Study of the Securities Markets, the Commission described the vital role interdealer quotation systems would play in the future of the over-the-counter ("OTC") market, and encouraged the National Association of Securities Dealers ("NASD") to create an electronic display system.[2] This led to the creation of the National Association of Securities Dealers Automated Quotation ("NASDAQ") system. Similarly, in its 1972 Statement on the Future Structure of the Securities Markets, the Commission called for a comprehensive system to make information on securities' prices, volume, and quotes available to all investors.[3] This eventually resulted in the development of a composite quotation system and a composite transaction tape for listed securities. In 1982, Commission efforts resulted in the commencement of last sale reporting for NASDAQ/NMS securities.[4]

These developments were predicated on the Commission's belief that transparency helps to link dispersed markets and improves the price discovery, fairness, competitiveness, and attractiveness of U.S. markets. Experience has shown that the Commission's beliefs were well-founded: the transparency initiatives have resulted in very high levels of transparency in U.S. equity markets, improving the quality of these markets substantially.

The Division continues to believe that the benefits of transparency for equity markets outweigh the costs. Furthermore, the Division is of the opinion, and many commentators agree,[5] that transparency can reduce the effects of fragmentation while allowing competition to flourish. Developments such as after-hours trading, the dispersal of trading interest across multiple market centers, and the increase in global trading, however, pose new challenges to the transparency of the equity markets. As a result, the Division believes that Commission leadership is necessary to promote greater transparency in the following areas: disclosure of customer interest within a given market; narrowing the minimum spread variation; exposure of customer orders across markets; public reporting of after-hours trades; and public reporting of overseas trades of U.S. equities.

A. The Need for Transparency

In equity markets, transparency may be defined as the extent to which trading information (*i.e.*, information regarding quotations, price, and volume of transactions) is made publicly available promptly after either the entry of a quotation or completion of a transaction. A marketplace that is "completely" transparent for a security would, on a real-time basis, disseminate publicly: (1) information that accurately indicates the size and price of prospective trading interest such as firm quotations in representative size and resting limit orders, both at the best bid and ask quotations, and away from such quotations (so-called "pre-trade" transparency); and (2) the trade price and volume of completed transactions from all markets trading that security (so-called "post-trade" transparency).[6]

In the United States, for exchange-listed and NASDAQ stocks, all market centers (exchanges and OTC market makers) must report trade prices and volumes within seconds of the trade, as well as the quotes at which they are prepared to buy and sell securities (*see* Appendix III). The best quotations (highest bid and lowest ask) and all trades are disseminated on a real-time basis.

Transparency should not be confused with *regulatory reporting*. Regulatory reporting is the provision of quote or trade information to regulators or self-regulatory organizations ("SROs") for audit trail or other market surveillance purposes. Audit trails capture information such as the security identification, size of trade, price, time of trade, contraside broker and clearing broker, but such information is accessible only to regulators and self-regulators. In contrast, transparency is the *public* dissemination of information to investors and other market participants. Although regulatory reporting is critical for surveillance purposes, it serves a different function than transparency.[7] Regulatory surveillance complements, but is not a substitute for, real-time dissemination of market information. Sole reliance on regulatory reporting not only requires greater governmental or self-regulatory oversight, but makes it difficult for investors to monitor trading for themselves. In addition, regulatory reporting does not contribute directly to price discovery or link dispersed markets.

1. Benefits of Transparency

At least three tangible benefits flow from transparency. First, transparency enhances investor protection. Second, it encourages investor participation in a market, and thereby promotes market liquidity. Third, it fosters the efficiency of securities markets by facilitating price discovery and open competition, and thus counteracts the effects of fragmentation.

a. Investor Protection. Transparency makes it easier for investors to monitor the quality of executions they receive from their intermediaries.[8] For example, when trade prices and quotations are available on a real-time basis, investors can determine if the price their broker indicates they will receive is the best price in the market at that time. When they receive confirmations, investors can determine the dealer mark-up on their transactions and compare the net price of their transactions with the prices reported in the markets. Finally, public trade reporting also helps investors discern the direction of trading activity and whether there is significant trading between, or outside of, the displayed quotes.[9] The dissemination of quotations and trade reports thus enhances investor protection and increases the actual and perceived fairness of securities markets.

b. Enhanced Liquidity. In the past, exchanges resisted Commission proposals to require firm quotation dissemination for equities, in part because of concerns that this requirement would make dealers less willing to supply liquidity. For similar reasons, OTC market makers strongly objected when the SEC proposed to require real-time trade reporting for the larger NASDAQ system securities.[10] The initial concerns articulated by market participants of the negative effect on liquidity have proven unfounded.[11] Indeed, liquidity for both listed and OTC equities subject to the real-time quote and trade reporting requirements has increased since transparency rules were adopted.

Because transparency increases the integrity of the securities markets and fosters investor confidence in those markets, it encourages greater participation by investors. Such participation, in turn, increases market liquidity. For example, with enhanced transparency, less informed traders are more willing to participate. A transparent market decreases the risk that investors in both the equity and derivatives markets will be "picked off" by market professionals before trading information is released. Transparency also promotes greater institutional participation in the securities markets because the institutions have less reason to fear abusive trading practices such as frontrunning.[12]

Moreover, where markets are divided into institutional and retail segments and the institutional segment lacks transparency, institutional market traders have the potential to use undisclosed information regarding institutional market activity to trade for their own advantage in the retail market. Without sufficient information regarding the institutional market, dealers in the retail market may increase their bid-ask spreads to protect themselves against trading with someone who has undisclosed transaction information. The resulting higher dealing costs may, in turn, reduce trading volume.

c. Enhanced Market Efficiency. Transparency helps to unite dispersed markets without costly electronic linkages. An increased diffusion of order flow, coupled with multiple market trading, raises the possibility that the same security will be traded at different prices in the various markets. This pricing inefficiency will occur if fungible securities are traded "in the dark" -- that is, with little or no transparency for those trades. When one market permits such opaque trading, it prevents other market centers from considering those trades in assessing the overall supply and demand for the securities. Consequently, determinations of the optimal price for the securities may be inaccurate. With full transparency, this inefficiency is eliminated, and price discovery is enhanced. Transparency, thus, has the advantage of counterbalancing the effects of market fragmentation while preserving competition among multiple markets.

2. Costs of Transparency

Maintaining high levels of transparency has some costs. The most immediate costs to the markets and their participants are those associated with establishing the systems and procedures needed to report quotes and trades. For the most part, however, these costs already have been met in the United States. Thus, refinements to transparency requirements should not involve substantial additional expenditures.

In addition to systems costs, some markets and dealers claim that post-trade transparency of large trades on a real-time basis increases their position risk. As a consequence, they must widen their spreads to compensate for possible losses to more informed traders who can use the information provided by the large trade to trade against the dealer.[13] They also believe that real-time reporting of large trades will reduce the willingness of dealers to quote in size.[14] Evidence, however, suggests the opposite. The competitiveness and liquidity of the markets for both listed and OTC equities subject to the real-time transaction and quotation reporting requirements have, if anything, increased since these requirements were adopted.[15] Block trades (which are reported on a real-time basis) have gained an increasing share of New York Stock Exchange ("NYSE") volume over the past decades,[16] yet the spreads and depth in NYSE stocks have improved.

Some commentators also believe that investors are not disadvantaged by opacity of large trades because many institutional trades are not based on information relating to the value of the underlying company, but rather are "liquidity" trades, such as arbitrage trades between cash and derivatives, or the result of program trading. Each trade, however, conveys some information, if only the fact that it occurred. Trades may convey relatively more or less information to different traders and investors. The determination as to the value of the information, if any, that is conveyed by a trade is more appropriately made by each investor, rather than a regulator or a market.[17] Further, as mentioned earlier, hiding trades in block size from the rest of the market reduces the pricing efficiency of the market. If these trades truly are "informationless," the market will evaluate them as such.

Another argument used to support non-reporting of blocks is that investors are not harmed by the lack of block-trade reporting because the price normally rebounds after a block trade. The lower block price reflects a "temporary" price change rather than a "permanent" price change that would be caused by adverse information about the company. Thus, by hiding block trades, dealers, in effect, gain the advantage of the "temporary" price change attributed to "price pressure" or "liquidity costs" and avoid the competition (which is characterized as "spoiling activities") of other dealers. The customer who pays the "permanent price" is assumed not to be disadvantaged by the dealers' transaction at the "temporary price."

This argument ignores the fact that price pressure and liquidity costs are really the forces of supply and demand. Thus, the distinction between "permanent" and "temporary" price changes is not meaningful. Those who trade at a price that does not reflect the forces of supply and demand either receive a windfall or pay a disadvantageous price; either one will be permanent. In this situation, public investors, more likely than not, will suffer a permanent economic loss.

More fundamentally, however, the experience in the United States indicates that a fair, efficient, and liquid market can exist with high levels of transparency. All these characteristics ultimately encourage greater market participation and the liquidity that facilitates block trading. Despite initial resistance, professional market participants, as well as OTC investors, today believe that enhanced availability of trade and quote information for OTC stocks has increased the pricing efficiency of the OTC market and encouraged greater investor interest.[18] Indeed, the NASD has recognized this by expanding real-time trade reporting to all NASDAQ securities.[19]

In the United States, increased transparency requirements also have brought meaningful innovations in the distribution of market information. Vendors have expanded, and continue to expand, their services to disseminate information on more types of securities. These vendors now offer sophisticated analytics and graphics, provide comprehensive historical data bases on securities, provide products that can be tailored to particular customer needs, and display information in an easy to read format. The speed and capacity of the services have also improved. Finally, markets may benefit from the dissemination of transaction and quotation information through the fees paid by vendors who distribute the information to the public. The exchanges and the NASD derive a significant portion of their revenues from these fees.[20]

B. Transparency Recommendations

After examining the levels of transparency in the equity markets, the Division has identified five areas where greater transparency should be considered: (1) the disclosure of customer interest within a given market; (2) the minimum spread variation; (3) the exposure of customer orders across markets; (4) the public reporting of after-hours trades; and (5) the public reporting of overseas trades of U.S. equities.

1. Disclosure of Customer Limit Orders

a. Exchange and OTC Markets. Some current market practices and recent developments in the exchange market, third market, and OTC market raise the issue of whether the optimal degree of pre-trade disclosure of limit orders within a given market ("intramarket transparency") is being achieved. For listed securities, for example, some argue that specialists and third market dealers sometimes fail to display limit orders that are at prices better than the displayed quotation.[21] For example, although the published quote for a security may be 20 bid to 20 3/8 ask, there may be an undisplayed limit order to buy at 20 1/4 and, thus, the actual market may be 20 1/4 bid to 20 3/8 ask. A similar concern is raised with third market makers who may have published quotes which track the NYSE or the American Stock Exchange ("Amex") quote but hold undisclosed limit orders at better prices. Questions have been raised about a similar lack of limit order exposure on NASDAQ and on NASDAQ's SelectNet Service.[22]

The NYSE asserts that its rules[23] require the specialist to display all orders in accordance with Exchange Act Rule 11Ac1-1, commonly known as the "Quote Rule," and that it currently collects and includes in its best bid and offer all trading interest announced on the floor. The NYSE claims that there has been some confusion regarding the manner in which exchange members attempt to achieve best execution of customer limit orders. According to the NYSE, in discharging fiduciary duties in the representation of customer orders, a specialist holding a limit order may decide not to announce some or all of the customer's order on the floor. In doing so, the NYSE believes that the specialist is using professional judgment as an agent on how best to serve the customer. The NYSE points out that the specialist remains obligated to that customer if such judgment results in the broker "missing the market." The NYSE concludes that it is the availability of these methods of trading that makes the exchange market superior to any other trading system yet devised.[24]

Although the Division recognizes that a specialist, like any broker, will use professional judgement in handling orders, the failure to display limit orders that are priced better than current quotes raises at least three regulatory concerns. First, the failure to display limit orders could artificially widen spreads, which raises the concern that investors are receiving unfair prices. Second, the failure to display limit orders raises fair competition concerns. If the quotes from a market or market maker do not fully represent the buying and selling interest, markets will lose incentives to compete based on quotes, and the price discovery process may be impaired. Third, with many markets offering automatic executions of small orders at the best displayed quotes, a failure to display the best quotes results in inferior executions for small-order customers.

Therefore, the Division recommends that the SROs consider encouraging the display of all limit orders in listed stocks that are better than the best intermarket quotes (unless the ultimate customer expressly requests that an order not be displayed). Such a requirement would provide a more accurate picture of trading interest, result in tighter spreads, and contribute to improved price discovery.

The Division believes that an analogous requirement may be appropriate for NASDAQ stocks, and recommends that the NASD consider encouraging the display of limit orders in NASDAQ stocks that are better than the best NASDAQ quote (unless the ultimate customer expressly requests that an order not be displayed). The Division recognizes that NASDAQ operates as an automated display of market maker quotes and not as an auction market. Nevertheless, increased transparency in NASDAQ could tighten spreads and enhance an investor's ability to monitor the quality of executions received on trades. The successful capture of NASDAQ volume by proprietary trading systems ("PTSs"), which do display customer limit orders, demonstrates the appeal of limit order display. Because access to PTSs is limited to institutions, however, retail investors cannot use PTSs to display limit orders.

It is noteworthy that display of limit orders by the PTSs does not preclude active participation by market makers, as is evidenced by the substantial percentage of PTS trades by NASD dealers. On the other hand, requiring all NASDAQ limit orders to be fully displayed may discourage the entry on NASDAQ of large limit orders by institutions and reduce the ability of a block positioner to work a large order. Accordingly, it may be reasonable for the customer to retain the right to exclude an order from being displayed. Nevertheless, while the Division recognizes that the precise terms and conditions for the display of limit orders should be considered by each market, more can and should be done to enhance their display.

b. SelectNet. The NASD's SelectNet is a screen-based trading system on NASDAQ. The system is offered to NASD members to facilitate negotiation of securities transactions through computer automation, rather than relying on telephone communication. Through SelectNet, brokers and dealers may enter orders either to one broker-dealer or to all market makers in a security, and negotiate the terms of the orders through counter-offers entered into the system. In addition, firms entering an order through SelectNet may direct it to one particular market maker registered in the issue, may broadcast an order to all market makers registered in the stock, or may preference one market maker for a limited time and then broadcast any unexecuted portion of the order.

SelectNet allows users to improve the price of agency or principal orders over the NASDAQ best bid or offer ("BBO") by permitting orders to be entered, negotiated, and executed at prices between the best bid or offer as displayed in the NASDAQ system. NASD members frequently use SelectNet to broadcast orders priced between the spread to all market makers in the security.[25]

SelectNet orders are not disseminated over all NASDAQ terminals. Instead, market makers using SelectNet on an order-entry basis may direct orders to other market makers, or may broadcast orders to market makers or to all broker-dealer members.[26] Order entry firms may only direct or broadcast SelectNet orders to market makers registered in the security. Orders may be timed to expire anywhere from three to 99 minutes, or may be entered as day orders or after-hours orders.[27] During this time period, the recipient of the order (*e.g.*, a market maker or NASD member) may accept or reject the order, or may make a counteroffer to the order entry firm or market maker that entered the order.

SelectNet originally was designed to provide a means for brokers to negotiate securities transactions electronically, bypassing the need for telephone contact. At its inception, SelectNet was intended to support the continuous, orderly operation of the NASDAQ marketplace during difficult or unusual market conditions.[28] Today it has evolved beyond merely being a means to use the NASDAQ workstation to send an order to a particular broker-dealer. It now enables broker-dealers to broadcast trading interest to a limited group of broker-dealers, excluding other broker-dealers or the public.

The Division is concerned with the limited availability of information regarding SelectNet orders. As discussed above, orders and counteroffers in SelectNet are visible only to broker-dealers, and certain orders are only visible to market makers. In addition, orders may be preferenced beyond a particular market maker or broker to a group of market makers, so that the rest of SelectNet users cannot see, let alone interact with, this order flow. Because market makers frequently use SelectNet to broadcast orders priced between the NASDAQ BBO, the best trading interest in NASDAQ stocks may not be visible to the rest of the market.

For these reasons, the Division recommends that the NASD examine how to improve access to information regarding orders entered into SelectNet. For example, the NASD could modify SelectNet so that information is broadcast to NASDAQ subscribers on an equal basis, without differentiating among market makers, order entry firms, and investors. Whatever approach the NASD takes, it should modify SelectNet's preferencing feature so that it is more consistent with increased transparency. The expanded dissemination of SelectNet information would better inform public investors regarding the prices at which investors and dealers are willing to transact business in a particular security. In addition, exposure of this information will help deter development of a private SelectNet market alongside a public NASDAQ market.

In making these recommendations, the Division recognizes that public display of some SelectNet trading interest may not be consistent with the nature of that trading interest. Although individual investors clearly benefit from display of their orders, customers with very large orders, such as institutions, may prefer that their orders be "worked" by a market maker who will attempt to find contra-side interest from other market makers or institutions. In working the order, the market maker will limit the solicitation of contra-side interest to a few participants so as not to inform the market generally that a large trading interest exists. Otherwise, the customer may have to pay a larger premium for buying or selling the block. The mandatory systemwide display of all SelectNet orders could discourage the use of SelectNet for larger orders. This is a factor for the NASD to consider in determining how best to increase disclosure of SelectNet orders.

Other issues regarding SelectNet arise from the NASD's proposal filed on May 1, 1992, to add listed securities to those securities eligible for trading through the NASD's SelectNet service.[29] Several commentators responding to the proposal expressed concerns regarding, among other things, the effect the proposal would have on the trading of listed securities. Exchanges and exchange specialists ("exchange commentators") raised concerns that, if adopted, the proposal would enable third market dealers to trade listed securities through SelectNet without disseminating SelectNet orders through the consolidated quote system or through NASDAQ. The exchange commentators argued that this would place the exchanges at a competitive disadvantage and frustrate the ability of brokers, dealers, and exchange specialists to attain best execution of their customer orders if the best price were available only through SelectNet. Several institutional money managers argue that the proposal would enable market makers to restrict investors' access to information regarding SelectNet orders for listed securities and, thus, prevent both retail and institutional investors from ascertaining the appropriate price level of a particular listed security.[30]

In light of the Division's concerns about, and recommendations for, improved transparency in SelectNet, the Division believes as a preliminary matter that SelectNet should not be extended to listed securities until the NASD determines how to improve the dissemination of SelectNet information. The Division further recommends that the NASD withdraw the pending proposal and refile it when SelectNet operations have been revised.

2. Minimum Spread Variation

The current pricing system for stocks may diminish intramarket transparency. Exchange rules set the minimum variation permissible for bids and offers at one-eighth (12.5¢).[31] Although the reasons for this minimum variation are lost in the history of the securities market,[32] the eighth minimum variation has been accepted as a given for decades. Some commentators have suggested that the Commission require this system to be modified so that quotes for stocks reflect the reality that our currency unit, the U.S. dollar, is based on decimals.[33] Because the smallest currency unit used for commercial purposes is one cent, these commentators find it anachronistic that the minimum price differential used in the equity markets is twelve and a half times that amount.

All of the commentators calling for this change believe that the one-eighth spread is too large. In their opinion, this minimum price differential permits, or at least contributes to, some of the current practices in the securities industry. For example, these commentators are of the opinion that the practice of payment for order flow is possible because, even after paying one or two cents per share for both sides of the transaction (a total of 4¢), market makers make a profit of eight and a half cents. The commentators also argue that the one-eighth variation hinders quote competition and imposes unnecessary costs on investors. Unlike commissions, which brokers have had to lower to several cents per share, the parameters for quotes are set by existing rules. As a result, market makers have little incentive, and no flexibility, to narrow the spreads. In addition, the market makers benefit because they can effect executions at wider spreads than if a smaller variation was used. For investors trying to decide whether to place limit orders, the one-eighth variation represents an expensive price to pay for improving an order's precedence in the limit order book. Even when placing market orders, investors suffer the consequences of the one-eighth requirement because market orders cannot obtain the benefit of an execution inside a one-eighth spread.

Commentators arguing against a change in the one-eighth spread believe that narrower quote variations could lead market makers and exchange specialists to abandon infrequently traded stocks, and thereby reduce liquidity for those stocks. In addition, they believe that a transition to a smaller minimum variation may cause some dealers to cease doing business because it would become more difficult to make a profit. The Division does not believe that these concerns are sufficiently compelling to maintain the current system. There is no justification to continue subsidizing, through artificially wide spreads, dealers who may not be operating efficiently. Other financial markets (*e.g.*, government securities, stock index futures, and foreign markets)[34] do not maintain a one-eighth spread.

As there is no clear reason to preserve the one-eighth requirement, the Division believes it is appropriate to revise the current pricing system. The two obvious alternatives are: (1) narrowing the minimum spread to sixteenths or thirty-seconds or (2) using a decimal pricing system. The Division believes that decimal pricing is preferable and may be inevitable. The Division realizes that the markets and their participants would incur expenses in converting to decimal pricing, but it is unclear how extensive these costs would be. In contrast, a transition to sixteenth pricing would not present major technical difficulties for the industry. Indeed, some stocks already trade with such pricing.[35] Thus, the Division recommends that the SROs convert to a minimum variation of one-sixteenth as soon as possible. Nevertheless, the Commission has solicited comment regarding decimal pricing in its rule proposal to require disclosure of payment for order flow practices.[36] The Commission and SROs should carefully examine commentators' views on decimal pricing. In particular, the SROs should consider whether adoption of decimal pricing would benefit investors and strengthen the competitive posture of the U.S. equity markets as they position themselves in a global market.

As a corollary to narrowing the minimum increments, the Consolidated Tape Association ("CTA") and NASDAQ should amend the tape reporting plan to allow a market or dealer to report trades in increments smaller than one-eighth. Currently, only Amex stocks priced under $5 and NASDAQ stocks priced under $10 are reported in sixteenths. Some PTSs and dealers effect transactions in sixteenths or decimals, but must round the reported price to the nearest eighth. This presents an inaccurate indication of the trade price and prevents markets and dealers from competing effectively. CTA and NASDAQ should, at a minimum, begin reporting trades in all stocks in sixteenth increments. They should also consider reporting trades in decimals from markets or dealers that use decimal pricing. The Division acknowledges that the costs of reporting in decimals must be balanced against the benefits. Nonetheless, at this time, the Division believes that the benefits of reporting in sixteenths outweigh any incremental costs.

3. Exposure of Customer Orders

The establishment of real-time quote and last sale reporting systems has helped investors to receive the best displayed price when trading, regardless of the market in which execution takes place. While the other transparency recommendations contained in this report will enable markets and brokers to discern the best price among all markets, there is still the possibility that a portion of the buying and selling interest in a security will be shielded from the market. Specifically, customer orders that do not better the existing Intermarket Trading System ("ITS") quotes generally will be exposed only to the market that receives the order. Interaction of these orders with orders in other markets could be enhanced by requiring market makers or market centers to expose customer orders in certain securities.

The Commission previously considered an order exposure rule for listed stocks in 1982.[37] The NYSE was concerned that firms making off-exchange markets in listed stocks would simply internalize their customers' orders rather than expose them to potentially superior prices on an exchange. To prevent this, the NYSE, building upon order exposure principles developed by the Securities Industry Association ("SIA"), recommended an order exposure rule that would apply only to OTC market makers. In response, the Commission published two alternative order exposure rules for comment. In essence, both proposed rules required that a market maker stop (*i.e.*, guarantee execution of) a customer order at the proposed price and, using the consolidated quotation system, publicly bid or offer the order at an eighth better than the proposed execution price before executing the order as principal. One version of the rule would have required a market maker to display a principal quotation matching the proposed execution price; the other version would not.

The Commission received more than 450 comment letters with commentators divided on the issue of whether a rule was needed. NYSE public firms, NYSE specialists, and NYSE listed companies made up a significant majority of those supporting such a rule. Commentators favoring a rule cited its potential to promote maximum interaction of orders and heightened intermarket competition for listed securities not subject to off-board trading restrictions ("19c-3 securities"), resulting in improved executions for customers overall. Other commentators argued that an order exposure rule would reduce concerns about unfair competition for order flow initially diverted to one market maker or market because it would provide other markets some access to this order flow before it was executed by the recipient market maker.

Some parties opposed to the rule claimed it was unnecessary because the Commission had found no harm resulting from off-board trading in 19c-3 securities. Others claimed that a rule that required that orders be held out for a specified period of time would be too complex and burdensome and would curtail most off-board trading. They also argued that, in light of the limited likely benefits and the significant additional transaction costs and added risks imposed on off-board market makers, a rule was not justified.

In December 1982, the Commission reproposed a single revised order exposure rule that would apply to all markets in listed securities.[38] The proposed rule stated that prior to executing an order in a Rule 19c-3 security either as principal with a customer or through an automated execution system, a broker-dealer would be required to stop the order at the agreed price and publish a bid or offer on behalf of the order for 30 seconds at a price 1/8th of a point better than the proposed execution price.[39] The Commission received more than 325 comment letters that largely restated positions put forth at the time of the original release. Those in favor of the rule cited the potential for price improvement that would arise from increased competition; those opposed claimed that the cost and burdens associated with order exposure would drive market makers out of this business, thereby reducing competition.

In April 1983, Merrill Lynch, the largest market maker in 19c-3 securities, ceased making markets in these securities. After other market makers in 19c-3 securities announced similar intentions, in July 1983, the Commission voted to defer action on the proposed order exposure rule, citing the low level of OTC trading in 19c-3 securities.

With the departure of these firms from 19c-3 securities trading, internalization became less of a concern for the Commission. In recent years, however, Commission and industry initiatives, advances in computer technology, and investors' demands for reduced transaction costs have increased the competition among market centers trading exchange-listed securities.[40] As described in Study II, third market volume has increased substantially over the past several years.

The NYSE has suggested that the Commission reconsider an order exposure rule to provide for greater interaction and enhance best execution of customer orders.[41] The regional exchanges also believe that an order exposure rule could restore the incentive of market makers and exchanges to compete on the basis of their displayed quotations.[42] The U.S. General Accounting Office also has suggested that the Division consider the applicability of order exposure rules in connection with any new proposals that would further repeal off-board trading restrictions.[43] Comments to the Market 2000 Study from other market participants revealed a degree of ambivalence toward an order exposure rule. The SIA noted that "currently there is no compromise or consensus between those who would advocate a uniform public order exposure rule for listed securities and those who believe transparency requirements should be determined by customer demand and not mandated."[44] The National Specialists Association, commenting on prior NMS initiatives by the Commission, stated that "we are aware of nothing that should persuade the Commission to revisit any of these proposals, except, perhaps, the order exposure rule."[45] The NASD stated that it did not believe that a new order exposure rule was necessary, but that if one were to be developed it should apply to all markets equally.[46]

The Division favors healthy competition among diverse market centers and has not found a dispersed marketplace to be incompatible with best execution, fair and orderly markets, and efficient price discovery. This is in large part due to the high level of transparency in U.S. equity markets. The Division also recognizes that an order exposure rule could increase visibility of orders. Market participants might be able to better gauge the depth of a market if they are aware of orders that would be executed internally through an automated execution system.

The benefits of an order exposure rule must be weighed against the costs of additional regulation such as the potential loss of speed and anonymity as well as other costs to market participants. Such a rule might also prove cumbersome during periods of high volume or volatility. Furthermore, an order exposure rule would have to take into account the ability of brokers to avoid the rule by effecting a transaction on a firm's foreign desk.[47]

The Division believes that, because the NYSE has indicated an interest in an order exposure rule, the exchange, together with the other SROs, should consider the feasibility of an order exposure rule. The SROs could coordinate the development of an order exposure rule for Commission consideration once the other transparency recommendations in this Report have been implemented. If the SROs cannot work collectively to develop an order exposure rule, any single market could submit its own proposal to implement such an approach for Commission consideration. If the SROs choose to develop an order exposure rule, reasonable exceptions should be carved out to prevent trading delays and to ensure that market makers are not forced to maintain financially untenable positions during periods of high volatility. The Division would urge that the NYSE, along with the other SROs, review these and the other concerns raised by commentators and recommend specific safeguards and/or exceptions that would enable the markets to remain efficient during periods of exceptionally high volatility, such as that experienced in October 1987.

In developing an order exposure rule, SROs should bear in mind that order exposure rules may change the pricing of market making services with no specific benefit to customers on a transactional basis. Market makers earn most of their income by making a spread, and charge low or no commissions. If they earn less income because they expose orders and execute fewer trades at the quotes, they can be expected to begin charging higher commissions. Thus, in return for (sometimes) better executions, customers may pay higher commissions. But even if customers are net (of execution quality plus commission) no worse off nor better off, the marketplace generally may benefit from better information about the flow of trading interest.

4. After-Hours Trading

Although most trading activity occurs during regular trading hours and is therefore captured by public trade reporting, a growing amount of trading is occurring after-hours in the United States and on foreign markets ("off-shore trading"). This growth in after-hours trading is largely due to a rise in the use of after-hours crossing networks by large institutions and the use of off-shore OTC markets by broker-dealers.[48] Most trades effected after the hours of operation of the consolidated reporting system are reported to SROs, but only for regulatory purposes.[49] Many Market 2000 Study commentators suggest that the Commission consider requiring greater transparency for the after-hours market. Commentators believe that the high levels of transparency in the U.S. markets contribute to efficient securities markets. Several commentators, especially large institutional traders and the sponsors of PTSs, support an extension of the consolidated tape operating hours to capture after-hours trades.[50] They stressed that a transparent market for all trades in U.S. securities is consistent with the goals of an informed market and a level playing field between markets.[51] In contrast, some block positioning firms fear that a 24-hour tape could make it more difficult for them to effect large transactions after regular trading hours.

In the first six months of 1993, approximately 17 million shares per day in U.S. equities were executed after regular trading hours.[52] In the Division's opinion, the lack of transaction reporting for after-hours trades can result in inefficient pricing on the U.S. securities markets. Moreover, the lack of information on after-hours trades weakens transparency as a counterbalance to fragmentation. Although the amount of trading currently effected in the after-hours is a small percentage of total trading, a lack of information on several million shares per day is still significant. Furthermore, as mentioned earlier, shielding after-hours trades in block size from the rest of the market reduces the pricing efficiency of the market.[53] Whether "informationless" or not, the market should have the opportunity to evaluate these trades.

To fill the gap in trade reporting, the Division believes that the SROs should develop a transaction reporting system to capture trades in U.S. equities that are executed outside of regular trading hours. Although the cost of more accurate price reporting on the tape is surely nominal, the cost of running the tape 24-hours may not be. For this reason, the Division suggests that the SROs could propose less comprehensive alternatives that offer similar benefits, at a lower cost, than 24-hour reporting. For example, after-hours trades could be reported hourly, or batched for dissemination before the opening of the regular trading day.

5. Off-Shore Trading

Although the current amount of off-shore trading in U.S. securities is relatively small, questions have arisen about the role of transparency in a global marketplace. U.S. broker-dealers often book after-hours trades with U.S. customers though their foreign desks or foreign affiliates. For instance, a U.S. broker-dealer acting as principal with its customer negotiates and agrees to the terms of a trade in the United States, but telephones or faxes the terms overseas to be "printed" on the books of the foreign office. The broker-dealers may treat these transactions as executed abroad, but in reality, price discovery occurs in the United States. At a minimum, these trades should be subject to the same type of transaction reporting as "domestic" after-hours trades. As discussed in Study VII, in constructing an after-hours reporting mechanism, the SROs should capture trades in U.S. equities that are nominally executed abroad.

1. *See* SEC, INSTITUTIONAL INVESTOR STUDY REPORT, H. Doc. No. 64, 93nd Cong., 1st Sess. (1971) (stating, among other things, that a consolidated transaction reporting system was an essential step toward formation of a central market system); SEC, Statement of the Securities and Exchange Commission on the Future Structure of the Securities Markets (Feb. 2, 1972), 37 FR 5286 (Feb. 4, 1972) ("Future Structure Statement") (stating, among other things, that a composite quotation system was an essential step toward formation of a central market system).

2. *See* SEC, REPORT OF THE SPECIAL STUDY OF THE SECURITIES MARKETS, H.R. Doc. No. 95, 88th Cong., 1st Sess. 126 (1963).

3. *See* Future Structure Statement, *supra* note 1.

4. *See* Securities Exchange Act Release No. 18514 (Feb. 25, 1982), 47 FR 9388 (Mar. 5, 1982).

5. *See, e.g.*, Letter from Jeffrey R. Larsen, Senior Legal Counsel, Fidelity Investments, to Jonathan G. Katz, Secretary, SEC (Nov. 5, 1992); Letter from Charles R. Hood, Senior Vice President and General Counsel, Instinet Corporation, to Jonathan G. Katz, Secretary, SEC (Oct. 19, 1992) ("Instinet Letter"); Letter from Donald E. Weeden, Chief Executive Officer, Weeden & Co., to Jonathan G. Katz, Secretary, SEC (Sept. 1, 1992).

6. *See* Brandon Becker, Market Transparency, Address before the *Financial Times* Conference on International Securities Markets: Limiting Market Risk (May 12, 1992) ("Becker Speech").

7. Other regulators, however, put more emphasis on using regulatory reporting as a substitute for real-time, public transaction reporting. *See* Letter from Richard Britton, Director, Securities and Derivative Markets and Investment Management Division, Securities and Investments Board, to Jonathan G. Katz, Secretary, SEC (Dec. 1, 1992) ("SIB Letter").

8. *See* Instinet Letter, *supra* note 5; Letter from Michael L. Quinn, Division Director, Equity Trading, Merrill Lynch, Pierce, Fenner & Smith Inc., to Jonathan G. Katz, Secretary, SEC (Mar. 17, 1993); Letter from Joseph R. Hardiman, President, National Association of Securities Dealers, to Jonathan G. Katz, Secretary, SEC (Nov. 20, 1992) ("NASD Letter"). *See generally* Joseph Hardiman, Automation and Electronic Trading: Key Issues for Regulating in a New Era, Address Before 16th Annual Conference, International Organization of Securities Commissions (Sept. 26, 1991) ("Hardiman Speech").

9. For example, because quotation spreads are intended to reflect active trading interest, a greater number of transactions outside the retail size quotation (*i.e.*, a block transaction away from the market) would be of interest to investors. That is, a record of recent block transactions would provide valuable information in determining the appropriate discount from, or premium over, the retail size quotation for the next block trade. *See* Becker Speech, *supra* note 6, at 9.

10. Some foreign commentators also argue that the optimum level of transparency in a market is related to the structure of that market. Specifically, they claim that in a "quote" driven market the liquidity will be impaired if the level of transparency exposes market makers to "undue position risk." Letter from J. R. C. White, Head of Department of Conduct of Business, Securities and Futures Authority, to Jonathan G. Katz, Secretary, SEC (Oct. 20, 1992). This Division disagrees with this argument, and instead believes that transparency can serve the same investor protection and price discovery uses in either quote or order driven markets.

11. NASD Letter, *supra* note 8; Hardiman Speech, *supra* note 8.

12. "Frontrunning" generally involves a market professional effecting a trade for its own account, either in the cash or a derivative market, based upon nonpublic information regarding an impending block transaction in a stock in order to obtain a profit when the cash or the derivative market adjusts to the price at which the block trades.

13. SIB Letter, *supra* note 7. The SIB maintains that if the level of post-trade transparency is set at too high a level, market efficiency and fairness can be endangered as market makers reduce their risk by widening price spreads and offering to deal in smaller size.

14. In general, dealers prefer to trade without trade reporting. "While transparent markets may offer a number of market-wide benefits, there is no question that dealers, if provided a choice, will prefer to execute many institutional trades without public dissemination." Hardiman Speech, *supra* note 8, at 5.

15. Hardiman Speech, *supra* note 8, at 8.

16. NYSE, FACT BOOK FOR 1992 (1993).

17. *See generally* James F. Gammill & André F. Perold, *The Changing Character of Stock Market Liquidity*, 15 J. PORTFOLIO MGMT. 13 (Spring 1989).

18. NASD Letter, *supra* note 8, at 20.

19. *See* Securities Exchange Act Release No. 31695 (Jan. 6, 1993), 58 FR 4189 (Jan. 13, 1993).

20. *See* Exhibits 42, 43, and 45.

21. *See* Thomas H. McInish & Robert A. Wood, Hidden Limit Orders on NYSE, Fogelman College of Business and Economics, Memphis State University (Oct. 1992) (unpublished manuscript) ("Hidden Limit Order Study"). The authors assert that NYSE specialists do not display about 50% of limit orders that better existing quotes. In their opinion, this practice represents a serious policy issue because it places both public investors and regional exchanges at a disadvantage. They assert that hiding limit orders impedes strategic decisions on order placement; results in publicly submitted market orders receiving inferior prices; hampers the monitoring of order executions; reduces the probability of a limit order being executed; results in a delay in reporting limit order executions; interferes with the ability of the regional exchanges to execute public orders; and artificially improves NYSE performance relative to the regional exchanges using a common benchmark. The authors also claim that NYSE Rule 60 is ambiguous in that the specialists may have some leeway in choosing what to disclose in their quotes.

22. Securities Exchange Act Release No. 30961 (July 27, 1992), 57 FR 34158 (Aug. 3, 1992).

23. NYSE Rule 60 requires that specialists promptly report, for the securities in which a specialist is registered, the highest bid and lowest offer made in the trading crowd and the associated quotation size that the specialist wishes to make available to quotation vendors. 2 NYSE Guide (CCH) ¶ 2060.

24. *See* Letter from William H. Donaldson, Chairman and Chief Executive Officer, New York Stock Exchange, to Jonathan G. Katz, Secretary, SEC 25-26 (Nov. 24, 1992) ("NYSE Letter").

25. *See* Securities Exchange Act Release No. 30961 (July 27, 1992), 57 FR 34158 (Aug. 3, 1992).

26. Broadcast orders may be entered anonymously or may be identified as to the order entry firm.

27. Orders may be entered as "all or none," or sent in with a minimum acceptable size of execution specified.

28. In November 1990, the Commission approved proposed enhancements to the SelectNet service to provide greater flexibility in the automated execution of orders and to facilitate SelectNet usage by market makers and order entry firms. Securities Exchange Act Release No. 25263 (Jan. 11, 1988), 53 FR 1430 (Jan. 19, 1988).

29. The NASD filed the proposed rule change with the Commission on May 1, 1992. Notice of the proposed rule change was provided in Securities Exchange Act Release No. 30961 (July 27, 1992), 57 FR 34158 (Aug. 3, 1992). On August 24, 1992, the Commission extended the period for public comment until September 24, 1992. Securities Exchange Act Release No. 31083 (Aug. 24, 1992), 57 FR 39411 (Aug. 31, 1992). On Sept. 22, 1992, the Commission extended the comment period until October 30, 1992. Securities Exchange Act Release No. 31216 (Sept. 22, 1992), 57 FR 44780 (Sept. 29, 1992).

30. *See* Letter from Michael K. Massicotte, Equity Trader, Harvard Management Company, Inc., to Howard L. Kramer, Senior Special Counsel, Division of Market Regulation, SEC (May 11, 1993); Letter from Harold S. Bradley, Director of Trading, Investors Research Corp. ("Investors Research Letter"), to Jonathan G. Katz, Secretary, SEC (May 12, 1993); Letter from Peter Jenkins, Principal Head of Equity Trading, Scudder, Stevens & Clark, Inc., to Jonathan G. Katz, Secretary, SEC (May 18, 1993).

31. NYSE Rule 62 provides that bids or offers in stocks selling above one dollar per share may not be made at a variation of less than one-eighth of a dollar or twelve and a half cents. 2 NYSE Guide (CCH) ¶ 2062. Amex Rule 127 allows for one-sixteenth spreads for stocks priced five dollars or less, and one-eighth spreads for stocks over five dollars. The NASD does not have a minimum spread policy for NASDAQ stocks. Amex Guide (CCH) ¶ 9277. NASDAQ, however, is designed to process spreads of one-thirtysecond for stocks bid under ten dollars and one-eighth for stocks ten dollars and over.

32. Michael Schroeder, *Will Wall Street Surrender its 'Pieces of Eight'?*, BUS. WEEK, Nov. 22, 1993, at 116.

33. Letter from Junius W. Peake, Professor, University of Northern Colorado, College of Business Administration, and Morris Mendelson, Professor, University of Pennsylvania, Wharton School, to Jonathan G. Katz, Secretary, SEC (Nov. 3, 1992); Letter from Jeffrey P. Ricker, to Jonathan G. Katz, Secretary, SEC (Mar. 4, 1993); Letter from Richard Breeden, Chairman, SEC, to Edward J. Markey, Chairman, Subcomm. on Telecommunication and Finance, Comm. on Energy and Commerce, U.S. House of Representatives (July 11, 1991); *Oversight Hearing on the Future of the Stock Market focusing on Inducements for Order Flow Before the Subcomm. on Telecommunications and Finance of the House Comm. on Energy and Commerce*, 103d Cong., 1st Sess. (1993).

34. The broker-dealers on the Tokyo Stock Exchange ("TSE") and London Stock Exchange ("LSE") are permitted to quote stock prices in significantly smaller intervals than in U.S. markets. For example, on the TSE, broker-dealers publish quotes in 8¢ intervals for stocks trading for more that $8 per share, or 0.8¢ for lower-priced stocks. On the LSE, market makers are permitted to publish bid and ask quotes in intervals of 1.5¢. Michael A. Hart, *Decimal Stock Pricing: Dragging the Securities Industry Into the Twenty-First Century*, 26 LOY. L.A. L. REV. 843, 871 (1993).

35. Amex Rule 127, Amex Guide (CCH) ¶ 9277, provides that the minimum fractional change for securities selling between twenty-five cents and five dollars will be one-sixteenth; for securities selling under twenty-five cents, the minimum fractional change is set at one-thirtysecond.

36. *See* Securities Exchange Act Release No. 33026 (Oct. 7, 1993), 58 FR 52934 (Oct. 13, 1993).

37. *See* Securities Exchange Act Release No. 18738 (May 13, 1982), 47 FR 22376 (May 24, 1982). The order exposure rule was not the first Commission initiative in this area. Earlier, the Commission had proposed a rule to provide price protection. *See* Securities Exchange Act Release No. 15770 (Apr. 26, 1979), 44 FR 26692 (proposing Rule 11Ac1-3 to provide intermarket price protection for all public limit orders); Securities Exchange Act Release No. 31344 (Oct. 21, 1992), 57 FR 48581 (Oct. 27, 1992) (withdrawal of proposed Rule 11Ac1-3). In addition, with the proposal of Rule 19c-2 to remove the remaining off-board trading restrictions, the Commission proposed four rules to preclude or minimize the possibility of exchange members from dealing unfairly with customers or "overreaching." *See* Securities Exchange Act Release No. 13662 (June 23, 1977), 42 FR 33510.

38. Securities Exchange Act Release No. 19372 (Dec. 23, 1982), 47 FR 58287 (Dec. 30, 1982) ("Reproposal Release").

39. Broker-dealers in this context would include off-board market makers, exchange specialists, and broker-dealers on the floor of an exchange.

40. Between 1983, when the Commission deferred action on an order exposure rule, and 1992, the third market increased its share of reported trades of NYSE-listed securities from 1.28% to almost 10.57% while regional exchanges increased their share from 22% to 25% during the same period. Office of Economic Analysis, Securities and Exchange Commission.

41. *See* NYSE Letter, *supra* note 24.

42. *See* Letter from William G. Morton, Jr., BSE, John L. Fletcher, MSE, Leopold Korins, Pacific Stock Exchange, and Nicholas A. Giordano, Philadelphia Stock Exchange, to Jonathan G. Katz, Secretary, SEC (Dec. 11, 1992).

43. *See* GAO, SECURITIES MARKETS: SEC ACTIONS NEEDED TO ADDRESS MARKET FRAGMENTATION ISSUES (June 1993). The Division, however, believes that the potential benefits of an order exposure rule should be considered independent of any decision regarding Rule 390. The equity markets already are highly dispersed so that if an order exposure rule is deemed necessary it would not have to wait for a removal of Rule 390. Conversely, if an order exposure rule is not considered worthy of pursuing under current conditions, then removing Rule 390 should not change this.

44. *See* Letter from Thomas M. O'Donnell, Chairman and Marc E. Lackritz, President, Securities Industry Association, to Jonathan G. Katz, Secretary, SEC (July 1, 1993).

45. *See* Letter from David Humphreville, National Specialists Association, to Jonathan Katz, Secretary, SEC (Dec. 11, 1992).

46. NASD Letter, *supra* note 8, at 25.

47. *See* Study II for a discussion of foreign transactions in U.S. securities.

48. *See* Study VII for a description of after-hours trading.

49. *See* Appendix III on trade reporting requirements in the United States. Even many trades in U.S. securities executed overseas are subject to regulatory reporting in the United States. The NYSE's Rule 410B has required its members to report transactions in NYSE listed securities executed overseas. 2 NYSE Guide (CCH) ¶ 2410B.

50. *See, e.g.*, Letter from Evan Shulman, President, Lattice Trading, to Jonathan G. Katz, Secretary, SEC (Oct. 12, 1992) ("Lattice Trading Letter"); Letter from R. Steve Wunsch, President, AZX, Inc., to Jonathan G. Katz, Secretary, SEC (Oct. 1, 1992); Letter from DeWitt F. Bowman, Chief Investment Officer, CalPERS, to Jonathan G. Katz, Secretary, SEC (Oct. 15, 1992). Investors Research Letter, *supra* note 30.

51. *See* Lattice Trading Letter, *supra* note 50.

52. *See* Exhibit 11. Of this total, the Division estimates that approximately 15 million shares per day in NYSE stocks (or 5.5% of NYSE volume) were executed after-hours or off-shore. This represents approximately 7 million shares a day of NYSE stocks that are faxed overseas.

53. *But see* NASD Letter, *supra* note 8, at 20 (arguing that different standards may be appropriate due to competitive concerns).

Study V

Best Execution

Generally, a broker-dealer has a duty to seek to obtain best execution for customer orders, which is understood to mean that a broker-dealer must obtain the most favorable terms available under the circumstances for a customer's transaction. This obligation constitutes one of the cornerstones of market integrity. Market developments since the Securities Acts Amendments of 1975 ("1975 Amendments")[1] to the Securities Exchange Act of 1934 ("Exchange Act")[2] raise concerns about whether certain broker-dealer and market practices are consistent with best execution obligations.

First, is best execution obtained when automatically routed small customer orders are subject to quote-based executions? Second, is best execution compromised when payment is received by a broker in return for order flow? Third, is increased dealer trading in listed stocks, as evidenced by the growth of the third market, inconsistent with best execution? Fourth, with the growth of the National Association of Securities Dealers Automated Quotation ("NASDAQ") system, do dealer practices exist that compromise best execution and are unfair when applied to stocks designated "national market system" securities ("NASDAQ/NMS securities")?[3] Fifth, does the payment of so-called soft dollars prevent obtaining best execution?

The Securities and Exchange Commission ("Commission") issued a release in October 1993 requesting comment on a rule proposal regarding payment for order flow practices.[4] Study III addresses issues pertaining to third market trading. This study addresses the remaining best execution issues.

A. Duty of Best Execution

1. Common Law Agency Principles

A broker-dealer's duty to seek to obtain the best execution of customer orders derives from the common law agency duty of loyalty, which obligates an agent to act exclusively in the principal's best interest.[5] Thus, when an agent acts on behalf of a customer in a transaction, the agent is under a duty to exercise reasonable care to obtain the most advantageous terms for the customer.[6] This common law agency principle has been incorporated into case law and Commission decisions under the federal securities laws.

Best execution duties also can arise when a broker-dealer is acting as principal.[7] If a broker-dealer has established a customer relationship based on trust and confidence, and the customer depends on and follows the broker-dealer's advice, a fiduciary relationship is created between the broker-dealer and the customer.[8] As a fiduciary, a broker-dealer has an affirmative duty to obtain the most advantageous terms for a customer's order.[9] Failure to exercise reasonable diligence to obtain best execution or provide sufficient disclosure in the absence of obtaining best execution has resulted in violations of the antifraud provisions of the federal securities laws.[10]

2. National Market System

In encouraging the establishment of a national market system ("NMS"), Congress and the Commission gave a prominent role to best execution concepts. Congress found that investors are best served by an NMS that ensures (1) "economically efficient execution of securities transactions," (2) the "practicability of brokers executing investors' orders in the best market," (3) the "opportunity [subject to best execution] for investors' orders to be executed without the participation of a dealer," and (4) the creation of linkages "of all markets for qualified securities through communication and data processing facilities [to] contribute to best execution of . . . orders."[11] All of these statutory objectives emphasized the importance of best execution in maintaining fair and orderly markets and in protecting investors.

To achieve these objectives, Congress granted the Commission the authority to oversee the development of the NMS and to implement rules as necessary to ensure that investors receive the best possible execution of their securities transactions regardless of the type or physical location of a particular trading market.[12] Congress concluded that best execution may be achieved only in an environment of open competition among markets and market makers, so that investors are ensured a central, liquid market to which to route their trades.[13] To this end, the Commission and the industry have worked together to establish a nationwide disclosure system whereby price and volume information is available for securities trading in diverse locations. In addition to the creation of consolidated quotations and trade reporting, the 1975 Amendments envisioned enhanced competition among markets, market makers, and broker-dealers to achieve lower transaction costs for customers and to contribute to the development of the NMS, where customers would be able to secure the best price among competing markets or market makers regardless of where their order was executed.[14]

3. Self-Regulatory Rules

Although the Commission has not promulgated a separate best execution rule or explicitly defined best execution, self-regulatory organizations ("SROs") have prescribed rules or provided interpretive guidance concerning their members' duty to obtain the best execution of customer orders.[15] SRO rules impose a diligence requirement on member firms to execute customer orders at the best prices available.

While price is the predominant element of the duty of best execution,[16] a broker-dealer is not bound exclusively by price considerations in satisfying best execution obligations. For example, the Commission has stated that

> brokers have not been held by the Commission, the self-regulatory organizations or the courts to an absolute requirement of achieving the most favorable price on each order. What has been required is that the broker endeavor, using due diligence, to

> obtain the best execution possible given all the facts and circumstances. These factors include, among other things, the size of the order, the trading characteristics of the security involved, the availability of accurate information affecting choices as to the most favorable market in which execution might be sought, the availability of technological aids to process such data, the availability of economic access to the various market centers and the cost and difficulty associated with achieving an execution in a particular market center.[17]

A customer's instructions or expectations may dictate the particular market for an order and the type of execution obtained, assuming the customer is informed of all material facts. If a customer has instructed a broker-dealer that speed and certainty of execution is most important in executing the order, the broker-dealer could satisfy its obligation of best execution by routing the order to the best market offering a prompt execution. The broker-dealer, however, should make a determination that the speed of execution in the market to which it has routed the order is sufficiently better to warrant taking a trade away from another market that may offer the possibility of obtaining a better price, but slower execution and less certainty.

B. Best Execution and Current Market Developments

The accuracy and efficiency of the price discovery process have improved since the 1975 Amendments. Current market practices, however, such as the packaging of retail customer order flow by broker-dealers to predetermined markets, the receipt of payments for routing customer orders, and the limit order handling for active, well-capitalized NASDAQ stocks, raise questions regarding whether the customer's order receives best execution. Although determining what constitutes best execution in general would be a convenient way to address the issues raised by the practices just described, the Division believes that it is not appropriate to promulgate a rule requiring uniform application of best execution principles based solely on price to differing market structures. Although price traditionally has been, and should continue to be, a significant component of best execution, the Division of Market Regulation ("Division") does not recommend that the Commission propose a best execution rule or issue an interpretative release establishing a single test of best execution. Instead, the Division recommends that the specific practices raising best execution issues continue to be addressed in the context of the current market structure. The remainder of this study addresses specific best execution issues.

1. Quote-Based Executions

Where multiple competing markets exist for listed stocks, (and similarly where there are competing market makers for NASDAQ stocks), a broker-dealer must ensure that its customer's order is executed in the best market or by the best market maker. Theoretically, to achieve best execution in this context, a broker-dealer would have to examine the various markets for each order it handles and route the order to the best market or market maker. Without an automated market-wide system to accomplish this, however, it is unrealistic to expect every order to be routed individually.

Currently, most small order flow routing decisions are predetermined. Although the customer's instructions and expectations should determine the order handling procedures that a broker-dealer employs and whether the execution of an order is the best under the circumstances, retail customers typically do not provide such specific instructions. Consequently, routing decisions are left to the broker-dealer acting on behalf of the customer. Broker-dealers have automated the trade routing process for small trades, thereby eliminating individualized attention for each order. Because the various markets guarantee the intermarket (or interdealer) best bid or offer regardless of the location of the best quote, broker-dealers use criteria in addition to quotes in their order routing algorithms, including, among other things, speed of execution, market fees, and affiliations with specialists or market makers.

The Division believes that an automated order routing environment can be consistent with the achievement of best execution. Without specific instructions from a customer, however, a broker-dealer should periodically assess the quality of competing markets to ensure that its order flow is directed to markets providing the most advantageous terms for the customer's order.[18] A broker-dealer must ensure that its order flow is not routed to a market or market maker offering executions that are inferior to those displayed by other markets or market makers.

Some broker-dealers, however, operate under the presumption that routing their order flow to a market guaranteeing executions at the best intermarket quote satisfies their best execution duties for small orders under all circumstances. In the Division's opinion, such a presumption may not be consistent with existing market alternatives for listed securities. For example, as a general matter trades in listed securities routed to an exchange will be exposed to other public orders or interest in the trading crowd, with the possibility that the order may receive a price that is better than existing quotations (so-called price improvement). For this reason, regional exchanges have incorporated order exposure features into their small order routing and execution systems with a view toward offering price improvement.[19] In addition, most of the regional exchanges have added algorithms to their automated execution systems that provide executions between the spread if such an execution occurred on the primary market and other conditions were met. As a result, the regional exchanges have been able to provide some price improvement to their customers. In addition, one prominent third market maker (but not all) has incorporated a price improvement algorithm in its order execution system.

The Division believes that the possibility for price improvement bears on the question of whether a broker-dealer is fulfilling its duty to obtain best execution.[20] Where price improvement is not possible, a market or market maker executing an order involving a listed stock may not necessarily be offering the best execution despite its guarantee of the Intermarket Trading System ("ITS") best bid or offer.[21] Of course, price improvement is never guaranteed, and there may be added risks in seeking it. Nonetheless, because executions of orders for listed stocks in an exchange market include the possibility for a price between the quotes, the Division believes that the existence of this possibility, even if the price is not actually improved, can be a factor in determining whether best execution has been achieved.

The Division has a different viewpoint with respect to NASDAQ stocks because the over-the-counter ("OTC") market is structurally different from the exchange market. It relies on dispersed, competing dealers rather than order interaction. Consequently, it is reasonable to accept quote-based executions of market orders based on the NASDAQ best bid or offer as consistent with best execution, absent customer instructions to the contrary. The handling of limit orders for NASDAQ stocks is more problematic.

2. NASDAQ Limit Order Handling

Over the past several years, limit order practices involving NASDAQ stocks have received Commission scrutiny. These practices also have been discussed by several commentators to this Study.[22] The Division believes that NASDAQ limit order handling practices should be revised to provide better treatment of customers.

a. Current Practice. The OTC market is composed of competing market makers willing to buy and sell securities for their own account at their displayed bid and ask price. The highest displayed bid and lowest displayed offer price among market makers traditionally have been viewed as constituting the "inside market" for the security.[23]

A customer order to buy or sell a NASDAQ stock at a set price ("limit order") is first received by a broker-dealer, who is the customer's agent in effecting the transaction. If the broker-dealer also makes a market in that security, it will route the order to the firm's market making desk for execution. If the firm does not make a market in the security, the firm could still execute the order as a principal or, more likely, would route the order to a non-affiliated market maker for execution. Regardless of where the order is routed, current NASDAQ limit order handling practice often results in a market maker's delaying execution of the customer's sell order until the highest bid from among competing market makers equals the customer's limit price. Once this happens, the market maker usually buys the stock from the customer at the limit price. If the market maker resells the stock immediately, the market maker is likely to receive a higher price, closer to the inside ask price. For example, a customer may wish to sell shares of stock at a price of 32. The highest bid from among the market makers in that security is 31, and the lowest offer is 33. The customer's order generally will not be executed until the highest market maker bid reaches 32 even though other transactions may be occurring at higher prices in the interim. Assuming the inside offer has risen to 34, the market maker may now be in a position to resell the shares bought at 32 at a price of 34 or higher. For a customer's limit order to buy a security, a broker-dealer will delay executing the limit order until the inside offer drops to the limit order's price.

NASDAQ market makers contend that the spread they earn between the best bid and ask quote is justified as compensation for the market liquidity that they provide and the risk that they incur by holding securities in inventory. They believe that if limit orders were routinely executed against customer orders, their market making spreads would be usurped.

Limit orders are handled differently in the exchange markets. A specialist must yield to a customer's limit order. Pursuant to exchange rules, the specialist cannot trade for its own account at prices at or better than the limit order until the limit order is executed.

b. NASD Action. In the 1980s, the National Association of Securities Dealers, Inc. ("NASD") took disciplinary action against E.F. Hutton & Co. ("Hutton") for failure to execute the sell limit order of a customer while trading for its own account at prices more favorable than the customer's limit price. Hutton failed to inform the customer that it would give its own position priority over the customer's limit order. The NASD found that Hutton's conduct was inconsistent with "just and equitable principles of trade," and thus violated the NASD's Rules of Fair Practice.[24] The decision was appealed to the Commission in *In re E. F. Hutton & Co.* ("Manning decision").[25]

On appeal from the NASD, the only question before the Commission was whether a broker-dealer could trade for its proprietary account ahead of a customer limit order without disclosing in advance to the customer its limit order practice. The Commission found that trading ahead of a customer created a conflict of interest between the agent and principal. The broker-dealer took advantage of an opportunity -- selling securities at a desired price -- which the customer sought.[26] Consequently, the Commission concluded that Hutton was required to disclose the procedures that would govern its handling of a customer limit order or otherwise refrain from competing with customer orders. The Commission emphasized that the NASD's decision did not impose a "limit order priority rule" on the OTC market because market makers are not required to accept limit orders.

As a result of the Manning decision, the NASD filed a proposed rule change with the Commission that provides that a member firm will be deemed not to have violated NASD Rules of Fair Practice if it provides to existing customers (as of the effective date of the rule), and to new customers at the time they open an account, a statement setting forth the circumstances in which the firm accepts limit orders and the policies and procedures that the firm follows in handling these orders.[27] The NASD later amended the proposal to require members to disclose their limit order practices in a separate statement that is either distributed annually or enclosed with confirmations of limit order transactions.[28]

The NASD recently withdrew the amended proposal[29] and has instead filed with the Commission an interpretation to its Rules of Fair Practice to prohibit member firms from trading ahead of their customers' limit orders in their market making capacity, regardless of any disclosure.[30] The interpretation would make it a violation of just and equitable principles of trade for a member firm to hold unexecuted customer limit orders and to trade ahead of those orders in the firm's market making capacity without filling the orders in accordance with their specific terms and conditions. The NASD's proposal would allow NASD members to continue trading ahead of limit orders routed to them for execution by other firms. Before deciding whether to extend the proposed prohibition to limit orders routed between member firms, the NASD wishes to examine the effect that such extension would have.

c. Need for a Higher Standard. The Division recognizes that the current practice of NASDAQ market makers trading ahead of their customers' limit orders is widespread and longstanding. Although the current NASDAQ limit order handling practice reflects the dispersed nature of the OTC market, especially during the developmental stage of the NASDAQ market, the Division does not believe that it should continue. Given the liquidity available for NASDAQ/NMS securities, there is no reason why market makers should be able to trade ahead of customers' limit orders. Most customers would clearly prefer that a broker-dealer not trade for its own account at prices equal to or better than the customer's own limit order price until the customer's order has been executed.

At the time of the 1975 Amendments, NASDAQ consisted primarily of thinly traded companies that needed market maker trading to maintain a continuous and liquid market. Since then NASDAQ has grown to include hundreds of securities that meet the listing standards of the New York Stock Exchange ("NYSE") or American Stock Exchange ("Amex") and that are indistinguishable, in terms of trading activity, capitalization, and number of shareholders, from NYSE and Amex securities. In addition, NASDAQ/NMS securities have obtained many of the regulatory benefits of listed securities, such as the ability to be bought on margin and exemptions in most states from the "blue sky" registration requirements. Because NASDAQ/NMS securities are indistinguishable from exchange-listed securities in many respects, they should have limit order protection commensurate with exchange-listed securities with similar widespread investor interest and trading activity.

The failure to provide limit order protection results in inferior executions for customers. By delaying execution of the customer's order until the inside market price reaches the customer's limit order price, market makers reduce their own trading risk at the expense of the customer. Moreover, diverting trade volume to the market maker's proprietary trading exposes the customer's limit order to the risk of going unexecuted because the trade volume that otherwise could be matched with the customer's limit order may be exhausted.[31]

In addition, the current limit order practice also adversely affects the price discovery process. Limit orders aid price discovery by adding liquidity to the market and by tightening the spread between the bid and ask price of a particular security. These benefits are reduced in the NASDAQ market because the uncertainty of execution and the difficulty in obtaining execution at a price between the spread discourage customers from placing limit orders. The current practice also distorts price discovery by delaying execution of limit orders, thereby giving investors an inaccurate indication of the buy and sell interest at a given moment.

The Division is aware of the argument that limit order priority would deny market makers their customary compensation for being at risk. The risk associated with market making in NASDAQ/NMS securities, however, no longer justifies the compensation derived from trading ahead of the customer. There are simply too many benefits that flow from participation in the NASDAQ/NMS market to permit market makers the additional advantage that results from trading ahead of the customer. The appeal of making markets in NASDAQ/NMS securities should lie in their widespread trading by investors, not in the opportunity to trade ahead of customers.[32] Although it is possible that some firms will stop handling limit orders if they have to accord them priority, these firms may find their customers gravitating toward other firms that grant priority to customer limit orders. It is unlikely that a rule prohibiting the practice of trading ahead of the customer will result in a "mass exodus" of market makers from the NASDAQ market.

The Division also believes that disclosure would not be an adequate remedy for the practice. In a typical agency relationship, disclosure often is relied upon as an adequate means of resolving a conflict of interest between an agent and its principal. Investors enjoy greater protection under the federal securities laws, however, than that afforded by common law; a general common law remedy of disclosure does not always suffice.[33] A stricter duty may be imposed where, as here, the principals are investors and the agents control access to the trading market. The exchange community already has recognized this obligation and has adopted strict provisions to prevent members from trading ahead of their customers.[34] The NASD has a similar prohibition that applies to its members trading in the third market.[35]

Furthermore, disclosure cannot resolve the fundamental inconsistencies of the practice with NMS principles. First, the cost to the customer each time a market maker fails to execute a customer's limit order is not removed by disclosure. Second, a customer cannot receive the best price if the dealer handling the customer's order trades at superior prices. Third, the broker trading ahead of a public limit order is competing with public customers for an execution.

Finally, disclosure might prove to be an ineffective remedy for many of the customers affected by this practice. To derive any benefit from disclosure, a customer must find a broker that does not trade ahead of its customers or route orders to market makers that do so. Because the practice of trading ahead of a customer's limit order is widespread in the OTC market, the choices of market makers are limited.

d. Recommendation. As noted above, the NASD has submitted a proposal to prevent a NASDAQ market maker from trading ahead of its own customers' limit orders, but the proposal does not prevent the same market maker from trading ahead of the limit orders of other firms' customers that are sent to the market maker for handling. The adverse effects of trading ahead of a customer, however, exist whether the customer's limit order is handled by the customer's firm or by another market maker. Accordingly, the Division recommends that the NASD revise its proposal to prohibit broker-dealers from trading ahead of all customer limit orders for NASDAQ/NMS securities.

The Division acknowledges that if the NASD were to adopt a comprehensive rule against trading ahead, some dealers might earn less income from market making. Even if dealers attempted to compensate for the shortfall with wider spreads or higher commissions, customers would still benefit because it would be easier for them to monitor the relative cost of placing limit orders at competing firms. Customers would be paying for the execution directly through commissions and spreads instead of indirectly through costs caused by dealers trading ahead. Thus, even if the total cost of the trade would not change, the transaction fees and execution quality would be easier for a customer to evaluate.

Institutional customers may be an exception to the foregoing analysis. Institutions often prefer to trade "net" for a large order (*i.e.*, a single price for the securities, without commissions) and may be willing to give the market maker the option to trade ahead as it works the institution's order or provides a single price execution. Thus, it may be reasonable to allow institutional customers to retain the option to negotiate their own arrangements with market makers.

In concluding that limit orders for NASDAQ/NMS securities should be accorded treatment that satisfies reasonable expectations of fairness and investor protection, the Division does not intend to suggest that trading of NASDAQ/NMS securities must conform to all auction market principles. Nevertheless, just as the Division believes that the dealers in exchange-listed securities must adhere to certain minimum standards with respect to order handling procedures, it also believes that market makers in NASDAQ/NMS securities should adhere to certain minimum standards of fair treatment of customers.[36]

3. Soft Dollar Practices

Best execution concerns also have been raised in connection with soft dollar practices. Soft dollars refer to the use of customer commissions by investment advisers or money managers to pay for research and other services that benefit the investment adviser. Unlike payment for order flow, automated order routing at pre-set quotations, and NASDAQ limit order practices, all of which largely involve retail orders, soft dollars primarily involve institutional accounts. As described below, questions have been raised whether soft dollars affect the handling of institutional orders.

a. Background. Because investment advisers manage or make recommendations with respect to customers' securities portfolios, they are subject to various fiduciary standards imposed by federal and state law. These standards require advisers to observe high levels of conduct with respect to the customer and to place the customer's interest ahead of their own.

In 1975, Congress enacted Section 28(e) of the Exchange Act,[37] which provides a safe harbor against claims of breach of fiduciary duty for investment advisers using commissions generated by customer orders to obtain brokerage and research services.[38] Unless explicitly overridden, Section 28(e) protects a person who exercises investment discretion[39] over client accounts (*i.e.*, an investment adviser or money manager) from claims of breach of fiduciary duty under state and federal law, if that person causes client accounts to pay more than the lowest available commission rate. The safe harbor, however, requires the investment adviser to determine in good faith that the commission charges are reasonable in relation to the brokerage and research services provided by the broker. Section 28(e) does not relieve money managers or brokers from their obligation to obtain the best possible execution of customer orders, nor does it provide a shield from the antifraud provisions of the federal securities laws.

In a typical soft dollar arrangement covered by Section 28(e), an investment adviser receives from a broker, in return for the brokerage commissions generated by the orders from the adviser, a portion of the value of the commissions in the form of research or other services. Research services may include reports or analyses prepared by the broker's own staff (*i.e.*, "in-house" research), or reports prepared by an independent analyst and provided to the investment adviser by the broker on a third-party basis.[40] Research services may be provided by the broker pursuant to an explicit agreement that a fixed ratio of commissions paid by the adviser's accounts will be allocated to pay for third-party research services chosen by the adviser. Alternatively, the broker may provide in-house or third-party research without an explicit agreement regarding the amount of commissions to be received from the adviser, but with an expectation that the adviser will compensate the broker with commissions in the course of their ongoing business relationship.

The use of soft dollars developed as a means of indirect price negotiation in the fixed commission rate environment that existed until 1975. Fixed commission rate schedules established by the NYSE and Amex precluded members from competing for order flow in exchange-listed securities on the basis of commissions. These fixed commission schedules set the commissions for large institutional trades at an artificially high level. As a result, members of the investment management industry sought ways to recapture portions of the commissions paid to brokers. In return for order flow, broker-dealers offered various services, such as research, to provide value to money managers in a form other than price. In short, firms competed on the basis of service not price.

At the same time, broker-dealers used various reciprocal and "give-up" practices to circumvent fixed commission rates.[41] These practices took several forms. For instance, in return for a nonmember's NYSE-listed business, an NYSE member would place orders with the nonmember broker-dealer on a regional exchange of which the NYSE member was also a member, rather than executing the order directly on the regional exchange itself. Although NYSE rules prohibit affiliates of institutions from becoming NYSE members, some institutions established broker-dealer affiliates on regional exchanges to receive orders from the NYSE firms in return for the institutional order flow.[42]

In addition, exchange members also provided special services to nonmembers, such as wire connections, office space, and clearance and settlement of non-exchange transactions to attract order flow.[43]

In 1975 the Commission eliminated fixed commission rates by rule, and Congress ratified this action by adopting Section 6(e) of the Exchange Act in the 1975 Amendments. In considering fixed commissions, Congress heard arguments that various fiduciary issues would arise once the exchange market moved toward competitive rates. In particular, commentators believed that price competition would force commission rates so low that brokerage firms would be unable to continue to provide research to the investment management industry. Moreover, commentators argued that fiduciary principles would force money managers to seek the lowest available commission rate without regard to the entire scope of services offered by brokers charging higher commissions.[44] Congress concluded that legitimate research benefitted the management of customer accounts; therefore, money managers should be ensured continued access to research provided by broker-dealers. Congress adopted the safe harbor of Section 28(e) of the Exchange Act in response to these concerns.

Without the safe harbor, traditional fiduciary principles might prohibit a fiduciary from using beneficiary assets in a way that benefitted the fiduciary. A money manager's purchase of research services with a client's commission dollars could be viewed as a benefit to the money manager insofar as the money manager is relieved of its obligation to produce or to purchase research with its own funds. Without the protection of the safe harbor of Section 28(e), investment advisers receiving brokerage and research services could violate various state fiduciary laws, as well as the Investment Advisers Act of 1940 ("Advisers Act"), the Investment Company Act of 1940 ("Investment Company Act"), and the Employee Retirement Income Security Act of 1974 .[45]

b. Interpretive Positions. The Commission first addressed the scope of Section 28(e) in an interpretive release issued in 1976 ("1976 Release").[46] The 1976 Release recognized Congress' intent to protect traditional research provided by broker-dealers. The 1976 Release also responded, however, to practices involving money managers using soft dollar commissions to obtain, among other things, commercially produced, widely available information services as well as other products, such as airline tickets, office supplies, office furniture, and electronic equipment. In the 1976 Release, the Commission concluded that the safe harbor of Section 28(e) was not intended to cover commercial products or practices. Instead, Section 28(e) was available solely with respect to products and services that were not "readily and customarily available and offered to the general public on a commercial basis."[47]

Ten years later, the Commission revisited Section 28(e) in another release that discussed the scope of the safe harbor ("1986 Release").[48] The Commission determined that the standard in the 1976 Release was difficult to apply and unduly restrictive given new technology and the widespread availability of new products. Consequently, the Commission revised the earlier standard, stating that the controlling principle dictating whether a particular product or service fell within the safe harbor was whether "it provides lawful and appropriate assistance to the money manager in the performance of his investment decision-making responsibilities."[49] In addition to revising the earlier standard, the Commission clarified the application of the safe harbor to third-party research,[50] emphasized the importance of written disclosure of soft dollar arrangements to customers,[51] and reiterated the money manager's duty of best execution.[52]

The 1986 Release pointed out that directed brokerage practices were not covered by the safe harbor of Section 28(e). Generally, directed brokerage consists of an employee benefit plan sponsor, investment company, or other client of the money manager that requests the money manager, subject to best execution principles, to direct a percentage of the orders from its account to a specified broker-dealer. In return, the broker-dealer agrees to pay for services or expenses for the client or to provide cash rebates directly to the client.[53] These practices are not covered by the safe harbor because Section 28(e) applies solely to persons that exercise investment discretion over client accounts.[54] Where a plan sponsor or investment company has retained the services of a money manager, the sponsor and investment company do not exercise investment discretion for purposes of Sections 3(a)(35) and 28(e) of the Exchange Act. Although directed brokerage practices are outside the safe harbor of Section 28(e), they are not necessarily illegal *per se*. Instead, the money manager and pension plan sponsor are subject to the full range of state and federal fiduciary laws.

Since 1986, the Division has issued several letters concerning the scope of Section 28(e). These letters state that the safe harbor is unavailable in principal and riskless principal transactions,[55] transactions in futures,[56] and in situations where commissions are used to compensate brokers for correcting an error in transmitting or executing an order.[57] The Division indicated that the safe harbor of Section 28(e) is available to a computerized brokerage system that matches buy and sell orders in equity securities.[58]

c. **Soft Dollars, Best Execution, and Market Liquidity.** With the implementation of the broader definition of research and brokerage services in the 1986 Release, additional products and services were covered by the safe harbor. The percentage of institutional commissions allocated for obtaining such research and services accounts for a significant part of the soft dollars industry.[59] The use of independent brokers offering third-party research services also remains significant. Many traditional broker-dealers have added divisions or subsidiaries that offer similar third-party research services. Use of soft dollar commissions also reportedly has grown in international equity securities[60] and international marketplaces, most notably in the United Kingdom.[61]

In 1989, the Commission sponsored a roundtable discussion involving a variety of industry participants to discuss the expansion of soft dollar practices and their implications for managed customer accounts and the securities markets.[62] The roundtable elicited a variety of opinions regarding fiduciary concerns raised by soft dollar practices and their effects on established brokerage practices, as well as the advantages of soft dollar research services.

Recent congressional hearings on soft dollars [63] and the Commission roundtable discussion focused on the growing reliance of some investment managers on analysis and information obtained through the use of soft dollars. This reliance gives rise to two concerns. First, where a manager fears a shortfall in commissions available for soft dollars, the manager potentially could overtrade client accounts[64] or "flip" securities (*i.e.*, purchase securities in new offerings for immediate resale after the offering) to satisfy commitments made to obtain soft dollar services. Second, the desire to accrue soft dollars could cause investment managers to relax their diligence in seeking the best possible execution price for each order.[65] Because the quality of execution provided by various brokers can differ, the choice of which broker to use to execute an order (particularly a large order) can affect the execution price obtained. Conflicts of interest can arise when a broker is chosen not for its execution skills, but primarily for its willingness to provide services for soft dollars.[66] The Division emphasizes that even if a money manager has satisfied the conditions of the safe harbor, the manager still has an obligation to obtain the best execution of a customer trade.[67] Section 28(e) does not shield a fiduciary from its obligation of best execution.

Concerns also have been expressed that soft dollar practices have had an impact on market liquidity. Broker-dealers typically are unwilling to place their own capital at risk in trades involving soft dollars. According to some large broker-dealers, this has caused investment managers increasingly to reserve their less difficult agency trades for execution by broker-dealers offering soft dollar services, and to direct their more difficult trades to firms willing to devote capital to executing complex, time-intensive orders. These large broker-dealers argue that the resulting change in the mix of orders directed to various broker-dealers has made block positioning largely unprofitable. Although block positioning firms theoretically could charge a higher commission to compensate for their capital risk, they argue that institutional customers would resist increased commissions necessary for block trades because of the difficulty of justifying the higher payment to their management. As a result, block positioning firms argue that the growing use of soft dollars undermines the availability of block positioning services, and thus reduces the liquidity available for large orders.[68]

There is some concern that the increase in directed brokerage practices also has an impact on brokerage services. In 1989, at the time of the Commission's roundtable discussion, directed brokerage was typically limited to 20% to 25% of a client's commission. Anecdotal information suggests that some clients now direct as much as 100% of their commissions to specified brokers. Where the client directs a large proportion of its commissions to a particular broker, the money manager may feel pressured to use that broker for trades that the broker cannot capably handle, regardless of the client's *pro forma* instruction to use the broker only where "consistent with best execution." Directed brokerage also constricts the manager's use of soft dollars by diverting many trades to the broker selected by the client rather than to the soft dollars broker desired by the manager.[69] These conflicting demands on commission dollars could tempt a manager to trade more frequently than that manager otherwise would, or to execute trades pursuant to a soft dollar arrangement that the manager otherwise would reserve for special handling. This, in turn, could threaten execution quality and impair account performance, because loss of an eighth point or more on a trade may offset any benefits from soft dollars.[70]

Proponents of soft dollar arrangements believe that the practice provides benefits to the market and facilitates the provision of research on securities and markets.[71] They believe that the availability of independent research allows an investment manager to select the analysis or information service most useful to that manager. This may supplement the manager's own analysis, thereby increasing the scope and quality of research and potentially improving the performance of the managed accounts. Proponents also argue that third-party soft dollar arrangements foster the increased availability of high-quality, independent research free from conflicts of interest arising from ties to underwriters, dealers, or investment bankers.[72] Moreover, they believe that brokers advancing soft dollar research to clients have an additional incentive to provide best execution so as to ensure that the money manager continues trading with the soft dollar broker to pay for the research credits.[73]

Proponents of soft dollar arrangements hold the opinion that third-party research generally has the virtue of being more clearly documented than research provided by "in-house" firms. As a result, it is often easier in these arrangements for the money manager (and potentially the client) to identify the commissions paid and the amount and nature of the soft dollar services received in return for commissions. Proponents of directed brokerage arrangements argue that these arrangements allow clients, such as plan sponsors and investment companies, to redirect portions of their commissions to pay legitimate expenses of the plan or investment company, thus potentially improving the total return to the ultimate beneficiaries or investors.

The Division recognizes that, in a sense, directed brokerage arrangements and, to a lesser extent, soft dollar arrangements, are a form of commission discounting on an account-by-account basis. Nonetheless, this discounting is at best an indirect means of reducing commissions, which creates new monitoring costs for institutional investors and raises conflict of interest concerns. In particular, as reliance on soft dollar and directed brokerage arrangements increases, added pressure is placed on the money manager's obligation to obtain best execution. In addition, because Section 28(e) permits managers to use one client's commissions to obtain research exclusively benefitting another client's account, particular clients may not benefit from the manager's use of their commissions for research services.

Given the conflict of interest concerns, the Division believes that soft dollar arrangements should be carefully scrutinized on an individual basis by the representative of the managed account, and by the regulators responsible for supervising investment fiduciaries. The Division is particularly concerned where soft dollar and directed brokerage arrangements comprise a majority, or even a significant portion, of the adviser's commission payments. These situations require special scrutiny. To facilitate closer scrutiny, the Division recommends that customers be provided with a clearer understanding of the nature and extent of these arrangements through increased disclosure. As discussed below, the Division believes that enhanced disclosure to the customer of the soft dollar arrangements involving its money manager or investment advisor may lessen the concerns raised by soft dollar practices.

The Division is not yet persuaded that soft dollar activities have had a significant effect on market liquidity. Although there are indications that the level of block positioning activities has declined, there is no evidence attributing the reduction in block positioning services to the increase in soft dollar arrangements rather than to other factors, such as episodic market volatility or reduced commission levels.[74] The Division believes that the potential effects of the increasing use of soft dollars and directed brokerage arrangements should be carefully monitored at an industry level and subject to ongoing review.

d. Enhanced Disclosure. The Commission consistently has emphasized the need for adequate disclosure of soft dollar arrangements to the advisory clients whose commissions are the subject of such arrangements.[75] Although disclosure to the customer does not diminish the obligation of a money manager and broker-dealer involved in the soft dollar arrangement to obtain the best execution of the client's trade, adequate disclosure can provide customers with an explanation of how commissions are being used and can alert them to potential conflicts of interests. Consequently, the Division believes that adviser disclosure of soft dollar arrangements should better inform advisory clients of the use of their commission dollars.

Currently, rules under the Advisers Act[76] and Investment Company Act[77] require investment advisers to describe their commission policies to customers. For instance, Item 12, Part II, of Form ADV (the uniform registration form for advisers) requires disclosure where the adviser has discretion in choosing the broker-dealer to be used in a transaction or the commission rate to be paid. The adviser must disclose whether it suggests broker-dealers to clients and, if so, the specific factors used in selecting a broker-dealer and determining the reasonableness of the commissions paid.

In addition to Form ADV, the Investment Company Act and the rules and forms prescribed thereunder impose disclosure obligations and recordkeeping requirements on investment companies, investment advisers of investment companies, and related persons. For instance, Part B of Form N-1A, which must be provided to shareholders upon request, requires a statement concerning the amount of brokerage transactions and related commissions if the investment company or the adviser have directed trades in exchange for research. Other provisions of the Investment Company Act also require specific disclosure of soft dollar arrangements to the management of the investment company in certain contexts.[78]

The Division believes that it is appropriate to require advisers to disclose quantifiable information to its clients, including more specific information regarding the research and other services an adviser receives through a soft dollar arrangement, so that customers may be better informed of the use of their commission dollars. Under current disclosure requirements, customers are informed only that advisers engage in soft dollar practices; they are not explicitly informed of the potential conflict of interest between the customer and adviser. Because of these potential conflicts of interest, additional disclosure requirements should include explicit statements regarding the conflict of interest created by an adviser's soft dollar arrangements.

Most importantly, the Division believes that any new disclosure requirements should apply equitably. Thus, research and other services obtained either from "in-house" firms or third-party firms should be subject to disclosure. In addition, consideration by appropriate regulators should be given as to whether increased disclosure should apply to banks when acting as investment advisers.

1. Pub. L. No. 94-29, 89 Stat. 97 (1975).

2. 15 U.S.C. §§ 78a to 78ll (1988).

3. *See* Exchange Act Rule 11Aa2-1, 17 C.F.R. § 240.11Aa2-1 (1993) (designation of national market system securities).

4. Securities Exchange Act Release No. 33026 (Oct. 6, 1993), 58 FR 52934 (Oct. 13, 1993).

5. RESTATEMENT 2D AGENCY § 387 (1958).

6. RESTATEMENT 2D AGENCY § 424 (1958).

7. In addition, under the "shingle theory" a broker-dealer impliedly represents at the outset of a securities transaction that it will deal with its customers fairly and in accordance with the standards of the industry. As part of this duty of fair dealing, a broker-dealer must charge prices that bear a reasonable relationship to the prevailing market price, or in circumstances where a broker-dealer's interests conflict with those of the customer (*i.e.*, where a firm acts in a principal capacity and trades with the customer from its own account), disclose all material information to enable the customer to make an informed decision regarding whether to complete the transaction. *See In re* Duker & Duker, 6 S.E.C. 386, 388-389 (1939).

8. *See In re* Hughes, 27 S.E.C. 629 (1948), *aff'd*, 174 F.2d 969 (D.C. Cir. 1949). The *Hughes* case involved a Commission action to revoke the registration of a broker-dealer and investment adviser. The registrant effected securities transactions for its customers on a principal and riskless principal basis without disclosing to its customers the conflicts in a principal transaction and that the prices obtained for the customers were not the most favorable under the circumstances. In revoking the registrant's registration, the Commission found, and the registrant conceded, that it owed a fiduciary duty to its customers by virtue of the trust that customers had placed in the registrant's advice.

   Similarly, the Commission also has stated that investment advisers have a duty of best execution by virtue of their fiduciary relationship with their clients. *See, e.g., In re* Kidder, Peabody & Co, Inc., 43 S.E.C. 911, 915 (1968).

9. *Hughes*, 27 S.E.C. at 636. The Commission has stated that in a transaction where a fiduciary is in a potentially conflicting position with a customer, the fiduciary must refrain from putting its interests ahead of the customer's, unless the customer has given informed consent. *Id.* at 635. A customer may give informed consent only after the fiduciary has disclosed all material facts, which would include the price of the security. *Id.* at 636; *see also In re* Allender Co., 9 S.E.C. 1043, 1054 (1941).

10. Typically, best execution cases have involved overt fraud against the customer and have been brought as omissions of a material fact under Section 17(a)(2) of the Securities Act of 1933 and Sections 10(b) and 15(c)(1) and Rules 10b-5(b) and 15c1-2(b) of the Exchange Act. *See, e.g.,* Charles Hughes & Co. v. SEC, 139 F.2d 434 (2d Cir. 1943), *cert. denied*, 321 U.S. 786 (1944) (broker-dealer's license revoked as a result of willful violations of Section 17(a) of the Securities Act of 1933 and Section 15(c)(1) of the Exchange Act); Opper v. Hancock Securities Corp., 250 F. Supp. 668 (S.D.N.Y. 1966) (claims brought under Sections 10(b) and 15(c)(1) of Exchange Act against broker that placed its own orders ahead of a customer's at prices more advantageous than those provided the customer); *In re* Wittow, 44 S.E.C. 666 (1971) (findings of violation of Section 10(b) and Rule 10b-5 for broker that engaged in sales of stock at unfavorable prices to customers); *In re* Investment Service Co., 41 S.E.C. 188 (1962), *aff'd sub. nom.* Barnett v. United States, 319 F.2d 340 (8th Cir. 1963) (findings of violations of antifraud provisions where firm effected securities transactions before satisfying a customer's limit order at prices more advantageous than the customer's limit order).

A theory alleging that a broker-dealer failed to exercise reasonable diligence in obtaining the best price, without overt fraud, has not yet been tested in court, but there have been recurrent Commission pronouncements that such a claim is viable. *See* Lesko v. Merrill Lynch, Pierce, Fenner & Smith, No. C-78-1740 (N.D. Ohio, June 22, 1979), *dismissed per settlement*, Jan 14, 1980 (alleging 10b-5 violations for failure to use adequate care in seeking the best price of customer order).

11. 15 U.S.C. § 78k-1(a)(1).

12. H.R. REP. NO. 123, 94th Cong., 1st Sess. 50 (1975) ("House Report").

13. S. REP. NO. 75, 94th Cong. 1st Sess. 12 (1975) ("Senate Report").

14. *See* House Report, *supra* note 12, at 47, 50; Senate Report, *supra* note 13, at 14-15.

15. *See, e.g.*, American Stock Exchange ("Amex") Rule 156(a), 2 Amex Guide (CCH) ¶ 9296, and New York Stock Exchange ("NYSE") Rule 123A.41, 2 NYSE Guide (CCH) ¶ 2123A, requiring members handling market orders to exercise diligence to execute orders at the best price or prices available. In addition, under Amex and NYSE rules, members handling limit orders are required to exercise diligence to execute the order at the limit price or *at a better price*. Amex Rule 156(b), 2 Amex Guide (CCH) ¶ 9296; NYSE Rule 123A.42, 2 NYSE Guide (CCH) ¶ 2123A. *See also* National Association of Securities Dealers, Inc. ("NASD") Rules of Fair Practice, Art. III, § 1, NASD Manual (CCH) ¶ 2151.03A (interpreting fair practice provisions to require members and associated persons of members to use reasonable diligence to obtain the best inter-dealer market for a security in order to ensure that the customer receives the most favorable price under the circumstances).

16. In the Commission report, the NASD stated that "[t]he integrity of the industry can be maintained only if the fundamental principle that a customer should at all times get the best available price which can reasonably be obtained for him is followed." SEC, REPORT OF THE SPECIAL STUDY OF SECURITIES MARKETS, H.R. Doc. No. 95, 88th Cong., 1st Sess., pt. II, 624 (1963) ("Special Study"); *see also Kidder*, 43 S.E.C. at 915; *In re* Delaware Management Co, 43 S.E.C. 392 (1967) (interpositioning broker between adviser and market maker caused adviser to pay unnecessary brokerage costs and violated the adviser's duty of best execution); *In re* W.K. Archer & Co., 11 S.E.C. 635 (1942) (finding of a failure to execute transactions at the best price).

17. *Second Report on Bank Securities Activities: Comparative Regulatory Framework Regarding Brokerage-Type Services* 97-98, n.233 (Feb. 3, 1977), *as reprinted in* H.R. Rep. No. 145, 95th Cong., 1st Sess 233 (Comm. Print 1977).

18. *See* Securities Exchange Act Release No. 15671 (Mar. 22, 1979), 44 FR 20360, 20366 (Apr. 4, 1979).

19. This feature by itself rarely provides an execution between the spread. Most regional exchanges program their automatic execution systems to "stop" an incoming order at the Intermarket Trading System ("ITS") best bid or offer. This means that the specialist guarantees that the order will receive, at worst, the ITS bid (for sell orders) or offer (for buy orders). The specialist will then expose the order for 15 seconds in an attempt to get a better price. The Philadelphia Stock Exchange ("Phlx") does not have such a feature in its automatic execution system, although the Commission has recommended for years that it be included.

20. Indeed, it has long been recognized that one of the benefits of the auction market is the potential for price improvement resulting from order exposure. Senate Report, *supra* note 13, at 16.

21. The Division does not believe that it is worthwhile, however, to rank markets based on the percent of orders obtaining price improvement. Such rankings would be highly suspect and subject to varying methods of measurement. Moreover, a consistently high percentage of executions between

a market's spread could indicate that the spreads are too wide or that all trading interest is not being displayed at the quotes -- both signs of poor market quality.

22. *See* Letter from William H. Donaldson, Chairman and Chief Executive Officer, New York Stock Exchange, to Jonathan G. Katz, Secretary, SEC 11 (Nov. 24, 1992); Letter from James R. Jones, Chairman and Chief Executive Officer, American Stock Exchange, to Jonathan G. Katz, Secretary, SEC 28 (Dec. 8, 1992); Letter from Jeffrey P. Ricker to Jonathan G. Katz, Secretary, SEC (Mar. 4, 1993).

23. Prices between this "spread" are obtainable through SelectNet.

24. *See* NASD Rules of Fair practice, Art. III, § 1, NASD Manual (CCH) ¶ 2151.

25. Securities Exchange Act Release No. 25887 (July 6, 1988), [1988-1989] Fed. Sec. L. Rep. ¶ 84,303 (Apr. 7, 1965) ("Manning").

26. The Commission refused to find that disclosure was unnecessary because the customer was a sophisticated investor with knowledge of Hutton's limit order practice. The Commission agreed with the NASD's finding that while the customer may have understood that trades by other firms might occur at prices above his limit order, he never realized that "transactions at a price higher than his limit price could occur for the account of the dealer with whom he placed his order." *Manning*, [1988-1989] Fed. Sec. L. Rep. at 89,329 n.14.

27. Securities Exchange Act Release No. 26824 (May 15, 1989), 54 FR 22046 (May 22, 1989). The proposal included model disclosure language to be used by firms whose policy is not to grant priority to customer limit orders over the member's own proprietary trading.

28. Securities Exchange Act Release No. 28381 (Aug. 28, 1990), 55 FR 36371 (Sept. 5, 1990).

29. *See* Letter from Robert E. Aber, Vice President and General Counsel, National Association of Securities Dealers, to Selwyn Notelovitz, Branch Chief, Division of Market Regulation, SEC (Oct. 13, 1993).

30. File No. SR-NASD-93-58.

31. *Manning*, [1988-1989] Fed. Sec. L. Rep. at 89,329.

32. A useful analogy is third market trading. *See infra* note 35.

33. *See, e.g.*, Herman & MacLean v. Huddleston, 459 U.S. 375, 389 (1983) ("An important purpose of the federal securities statutes was to rectify perceived deficiencies in the available common law protection by establishing higher standards of conduct in the securities industry.").

34. *See, e.g.*, NYSE Rule 92, 2 NYSE Guide (CCH) ¶ 2092.

35. Third market dealers operate similarly to NASDAQ market makers. Yet, the NASD's rules prohibit trading ahead of customer limit orders in the third market. NASD Bylaws, Schedule G, Section 4(f), NASD Manual (CCH) ¶ 1921. Despite this prohibition, third market dealers account for 9% of listed stock orders.

36. The legislative history of the 1975 Amendments clearly endorses the idea of requiring priority of limit orders for NMS securities and indicates that the Commission should have discretion to achieve this protection. Congress indicated that for securities suitable for auction market trading, every effort should be made to design the national market system in such a way that public investors in these securities would receive the benefits and protections associated with auction-type trading. Congress further stated that benefits of auction trading would result from the placing of public orders ahead

of dealers' orders in determining the sequence in which the orders entering the market are executed. The Senate Report indicated that the 1975 Amendments would grant the Commission complete and effective authority to implement a system for the satisfaction of public limit orders.

Senate Report, *supra* note 13, at 16, 18.

37. 15 U.S.C. § 78bb(e).

38. Brokerage and research services under the safe harbor are defined in Section 28(e)(3) as:

> (A) . . . advice, either directly or through publications or writings, as to the value of securities, the advisability of investing in, purchasing, or selling securities, and the availability of securities or purchasers or sellers of securities;
>
> (B) . . . analyses and reports concerning issuers, industries, securities, economic factors and trends, portfolio strategy, and the performance of accounts; or
>
> (C) . . . functions incidental [to effecting securities transactions] (such as clearance, settlement, and custody) or required in connection therewith by rules of the Commission or a self-regulatory organization of which such person is a member or person associated with a member or in which such person is a participant.

15 U.S.C. § 78bb(e)(3).

39. Under Section 3(a)(35) of the Exchange Act, a person exercises "investment discretion" when such person:

> (A) is authorized to determine what securities or other property shall be purchased or sold or [sic] for the account, (B) makes decisions as to what securities or other property shall be purchased or sold by or for the account even though some other person may have responsibility for such investment decisions, or (C) otherwise exercises such influence with respect to the purchase and sale of securities or other property by or for the account as the Commission, by rule, determines, in the public interest or for the protection of investors, should be subject to the operation of the provision of this title and the rules and regulations thereunder.

15 U.S.C. § 78c(a)(35).

40. The term third-party or independent research is used to refer to research and other services of independent third parties provided by a broker in return for commission payments.

41. Give-ups are the result of a customer directing its executing broker to pay a portion of a commission payment to another broker that is a member of the same exchange as the executing broker. Generally, the give-up is in payment for other services provided to the customer by the give-up beneficiary. *See* Special Study, *supra* note 16, pt. II, at 316-317.

42. *See* Senate Report, *supra* note 13, at 63; H.R. REP. NO. 229, 94th Cong., 1st Sess. 56 (1975).

43. *See* Special Study, *supra* note 16, pt. II, at 302-308.

44. Senate Report, *supra* note 13, at 70.

45. For a discussion of the relationship of the Employee Retirement Income Security Act of 1974 and soft dollar practices, see generally Robert J. Moran & Cathy G. O'Kelly, *Soft Dollars and Other Traps for the Investment Adviser: An Analysis of Brokerage Placement Practices*, 1 DEPAUL BUS. L.J. 45, 85 (1989); Pamela Baker, *Pension Fund Investing*, 4 J. TAX'N OF INVESTMENTS 140 (1987); Donald J. Meyers, *Directed Brokerage and "Soft Dollars" Under ERISA: New Concerns for Plan Fiduciaries*, 42 BUS. LAW. 553 (1987); Lee B. Burgunder & Karl O. Hartmann, *Soft Dollars and Section 28(e) of the Securities Exchange Act of 1934: A 1985 Perspective*, 24 AM. BUS. L.J. 139, 150-153 (1986) ("Burgunder & Hartmann").

46. Securities Exchange Act Release No. 12251 (Mar. 24, 1976), 41 FR 13678 (Mar. 31, 1976).

47. *Id.* at 13679.

48. Securities Exchange Act Release No. 23170 (Apr. 23, 1986), 51 FR 16004 (Apr. 30, 1986) ("1986 Release").

49. *Id.* at 16006.

50. The Commission stated that the safe harbor applied not only to brokers providing "in-house" research, but also to brokers providing research prepared by independent third parties, assuming that the broker was legally obligated to purchase the research. *Id.* at 16007.

51. *Id.* at 16007-16011.

52. *Id.* at 16011.

53. In the investment company context, this arrangement allows an investment company to reflect lower expenses on its financial statements and fee table, reduce its expense ratio, and increase its advertised yield.

54. *See supra* note 39.

55. *Letter regarding The Department of Labor*, [1990] Fed. Sec. L. Rep. (CCH) ¶ 79,499 (July 25, 1990) (principal and riskless principal transactions are not covered by the safe harbor because the statute speaks solely of commissions, which denote agency transactions).

56. *Id.* Similarly, Congress did not intend financial futures transactions to be covered by the safe harbor because the statute references only securities transactions.

57. *Letter regarding the Department of Labor*, [1988-89] Fed. Sec. L. Rep. (CCH) ¶ 78,881 (Oct. 25, 1988).

58. *Letter regarding Instinet Corp.* (Jan. 15, 1992) (available on LEXIS) (also emphasizing that a broker is under an obligation of best execution and warned of potential interpositioning issues).

59. The demand for soft dollar research and brokerage services rose 4% in 1991, although that increase was down from a 22% rise in demand in 1989. GREENWICH REPORTS, PEACE REIGNS - FOR NOW, (1992). In addition, the allocation of listed commissions for third-party research and services increased to 33%, up from 28% in 1989 and 31% in 1990. Although these figures illustrate a rise in the use of soft dollar commissions, the average conversion ratio of commissions to services has steadily declined from 1.6 to 1, a figure slightly less than 1.8 to 1 ratio in 1990. *Id.* The Greenwich Study is an informal study of investment advisers.

60. In 1991, 58% of surveyed institutions investing in international equity shares used soft dollars and paid an average of $390,000 in soft commissions. These figures represented an increase from 48% of institutions and $340,000 in average commissions in 1990. *Id.* at 29.

61. The United Kingdom Securities and Investment Board ("SIB") has adopted rules regulating and requiring disclosure of soft dollar arrangements. *See, e.g.*, SIB Rules, Investment Management Regulatory Organisation Rules, ch. II, § 1.7(4); Securities and Futures Association Rules § 5-8(4).

62. *See* Transcript of SEC Roundtable on Commission Dollar and Payment for Order Flow Practices, SEC File No. 4-348 (July 24, 1989).

63. *See Oversight Hearing on the Structure of the Marketplace with a Focus on Soft Dollar Arrangements Before the Comm. on Energy and Commerce Subcomm. on Telecommunications and Finance*, 103 Cong., 1st Sess. (1993) (statement of David Silfen, Partner Goldman, Sachs & Co.) ("Soft Dollars Hearing").

64. *Id.*

65. As discussed previously, the "duty of best execution" requires a fiduciary to seek to execute securities transactions for its clients in such a manner that the client's total costs or proceeds in each transaction are the most favorable under the circumstances. Because soft dollar arrangements involve non-execution services, the determinative factor for best execution has not been the lowest possible commission cost, but whether the transaction represents the best qualitative execution for the managed account. 1986 Release, *supra* note 48, at 16011 (*citing* Securities Exchange Act Release No. 9598 (May 9, 1972)).

It should be noted that money managers in fulfilling their duties of best execution and plan sponsors in keeping with their general fiduciary duties must evaluate periodically the performance of the broker-dealers that execute their transactions. *See* Soft Dollars Hearing, *supra* note 63.

See generally Burgunder & Hartmann, *supra* note 45, (noting potential conflicts of interest in soft dollars arrangement includes the possibility that a money manager may use a soft dollar broker despite such broker's poor execution record).

66. *See* Soft Dollars Hearing, *supra* note 63 (statement of Representative Jack Fields).

67. *See supra* Section A for a discussion of the duty of best execution.

68. *See* Letter from D. Bruce Johnsen, Professor, University of Pennsylvania, Wharton School, Department of Legal Studies, to Jonathan G. Katz, Secretary, SEC 4-6 (Oct. 19, 1992); *see also* Marshall E. Blume, *Soft Dollars and the Brokerage Industry*, FIN. ANALYSTS J., Mar.- Apr. 1993, at 36 ("Blume").

69. *See generally* JOHN L. CASEY, ETHICS IN THE FINANCIAL MARKETPLACE 84 (1988) (quoting money manager who stated that pressures from directed brokerage means there are less trades available to fulfill soft dollar commitments, thus decreasing the availability of innovative research).

70. *See* Blume, *supra* note 68, at 39, 41 (based upon questionnaire money managers indicated that they are the least satisfied with the execution quality where a plan sponsor has directed the adviser to use a particular broker).

71. *See* Soft Dollars Hearing, *supra* note 62 (statement of Holly Stark, Sr. V.P., Dalton, Greiner, Hartman, Maher & Co.); Letter from Richard E. Cusic, Senior Vice President, Fidelity Capital Markets Co., member Alliance in Support of Independent Research, to Jonathan G. Katz, Secretary, SEC 3 (Oct. 20, 1992) ("Alliance Ind. Research Letter").

See generally Lee A. Pickard, *Institutional Portfolio Executions: Soft Dollar Arrangements*, INSIGHTS, Aug. 1990, at 22 (the addition of quality independent research in the marketplace has enhanced competition and provided market efficiencies).

72. *See* Alliance Ind. Research Letter, *supra* note 71, at 7. Some commentators argue that soft dollar arrangements enhance the free-flow of quality research, which ultimately benefits investors as a result of increasing the efficiency of the markets. *See* Letter from Hans Stoll, Professor, Vanderbilt University, Owen Graduate School of Management, to Jonathan G. Katz, Secretary, SEC 25-31 (Nov. 2, 1992); Alliance Ind. Research Letter, *supra* note 71, at 10-11, 17.

But see Burgunder & Hartmann, *supra* note 45, at 176 (stating that some commentators have argued that there is too much available research that adds little to market efficiencies); Soft Dollars Hearing, *supra* note 63 (statement of Paul G. Haaga, Jr. Sr. V.P. Capital Research and Management Co.) (stating that he believed that soft dollar arrangements have had a negative market impact, although the extent of the impact is not susceptible to precise measurement).

73. D. Bruce Johnsen, *Agency Theory and the Case for Soft Dollars*, PENSIONS & INVESTMENTS, Apr. 19, 1993, at 12.

74. *See* Soft Dollars Hearing, *supra* note 63 (statement of Fred G. Weiss, Chairman Comm. on Investment of Employee Benefit Assets, Financial Executive Institute).

75. Congress also recognized the importance of disclosure of soft dollar arrangements in granting the Commission authority to implement specific disclosure rules under Section 28(e)(2). 15 U.S.C. § 78bb(e)(2).

Market participants also agree that disclosure of soft dollar arrangements is essential and that no distinction should be made with respect to disclosure of in-house research and third-party research. *See* Soft Dollars Hearing, *supra* note 63 (statement of Charles Bouvet, Chairman, Thamesway Inc.).

76. 15 U.S.C. §§ 80b-1 *et seq.*

77. 15 U.S.C. §§ 80a-1 *et seq.*

78. *See, e.g.*, Section 15(c) of the Exchange Act, 15 U.S.C. § 78o(c) (requiring boards of directors to review, and advisers to provide information reasonably necessary to evaluate the terms of the advisory contract, which may include information on soft dollar arrangements).

Study VI

Regulatory Structure and Costs

A. Regulatory Structure

The regulatory structure for equity markets in the United States was designed originally by Congress in the mid-1930s and has evolved along with the equity markets over the last 60 years. Under this structure the Securities and Exchange Commission ("Commission"), an independent governmental agency, oversees the equity markets and participants.[1] The Commission's authority and functions are prescribed by the Securities Exchange Act of 1934 ("Exchange Act"),[2] and the agency itself is subject to oversight by several Congressional committees.

Most of the day-to-day responsibility for market and broker-dealer oversight is performed by self-regulatory organizations ("SROs").[3] The Exchange Act provides for different types of SROs.[4] Entities that operate as national securities exchanges must register with the Commission pursuant to Section 6.[5] Those that operate as national securities associations must register under Section 15A.[6] SROs operating as clearing agencies must register under Section 17A.[7] Finally, Section 15B mandates the establishment of the Municipal Securities Rulemaking Board.[8]

The SROs operate under the Commission's direct oversight.[9] They must enforce their members' compliance with SRO rules and the federal securities laws. As part of this responsibility, SROs conduct surveillance of trading in their markets and examine the operations of their members. Furthermore, their rules must meet certain criteria under the Exchange Act.[10] The rules of securities exchanges and associations should, among other things: (1) provide for a fair representation of their members on the board of directors; (2) provide for an equitable allocation of dues, fees, and charges among their members; (3) be designed to prevent fraudulent and manipulative practices; (4) promote just and equitable principles of trade; (5) perfect the mechanism of a free and open market and a national market system ("NMS"); (6) protect investors and the public interest; and (7) provide a process for disciplining their members.[11] The rules also cannot impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Exchange Act.[12]

Although the statutory scheme allows SROs to exercise authority subject to Commission oversight, it is designed so that the initiative and responsibility for formulating regulations pertaining to the administration of their ordinary affairs remain with the SROs.[13] For the most part the Commission performs an oversight role over SRO functions through inspections of SROs, review of SRO rule proposals, and review of final SRO disciplinary proceedings.[14] Congress intended that the Commission step in to compel SROs to act where they fail to provide adequate protection to investors.[15]

The member firms of SROs also have compliance responsibilities and must maintain ongoing and vigilant monitoring of their employee activities. A broker-dealer can be disciplined by the Commission or an SRO for direct violations of the securities laws, aiding and abetting a violation, or failing reasonably to supervise an employee who commits a violation.[16]

Several of the market developments discussed in this report have caused commentators to question certain aspects of the regulatory structure described above. First, as institutional investors have grown in size and importance, their increasing use of alternative trading mechanisms raises a basic regulatory issue: does the existing regulatory structure, designed at a time when a marketplace with predominantly retail participation was at the center of the equity markets, unduly interfere with the activities of institutional investors? Second, as competition increases among markets, are SROs pursuing their competitive strategies in a manner consistent with their statutorily mandated self-regulatory duties? Third, as the various markets seek to compete on a level playing field, does the present regulatory structure allocate costs fairly and efficiently among them? Fourth, are there regulatory barriers to market access that impede fair and efficient market operation?

1. Effect on Institutional Market Participants

Individual investor participation in the equity markets often takes place in institutional form through mutual funds, pension plans, and other such entities. These entities (or the professionals hired to manage the assets) presumably are sophisticated investors with the resources, time, and expertise to monitor the handling of their accounts and to make informed investment decisions. Recognizing this, the Commission has lessened the disclosure requirements of the federal securities laws in certain types of offerings to institutional investors.[17]

Some commentators have suggested that the rules and regulations governing equity market trading should similarly be altered for institutional investors and market professionals.[18] These commentators are of the view that because technology allows institutions to effect transactions directly and globally via desktop computers, it is unnecessarily burdensome to require institutions to effect transactions pursuant to SRO and Commission rules designed for individual investors. They suggest an alternative regulatory approach under which the full panoply of sales practice rules would continue to apply with respect to individual investors but would cease to apply with respect to dealings with institutions.[19] In addition, although institutions could still be held to rules prohibiting fraud and manipulation, they would not have to comply with rules designed for fair and orderly markets, such as circuit breakers, as well as rules regarding transaction reporting and margin. Institutions would be free to effect transactions without the "shackles" of regulatory restrictions, subject to certain prudential requirements and fiduciary obligations of the persons that manage their assets. Proponents of this approach believe that the efficiency of U.S. markets would consequently be enhanced. Moreover, they suggest that if the United States does not follow this model, trading will flow overseas to markets that are more "user-friendly" to institutions.

The Division of Market Regulation ("Division") does not recommend that the Commission pursue this approach. For several reasons, this bifurcated approach could result in a serious deterioration in the efficiency and integrity of the U.S. equity markets. First, the strength of these markets derives in part from their ability to accommodate the needs of both retail and institutional investors. The demands of different types of investors have given rise to many of the innovations developed since the Institutional Investor Study.[20] For example, the New York Stock Exchange ("NYSE") in the 1970s adopted special procedures for handling block trades and, in 1991, implemented two after-hours crossing sessions. Proprietary trading systems ("PTSs") have enabled institutions to interact directly without professional intermediation. Exchanges have developed automated small order routing systems to expedite the handling of retail orders. Clearly, the equity markets can adhere to the existing regulatory standards that preserve their integrity and at the same time develop services to meet the needs of their users. It is unnecessary and unwise to upset this carefully maintained balance.

Second, the Division believes that it would be difficult to provide completely different tiers of regulation and maintain fair and orderly equity markets. The knowledge that U.S. markets offer a sound environment in which to transact business benefits all market participants by enhancing U.S. competitiveness. Irreparable harm to the well-deserved reputation of the U.S. markets could result from, for example, allowing frontrunning of institutional trades; allowing institutions to trade through pre-existing market interest during regular trading hours; or reducing transparency for institutional trades. Moreover, the increased trading activity of large institutions and broker-dealers makes it imperative to consider market-wide mechanisms such as circuit breakers to prevent disorderly markets. This does not mean that a distinction should never be made with regard to institutional activity; rather, any distinction should be crafted to balance the costs and benefits to the NMS, the protection of investors, and the maintenance of fair and orderly markets.

The Division recognizes that significant regulatory and self-regulatory costs are imposed on market participants to maintain fair and orderly markets and reliable price discovery. Larger or professional market participants should not be able to avoid these costs merely because they may not need all of the services provided by a particular market. Although removing these costs for larger investors could create a marginally more efficient operating environment for them, it would reduce significantly the fairness that makes U.S. markets so attractive to investors. Rather than focusing on the convenience of a particular group of investors to effect transactions in a marginally more efficient manner, the Commission should concentrate on improving the price discovery process and preserving the markets' fairness and orderliness.

2. Regulatory and Market Roles of SROs

The combined roles of SROs as market overseers and as competitors have raised concerns regarding SROs' ability and willingness to fulfill their regulatory responsibilities impartially and efficiently. The Exchange Act requires SROs to act as quasi-governmental bodies implementing the federal securities laws as well as their own rules. Yet SROs also are membership organizations and as such represent the economic interests of their members. In addition, SROs are marketplaces concerned with preserving and enhancing their competitive positions.[21] As competition increases among marketplaces and SROs aggressively pursue strategies to increase their market share, it is appropriate to question whether they are doing so in a manner consistent with their statutorily mandated self-regulatory duties.

Congress was aware of the conflicting roles of SROs when it designed the regulatory scheme that provides for their activity in U.S. securities markets.[22] Nonetheless, some commentators have suggested that the potential conflicts of interest apparent in the multiple roles that SROs play make it difficult for SROs to perform their functions adequately and fairly.[23] With increasing competition among the NYSE, American Stock Exchange ("Amex"), and National Association of Securities Dealers Automated Quotation ("NASDAQ") system for listings, and between the primary and other markets for order flow, it is possible that both the relationship of SROs with their members and SROs' ability to carry out their self-regulatory duties impartially will be strained. Consequently, some commentators believe that the best remedy for the situation is to separate the self-regulatory function from the market function. The former could be assigned to a newly created super-SRO or assumed by the Commission itself; the latter would remain with existing SROs.[24]

The Division believes that separating the regulatory and the market functions of existing SROs would be likely to create more problems than it would solve. The Division acknowledges that potential conflicts of interest exist between the SROs' regulatory and market roles, and that there is some merit to the argument that independent market surveillance and enforcement efforts by each SRO are duplicative.[25] Nonetheless, the Division also believes that the current structure is preferable to a regulatory structure that would, in practice, add yet another layer to the regulatory system.

The notion that self-regulatory functions may be best allocated to an entity other than the existing SROs has been considered in the past.[26] Shortly after the Securities Acts Amendments of 1975 ("1975 Amendments")[27] were adopted, the National Market Advisory Board ("NMAB") reported to Congress on the need to alter the self-regulatory scheme to implement the NMS. The NMAB identified the possible functions of a new super SRO, including elimination of the overlapping authority and duplication of efforts inherent in the regulation of members by the existing SROs. In addition, a new SRO could implement and administer new and possibly existing NMS facilities. The NMAB, however, concluded that there was no need to establish a new SRO because it was unclear what form the NMS would take. The NMAB also did not believe that there was a need for any substantial modification to the scheme of self-regulation provided for in the Exchange Act in light of the fact that the Commission had extensive power to reduce overlapping authority and duplication of efforts.[28] The NMAB suggested that whatever needs existed would be best met by one or more coordinating entities in which the SROs and the public were represented but in which no one or two existing SROs held a dominant position.[29]

The Division believes that the coordinating functions envisioned by the NMAB have been implemented under the current structure. For example, the Commission adopted Rule 17d-2 under the Exchange Act in 1976, which provides that any two or more SROs may file with the Commission a plan for allocating among themselves a variety of specified regulatory functions that affect their members.[30] As a result of these plans, the task of conducting financial responsibility examinations for broker-dealers that are members of more than one SRO has been allocated to a specific SRO. In addition, NMS facilities, such as the consolidated tape and Intermarket Trading System ("ITS"), are run by entities composed of SRO representatives. Clearly, it is possible to achieve the cooperation among SROs necessary to accomplish complicated objectives, the benefits of which reach all market participants, without altering the current regulatory structure.

The experience of the United Kingdom ("U.K.") in separating the market and regulatory functions of the SROs also is illustrative. In the U.K., the activities normally carried out by SROs in the United States are divided between Recognized Investment Exchanges ("RIEs") and other SROs. The former are responsible for the various marketplaces; the latter are responsible for the firms engaged in the business effected in their marketplace. The Securities and Investments Board ("SIB") serves as a super-SRO over this structure.

The U.K. experience exemplifies the potential difficulties in this approach. The U.K. regulatory structure has been subject to criticism since its creation in 1986. A recent report (so-called "Large Report") describes the problems experienced by U.K. regulators as they have sought to make their two-tiered system work; it also suggests possible solutions.[31] Among the criticisms of the U.K. system cited in this report are the complexity of the system, its unproven cost-effectiveness, and the imprecise definition of the regulation of exchanges and markets.[32]

The Large Report notes that the responsibilities of RIEs for market supervision and of SROs for market conduct overlap.[33] Although this situation may be attributed in part to the fact that the U.K. system is relatively new and needs adjusting, the Division notes that the theoretical benefits of the split roles remain to be clearly established and, in fact, may never be fully achieved. Moreover, the synergy created by the simultaneous oversight of a marketplace and the broker-dealers participating therein is lost when the two functions are separated. Because a system specifically designed to separate the regulatory and market roles has yet to establish the viability of that separation, the Division does not recommend altering the existing U.S. regulatory system to follow such a model.

The Division recognizes that a super-SRO or coordinating body for market surveillance and member firm examinations could eliminate duplicate efforts by existing SROs and reduce the expenses of member firms necessary to comply with current requirements.[34] The Commission, however, has reduced much of the duplication of SRO activities through several initiatives since 1975. First, as mentioned above, the adoption of Rule 17d-2 in 1976[35] led to the creation of designated examining authorities. Second, the Commission fostered the creation of industry groups, such as the Intermarket Surveillance Group ("ISG"), to promote concerted industry action. The ISG full members, the eight major stock and option exchanges, strive to coordinate the surveillance and investigation of activities in the stock and option markets.[36] Another such group, the Intermarket Financial Surveillance Group ("IFSG"), was formed after the 1987 market break to ensure coordination and cooperation among the various regulatory organizations with respect to the financial or operational condition of member firms in times of market stress. The IFSG is composed of representatives from the SROs, the SEC, and the Commodity Futures Trading Commission. A third group, the Intermarket Communications Group ("ICG"), was also formed after the 1987 market break to coordinate and share information among regulators and the SROs. The ICG operates a communications system known as "INFOE" (Information Network for Futures, Options, and Equities) that utilizes dedicated data transmission lines to maintain a continuous link among NASDAQ, securities exchanges, and futures markets.

Duplication of efforts does not benefit SROs or their members. Yet in light of the numerous initiatives already undertaken to facilitate intermarket coordination, it is unclear what a super-SRO would add. The Division, however, is open to suggestions designed to refine existing mechanisms to avoid duplication and will consider responsible new ideas to achieve that objective. In this regard, the Division supports the efforts of industry working groups to address redundancies in the present regulatory structure and is willing to provide appropriate assistance to these groups.

Yet another suggestion is that the Commission itself assume some SRO functions to reduce the duplication of efforts by multiple regulators or avoid conflicts of interest in SRO roles. The direct assumption of SRO functions by the Commission has been tried before. Past experience with the Securities and Exchange Commission Only ("SECO") program indicates that it is difficult to implement this alternative successfully. In 1965, the Commission became responsible for directly regulating a small number of broker-dealers that traded only in the over-the-counter ("OTC") market, along with their associated persons, through the SECO Program.[37] The program was originally created to provide certain firms with a regulatory alternative to joining the National Association of Securities Dealers ("NASD").[38] In 1983, the Commission concluded that the investing public and the securities industry would be better served if the program were discontinued. After 18 years of experience, the Commission recommended to Congress that the program be eliminated and compulsory membership in an SRO be required. The Commission concluded that a direct regulatory program was not the most efficient use of the Commission's resources and that weak links in the program regarding rulemaking and data collection could not be improved without increased expenditures. The Commission determined that the benefits of retaining the SECO Program were minimal compared to the benefits to be derived from its elimination. The Commission noted that even if the program were abolished, the Commission would still retain general oversight authority over SRO actions. Because all its rules would be reviewed by the Commission, specific complaints concerning NASD performance would also be heard.

The Division believes that the SECO experience illustrates that the resources necessary for the Commission to assume SRO regulatory functions directly and effectively are not realistically attainable. The SECO experience also confirms that SROs are better able to offer the required degree of expertise to handle day-to-day industry problems expeditiously. The Commission's oversight authority ensures that the industry acts according to the standards embodied in the Exchange Act. Although the Commission may choose to become involved in the details, it need do so only when the SROs fail in their tasks.[39] In rejecting a SECO approach, the Division is not suggesting that problems do not exist in the conflicting SRO roles. Instead, the Division suggests that the Commission can appropriately address such conflicts through its current oversight function.

Finally, the Division notes that SRO members have a voice in their organizations and that modifications or improvements in the way in which SROs function may be initiated from within. The Exchange Act requires SROs to give members fair representation on the board of directors and in SRO affairs. In addition, members may use their ability to direct their business away from a particular SRO so as to force the SRO to address issues in a satisfactory manner.[40] Similarly, members may express their opposition to a proposed SRO course of action directly to the SRO.[41] The Division is of the view that the alternatives available to SRO members to achieve an effective voice in their organizations provide a reasonable counterbalance to the SROs' potential conflicts of interest.

B. Allocation of Regulatory Costs

The Division has identified three areas in which the allocation of regulatory costs among competing markets raises questions: (1) the imposition of transaction fees; (2) the oversight of SRO rulemaking; and (3) the responsibilities imposed on PTSs versus those imposed on SROs. Study III discusses the Division's recommendations regarding PTSs. Transaction fees and SRO rule proposals are discussed below.

1. Transaction Fees

Section 31 of the Exchange Act imposes a fee on all national securities exchanges for each transaction based on a fixed percentage of the aggregate dollar value of trades executed on the exchange.[42] The fee applies only to transactions in exchange listed securities; it is not imposed on OTC securities. Section 31 also imposes an equivalent fee on broker-dealers effecting OTC trades in exchange-listed stocks.[43] The fee is designed in part to compensate the federal government for the cost of regulating and overseeing the securities markets.

Section 31 provides the Commission with authority to exempt any sale of securities or any class of sales of securities from the imposition of the transaction fee if the Commission finds that such exemption is consistent with the public interest, the equal regulation of markets, brokers and dealers, and the development of the NMS. Rule 31-1 under the Exchange Act,[44] promulgated pursuant to this exemptive authority, exempts transactions that are executed outside the United States and are not reported or required to be reported to a transaction reporting association as defined in Rule 11Aa3-1 under the Exchange Act [45] and any approved plan filed thereunder. The rule also exempts transactions in NASDAQ securities except for those NASDAQ securities that also are traded on an exchange.

The Division believes that the distinction between exchange and NASDAQ securities for the purposes of the Section 31 transaction fee is anachronistic. NASDAQ is now the second largest market in the world after the NYSE. In addition, last sale information for NASDAQ securities is now publicly available so that the fee would be easy to calculate. Moreover, given the intense competition for listings among the OTC and exchange markets, disparate application of such fees provides the OTC market with an unintended competitive advantage that is not justifiable. Finally, the Commission uses the same resources to oversee and regulate the OTC market as it does for the exchange markets, and it is appropriate to charge both markets for the costs incurred in performing these functions.

For the reasons explained above, the Division has determined that Section 31 unfairly allocates transaction fees solely to listed securities. The Division believes that amending Section 31 to include transactions in NASDAQ securities would provide equal treatment of both the exchange and OTC markets and would further the purposes of Section 31 as envisioned by Congress.[46] To this end the Division has assisted in the drafting of a legislative proposal to amend Section 31. The legislation would expand the application of Section 31 fees to transactions in non-exchange listed/OTC securities. The proposed legislation would require both exchanges and national securities associations to pay Section 31 fees.[47] Exchanges would pay Section 31 fees based on the aggregate dollar value of transactions in securities conducted on the exchange. National securities associations would pay Section 31 fees based on the aggregate dollar value of transactions conducted by or through associations' members in securities registered on an exchange and in OTC securities subject to last sale reporting pursuant to the rules of a registered national securities association.[48]

The Division does not believe that the fee will impose a significant burden on NASDAQ trading because the fee is *de minimis* when applied to individual transactions. When aggregated, the fees will help defray the costs of regulating the OTC market.[49]

2. SRO Rule Changes

Section 19(b) of the Exchange Act requires all SROs to file with the Commission all proposed changes to their rules ("rule filings")[50] accompanied by a concise general statement of the basis for and purpose of the proposed rule change. After an SRO submits a rule filing, the Commission must publish notice of the proposed rule change together with the terms of substance or a description of the subjects and issues involved.[51] Interested persons have an opportunity to submit written data, views, and arguments concerning the proposed rule change.

The Commission must approve a proposed rule change or institute proceedings to determine whether the proposed rule change should be disapproved within 35 days of publication of the notice of filing notice.[52] If disapproval proceedings are instituted, the Commission must provide notice of the grounds for disapproval and an opportunity for a hearing. The Commission must approve or disapprove the rule filing within 180 days of the date of publication of the notice of the filing of the proposed rule change unless the SRO grants the Commission an extension.[53] Except under limited circumstances, a proposed rule change may not take effect unless approved by the Commission.[54] These circumstances concern changes that (1) constitute an interpretation of an existing rule; (2) establish or change a due, fee, or other charge imposed by the SRO; or (3) deal solely with the administration of the SRO where the Commission has determined by rule that the subject of the rule change is outside the scope of Section 19(b)(2).

Rule 19b-4 under the Exchange Act[55] requires SROs to file proposed rule changes on Form 19b-4,[56] which includes instructions setting forth the procedures for filing proposed rule changes. The Division reviews rule filings to ensure compliance with Form 19b-4[57] and conducts a preliminary evaluation of the substance of the proposed rule change for compliance with the Exchange Act. After publication for notice and comment in the *Federal Register*, the Division conducts a detailed evaluation of the substance of the proposed rule change commensurate with the complexity of the issues raised in the filing. This evaluation includes discussions with the SRO submitting the proposed change, consideration of comment letters received, and legal analysis of the SRO proposal. After expiration of the comment period, the Division, pursuant to its delegated authority, issues an approval order explaining why the proposal is consistent with the Exchange Act or, when appropriate, recommends that the Commission institute disapproval proceedings. Controversial or significant rule proposals are presented to the Commission for action.

The SROs have complained that the rule filing process is too lengthy and places them at a competitive disadvantage to PTSs, which are not subject to Section 19(b).[58] The SROs claim that the process hampers their efforts to provide prompt, flexible, and innovative order-entry and trading services to their members and the investing public.[59] They point out that PTSs may add new services or procedures to their systems instantaneously without government approval. In addition, the exchanges suggest that the disparity extends to third market dealers because they do not need Commission approval to implement changes to their systems.[60] The SROs are of the view that their competitors should be subject to the same review process as they are or, alternatively, that the SROs should be relieved from the review requirement for their system changes.[61] The NYSE further recommends that only rule filings that present genuine investor protection concerns should be subject to the pre-effective review process.[62]

The Division disagrees with the SROs' assertion that PTSs should be subject to Section 19(b) procedures. In many respects PTSs do not perform the same functions as SROs and do not need a commensurate level of regulation.[63] For the same reason the Division does not believe that third market dealers should be subject to a rule review process. At the same time the Division recognizes that the SRO rule filing process could be expedited to place the SROs in a better competitive posture. Accordingly, the Division believes that attention should be focused on how the handling of SRO proposals for new systems or services can be improved.

The Commission receives more than 450 rule filings each year. The majority of these present routine changes that are approved quickly. Some rule filings, however, require substantial consideration. Generally, the Division finds that the review process is lengthened by three factors: (1) submission of an incomplete Form 19b-4 by the SRO; (2) adverse comment on a proposed rule change; or (3) significant impact on the trading process that could potentially result from a proposed system change. The first factor can be remedied easily by the SROs themselves; the other two are more difficult.

Some SRO filings, when first submitted to the Commission, do not comply with the requirements of Rule 19b-4 and Form 19b-4 and therefore must be amended or returned for revision. To facilitate the Commission's response to proposed rule changes, the Division urges all SROs to focus more attention on the requirements when completing Form 19b-4. As the Commission noted in the 1980 amendments to Form 19b-4, the form is designed to facilitate the review process.[64] The Division relies substantially on this form; the cooperation of the SROs in adhering to the requirements of Form 19b-4 is crucial.

The Division regards with the utmost seriousness its statutory obligations to review proposed rule changes to ensure that they comply with the provisions of the federal securities laws. The Congressional intent expressed in the 1975 Amendments was that the Commission would conduct a comprehensive review of a proposed rule change, including the justification for the change, any burden on competition that the change may impose, the impact on the public, and public comments received concerning the rule change.[65] The Division attempts to fulfill this obligation by conducting a careful study of every rule filing it receives. This often requires that the Division consider complex and significant issues raised in the rulemaking process.

The SROs themselves often submit comments on proposed rule changes by other SROs. These comments sometimes either request additional delay in the process for further study or recommend that the Commission disapprove proposed changes that they believe are inconsistent with the Exchange Act.[66] These comments often point out important market structure implications arising from so-called "system changes." Even when negative comments are not submitted, the Division must consider that the impact of some system changes may extend beyond the system itself.[67] To approve these proposed rule changes instantaneously could debilitate significantly the Commission's oversight of SROs.

Nevertheless, the Division could strive to expedite review of proposed rule changes that are not substantive in nature and do not engender adverse comment. At a minimum the process should be expedited for routine procedural and administrative modifications to existing order entry and trading systems.[68] Accordingly, the Division recommends that the Commission amend Rule 19b-4 under the Exchange Act to make these routine procedural and administrative modifications effective upon filing with the Commission. Modifications that present restrictive or anti-competitive concerns or investor protection issues, however, would still need to be considered in detail after a notice and comment period. In addition, the Division will consider whether other types of SRO proposals can be subject to an expedited review process.

Finally, the Division reasserts its continued commitment to working with the SROs to streamline the process for approval of proposed rule changes. Continued cooperation and communication between the Commission and the SROs is essential to the efficient administration of Section 19(b).

C. Barriers to Market Access

In Study III the Division recommends the removal of unnecessary barriers to intermarket access and, in this regard, discusses off-board trading restrictions and the Amex competing dealers proposal. The Division is of the opinion that two other existing regulations that restrict access need reexamination to determine if they impose unnecessary costs: restrictions on issuer delistings and limitations on floor trading.

1. Issuer Delistings

NYSE Rule 500[69] requires an issuer wishing to withdraw its securities from the NYSE to submit the proposal to its shareholders.[70] The rule requires that the proposal be approved by 66% of the outstanding shares of the particular security, together with a failure of 10% of the individual shareholders to object. The Amex's analogous rule, Rule 18, requires an issuer wishing to withdraw a listed security to file with the Amex a copy of the board resolution authorizing withdrawal along with a statement setting forth the reasons for the proposal. After receipt, the Amex notifies the issuer whether the reasons warrant such action and whether the issuer will be required to send notification to its shareholders at least 15 days in advance of filing with the Commission under Section 12(d) of the Exchange Act.[71] In contrast, the NASD's rules for NASDAQ/NMS issuers allow an issuer to terminate its NASDAQ/NMS designation voluntarily upon written notice to the NASD.[72]

The NYSE holds that Rule 500 is an investor protection rule and that shareholders take comfort in purchasing securities of a listed company, knowing that the issuer cannot delist the securities without overwhelming support from shareholders. The NYSE contends that the rule's requirements ensure the continued availability of the auction market for the securities and limit the issuer's ability to take corporate action not allowed under the exchange's listing agreement. For example, if a company had the ability to delist on demand, its management could delist the company, take corporate action inimical to the shareholders' interest, and then reapply for listing on the NYSE or apply for listing on another market.

Other commentators view Rule 500 as an anti-competitive rule that makes it very difficult for an issuer to withdraw securities from listing on the NYSE. Opponents of Rule 500 assert that issuers should be able to choose the market center that offers the best trading environment for their securities. The NASD has long questioned the validity of Rule 500[73] and is of the opinion that the rule is no longer justified in light of both Commission and SRO protections currently afforded to shareholders.[74] The NASD believes that the rule prevents companies from leaving the NYSE to move to NASDAQ, and because of this anti-competitive burden, the rule should be rescinded.

The NYSE disagrees and argues that Rule 500 does not affect the market structure for equity securities. Rather, it views the rule as part of the listing contract between the issuer and the exchange. In the NYSE's opinion, if an issuer objects to the rule, it can list its securities in another market, thus signaling whether or not this condition is appropriate.[75]

The Division recognizes that at some point in the past, Rule 500 may have been justified, given differences in standards between the NYSE and OTC markets. This is no longer the case with respect to NASDAQ/NMS. Currently, issuers seeking listing or NMS designation for their securities consent, as part of their listing or designation agreements, to follow specified guidelines with respect to dealings with their shareholders and to undertake certain corporate actions only after obtaining approval from their shareholders. The guidelines and thresholds for shareholder approval for NYSE-listed issuers and NASDAQ/NMS issuers currently are substantially the same. As a result, the Division believes that shareholders of companies whose securities are designated NMS are subject to shareholder protection standards comparable to those for their NYSE counterparts.

Until the 1980s, Rule 500 also may have been justified on the grounds of certain qualitative differences between exchange markets and the OTC market existing at that time. These differences included the availability of quotation and transaction information, existing market liquidity, and periodic reporting, proxy, and short-swing profit requirements for issuers.[76] As a result of the changes implemented following the Special Study[77] and the 1975 Amendments, however, these differences have for the most part been eliminated.

Although the Division can no longer identify any justification for the stringent approval requirements of Rule 500, the Division does not propose that the NYSE rescind the rule. The Division recognizes that withdrawing securities from listing entirely or from an exchange is a major corporate decision, and it is reasonable to ensure that careful management attention is provided. Accordingly, the Division recommends that the NYSE submit a proposed rule change to remove the shareholder approval requirements of Rule 500 and substitute a standard that relies on a determination by the board of directors. For example, the new standard could require approval by the board of directors and a majority of the independent directors, or it could require a review of the delisting decision by the board's audit committee. The Amex should submit a similar rule change to its Rule 18.

2. Exchange Floor Trading Under Section 11(a) of the Exchange Act [78]

Exchange members are subject to a layer of regulation that has no counterpart for non-exchange members. Subject to eight statutory exceptions, Section 11(a) of the Exchange Act generally prohibits national securities exchange members from effecting securities transactions on such exchanges for their own accounts, or the accounts of their associated persons, or for their own managed accounts, or the managed accounts of their associated persons. Section 11(a) reflects both Congressional concern that a conflict of interest could arise from exchange members trading for their own accounts in public exchange markets, and the concern that problems may arise when brokerage and money management functions are combined within a single entity.

The last major revision of Section 11(a) occurred with the 1975 Amendments. At the time the equity markets were undergoing significant changes, including the abolition of fixed commission rates and the expansion of access to exchange membership. In addition, the equity markets were experiencing the beginning of a technical revolution.

Because of these changes and the uncertainty regarding their impact, the Commission opposed amendment of Section 11(a) as largely unnecessary and as creating inefficiencies in the order execution process for managed accounts. Congress responded by granting the Commission broad authority to exempt classes of transactions from the ambit of Section 11(a).[79] Congress recently repealed the managed account provisions of Section 11(a).[80] The Division believes that the remaining provisions of Section 11(a) governing member trading from off-floor should be reconsidered in light of evolving regulatory and technological changes in the equity markets.

Members of the securities industry indicate that the requirements of Section 11(a) and the rules thereunder governing broker-dealer proprietary trading are both complex and cumbersome, and of scant benefit to the investing public or to the securities markets.[81] Moreover, exchange members can use independent floor brokers to effect their proprietary trades to satisfy the requirements of Section 11(a).[82] Industry members argue that this increases the cost of executing proprietary trades without offering the public or the markets any significant protections.

The Division remains committed to the principle that the primary function of a securities exchange is to serve public customers. Thus, exchange members should not be allowed to utilize their memberships as a means of effecting proprietary trades to the detriment of public customers. At the same time neither public customers nor exchange members benefit from unnecessarily inefficient and costly trading restrictions. The Division will therefore reevaluate whether the Section 11(a) provisions regarding trading from off-floor should be modified. The Division will consider possible alternative approaches, such as strengthening these provisions by requiring all proprietary orders to yield to public customers' orders, eliminating the requirements if they are deemed unnecessary, or retaining the requirements in their current form.

1. Securities Exchange Act of 1934 ("Exchange Act") Section 4(a), 15 U.S.C. § 78d(a) (1988).

2. 15 U.S.C. §§ 78a-78ll (1988).

3. In addition, states have adopted securities laws pertaining to offerings of securities and activities of broker-dealers (the so-called "blue sky" laws).

4. Exchange Act Section 19(a), 15 U.S.C. § 78s(a).

5. 15 U.S.C. § 78f. Currently, there are eight SROs registered as national securities exchanges: New York Stock Exchange ("NYSE"); American Stock Exchange ("Amex"); Philadelphia Stock Exchange ("Phlx"); Boston Stock Exchange ("BSE"); Chicago Stock Exchange ("CHX"); Pacific Stock Exchange ("PSE"); Cincinnati Stock Exchange ("CSE"); and the Chicago Board Options Exchange ("CBOE").

6. 15 U.S.C. § 78o-3. The NASD is the only entity registered under this provision.

7. 15 U.S.C. § 78q-1. There are 16 SROs registered as clearing agencies.

8. 15 U.S.C. § 78o-4. The NASD, not the MSRB, oversees the municipal securities market. Instead, the MSRB promulgates rules for the municipal securities industry.

9. Section 19 of the Exchange Act, 15 U.S.C. § 78s, establishes a statutory scheme with respect to the responsibilities imposed on and Commission oversight of the national securities exchanges and registered securities associations. The statutory scheme vests national securities exchanges and registered securities associations with almost identical responsibilities and imposes upon the Commission virtually the same oversight requirements with respect to national securities exchanges and registered securities associations.

10. Exchange Act Section 6(b), 15 U.S.C. § 78f(b), sets forth the standards that the national securities exchanges must meet. Section 15A of the Exchange Act, 15 U.S.C. § 78o-3, sets forth the standards that a registered securities association must meet.

11. Exchange Act Section 19(d), 15 U.S.C. § 78s(d), addresses Commission oversight of SRO disciplinary actions, and establishes the same procedures for review of disciplinary action by exchanges and associations.

12. Exchange Act Sections 6(b)(8) and 15A(b)(9), 15 U.S.C. §§ 78f(b)(8), 78o-3(b)(9).

13. S. REP. NO. 75, 94th Cong., 1st Sess. (1975) ("Senate Report").

14. The Commission's oversight function has two aspects: an affirmative responsibility of assuring that delegated power is exercised effectively to meet regulatory needs in the public interest, and a negative responsibility of assuring that delegated power is not exercised in a manner inimical to the public interest or unfair to private interests. *Id.* at 34.

15. *Id.* at 13.

16. Exchange Act Section 15(b)(4), 15 U.S.C. § 78o(b)(4). One method which members may use to avoid liability for failure to supervise is to establish procedures to prevent and detect violations.

17. For example, Rule 501 of Regulation D under the Securities Act of 1933 ("Securities Act"), 17 C.F.R. §§ 230.501 to 230.508 (1993), exempts from the Securities Act registration requirements offerings made to accredited investors, which are defined to include banks, savings and loans, broker-dealers, insurance companies, investment companies, and natural persons with a net worth in excess of one million dollars. Likewise, Rule 144A under the Securities Act, 17 C.F.R. § 230.144A,

exempts from the Securities Act registration requirements sales to qualified institutional buyers (*e.g.*, insurance companies, investment companies, and employee benefit plans) that own and invest on a discretionary basis at least $100 million in securities of non-affiliated issuers. In addition, Rule 15a-6 under the Exchange Act, 17 C.F.R. § 240.15a-6, exempts from the broker-dealer registration requirement certain foreign brokers or dealers dealings with major institutional investors having under management total assets in excess of $100 million.

18. *See, e.g.*, Saul Cohen, *The Death of Securities Regulation*, WALL ST. J., Jan. 17, 1991, at A10; Julian Franks & Stephen Schaefer, *The Costs and Effectiveness of the U.K. Financial Regulatory System*, London Business School 6 (Mar. 1993).

19. For example, broker-dealers would not have to perform a suitability analysis with respect to recommendations to institutional investors. Likewise, broker-dealers would not have to provide an options disclosure document to an institution before it engaged in options trading.

20. SEC, INSTITUTIONAL INVESTOR STUDY REPORT, H.R. DOC. NO. 64, 92d Cong., 1st Sess. (1971) ("Institutional Investor Study").

21. This fact was acknowledged early on in the development of the NMS by the National Market Advisory Board in its report to Congress on self-regulation. NATIONAL MARKET ADVISORY BOARD, REPORT TO THE CONGRESS: THE POSSIBLE NEED FOR MODIFICATION OF THE SCHEME OF SELF-REGULATION IN THE SECURITIES INDUSTRY SO AS TO ADOPT IT TO A NATIONAL MARKET SYSTEM 32 (Dec. 31, 1976) ("NMAB's Report on SROs").

22. *See, e.g.*, S. REP. NO. 792, 73d Cong., 2d Sess. 4-5 (1934); H.R. DOC. NO. 1383, 73d Cong., 2d Sess. 14-16 (1934); S. REP. NO. 1455, 73d Cong., 2d Sess. 80-81 (1934).

    Congress recognized that self-regulators may not always be as diligent as desired, and, indeed, may use self-regulation as a device to avoid regulation altogether. Nonetheless, Congress also was of the view that members of the securities industry could bring down to bear on the problems of regulation a degree of expertise and, in many circumstances, expedition not expected of a necessarily more remote governmental agency. SEC, REPORT OF THE SPECIAL STUDY OF SECURITIES MARKETS, H.R. DOC. NO. 95, 88th Cong., 1st Sess. 693-697 (1963) ("Special Study").

23. *See* Letter from Charles R. Hood, Senior Vice President and General Counsel, Instinet Corporation, to Jonathan G. Katz, Secretary, SEC (Oct. 19, 1992); Letter from Richard B. Gunter, Jr., Chairman, and John L. Watson III, President, Security Traders Association, to Jonathan G. Katz, Secretary, SEC (Nov. 24, 1992); Letter from Leonard Mayer, President, Security Traders Association of New York, Inc., to Jonathan G. Katz, Secretary, SEC (Mar. 12, 1993) ("STANY Letter").

24. *See* Letter from Junius W. Peake, Professor, University of Northern Colorado, College of Business Administration, and Morris Mendelson, Professor, University of Pennsylvania, Wharton School, to Jonathan G. Katz, Secretary, SEC (Nov. 3, 1992).

25. *See* Letter from Michael L. Quinn, Division Director, Equity Trading, Merrill Lynch, Pierce, Fenner & Smith Inc., to Jonathan G. Katz, Secretary, SEC (Mar. 17, 1993) ("Merrill Lynch Letter"); STANY Letter, *supra* note 23.

26. NMAB's Report on SROs, *supra* note 21.

27. Securities Acts Amendments of 1975, Pub. L. No. 94-29, 89 Stat. 97 (1975).

28. NMAB's Report on SROs, *supra* note 21, at 9.

29. The NMAB envisioned such a coordinating entity evolving from an industry initiated effort. In the absence of this effort, the NMAB was willing to conclude that a new SRO would be advisable. The NMAB also saw no need for legislation to implement its recommendations because the SEC had, under the statutory scheme, ample authority to require the SROs to act jointly with respect to matters over which they share authority.

30. Securities Exchange Act Release No. 12935 (Oct. 28, 1976), 41 FR 49091 (Nov. 8, 1976).

31. ANDREW LARGE, FINANCIAL SERVICES REGULATION: MAKING THE TWO TIER SYSTEM WORK (May 1993) ("Large Report"). The author is the chairman of the SIB.

32. *Id.* at 8.

33. *Id.* at 79.

The Division also notes that in the U.K. system, a firm may opt for direct regulation by the SIB instead of joining an SRO. The authorization and monitoring of such firms is undertaken by a division of the SIB known as "SIBRO." The Large Report states that the SIB's strategy has been to minimize SIBRO's role and to maximize the SROs' role. It also notes that the firms choosing this option are not generally representative of the investment business. The U.K. commentators favor abolishing SIBRO. SROs, in particular, believe that the SIB's role as SRO regulator and its role as a direct regulator creates a conflict of interest for the SIB. In addition, SROs perceive SIBRO as involving a duplication of efforts on SIB's part. *Id.* at 72.

34. *See* Merrill Lynch Letter, *supra* note 25; STANY Letter, *supra* note 23.

35. *See* Securities Exchange Act Release No. 12935 (Oct. 28, 1976).

36. Affiliate members include futures exchanges that trade stock index futures, international exchanges, and foreign SROs.

37. *The SECO Program: A Background Paper* (Feb. 14, 1983). Because the Maloney Act of 1938 did not provide for compulsory membership in a national securities association, a portion of the OTC industry, including non-exchange broker-dealers, chose not to join the NASD, thereby escaping the regulatory responsibilities assumed by the rest of the industry.

38. While in 1964 the Commission was in favor of compulsory membership in the NASD, Congress opted to provide for Commission regulation of broker-dealers who were not members of an association. Congress intended the SECO regulations to mirror the substantive and most of the procedural requirements of the NASD so that SECO firms would not enjoy a competitive advantage over NASD members or escape the regulation of ethical standards. Consequently, the Commission was authorized to design rules to promote just and equitable principles of trade; to regulate the training and competency of securities industry personnel; to adopt regulations regarding broker-dealer and associated person qualifications, and training; and to adopt standards to cooperate with associations on qualification examinations and exam fees. *Id.*

39. *See supra* notes 13-15 and accompanying text.

40. For example, the Amex captured the majority of the order flow in options on OTC stocks when they began trading in 1985. Because these options were multiply-traded, broker-dealers dissatisfied with the quality of the market making on the CBOE sent their business to the Amex. The CBOE responded by adjusting its operations, and, thereafter, has successfully competed for order flow for these multiply-traded options.

41. This happened when the NYSE proposed to open for trading a half-hour earlier, and many of its members opposed the proposed initiative.

42. 15 U.S.C. § 78ee. The annual fee is equal to 1/300th of one percent of the aggregate dollar amount of securities sold. The annual fee does not apply to bonds, debentures and other evidences of indebtedness. In addition, the Commission has exempted certain securities transactions from the fee.

43. While Section 31 of the Exchange Act originally only applied to transactions on an exchange, Congress amended Section 31 in the 1975 Amendments to require payment of similar fees from broker-dealers for OTC transactions in exchange-listed securities. Congress stated that transactions in all exchange listed securities whether executed on an exchange or OTC, should receive "even handed treatment" and that "the cost of such regulation and oversight should be borne in a comparable fashion." Senate Report, *supra* note 13, at 139.

44. 17 C.F.R. § 240.31-1.

45. 17 C.F.R. § 240.11Aa3-1.

46. Congress indicated, when addressing the extension of the fees to OTC transactions in listed securities, that as more progress is made toward the development of the NMS, equal regulation and fair competition would require that the fees apply uniformly to all markets. Senate Report, *supra* note 13, at 139.

47. The fee would be assessed against national securities associations rather than individual broker-dealers as is now done for OTC transactions.

48. This provision would include both securities qualified for trading in the NMS pursuant to Exchange Act Section 11A(a)(2), 15 U.S.C. § 78k-1(a)(2) ("NASDAQ/NMS securities") and regular NASDAQ securities ("NASDAQ Small Cap securities"). Section 31 fees would not apply to bonds, debentures, or other evidence of indebtedness.

49. Section 31 fees are payable to the Commission. The Commission then submits the fees to the U.S. Treasury. In 1992, NASDAQ trading would have generated approximately $29.4 million if Section 31 fees had been applicable.

50. Under Exchange Act Section 19(b), a proposed rule change includes "any proposed rule or any proposed change in, addition to, or deletion from the rules" of an SRO. 15 U.S.C. § 78s(b)(1). The rules of an SRO include the constitution, articles of incorporation, by-laws, and rules, or instruments corresponding to the foregoing and the stated policies, practices and interpretations of the SRO as the Commission determines by rule to be necessary or appropriate in the public interest or for the protection of investors to be deemed rules. *Id.* § 78c(a)(27), (28).

51. Exchange Act Section 19(b)(1), 15 U.S.C. § 78s(b)(1).

52. Section 19(b)(2), 15 U.S.C. § 78s(b)(2), prescribes the procedure by which, and time periods within which, the Commission must take action. Alternatively, the Commission may designate up to 90 days to take action on a proposed rule change if it publishes the reasons for the extended period. In addition, the SRO may consent to an extension of time for Commission action.

53. 15 U.S.C. § 78s(b)(2)(B).

54. Exchange Act Section 19(b)(1), 15 U.S.C. § 78s(b)(1).

55. 17 C.F.R. § 240.19b-4. Rule 19b-4 was adopted in 1975, Securities Exchange Act Release No. 11521 (July 2, 1975), 40 FR 30332 (July 18, 1975), and was amended in 1980, Securities Exchange Act Release No. 17258 (Oct. 30, 1980), 45 FR 73906 (Nov. 7, 1980).

56. 17 C.F.R. § 249.819.

57. Form 19b-4 requires, among other things, that the SRO file the text of the proposed rule change, indicate the action taken to adopt the change, provide a statement of the purpose of, and statutory basis for, the proposed rule change, and provide the information necessary for the Commission to determine whether the proposed rule change is consistent with the Act. This form also requires the SRO to provide the Commission with any written communications to and from the SRO on the proposed rule change generated after the rule change is filed with the Commission but before the Commission takes final action. The SRO must also indicate the rules on which the organization reasonably expects the proposed rule change will have a direct or significant indirect effect. In addition, the SRO must provide detail on the impact on competition the proposed rule change will have. Form 19b-4 further requires the SRO to provide a summary of the substance of any comments received and respond in detail to any significant issues raised in these comments. In addition, Form 19b-4 provides for the SRO to indicate whether it consents to the extension of the time periods prescribed by Section 19(b).

58. *See* Letter from James E. Buck, Senior Vice President and Secretary, New York Stock Exchange, to Jonathan G. Katz, Secretary, SEC (Nov. 24, 1992) ("NYSE Letter"); Letter from James R. Jones, Chairman and Chief Executive Officer, American Stock Exchange, to Jonathan G. Katz, Secretary, SEC (Dec. 18, 1992) ("Amex Letter"); Letter from Joseph R. Hardiman, President, National Association of Securities Dealers, to Jonathan G. Katz, Secretary, SEC (Nov. 20, 1992) ("NASD Letter"); Letter from William G. Morton, Jr., Boston Stock Exchange, John L. Fletcher, Midwest Stock Exchange, Leopold Korins, Pacific Stock Exchange, and Nicholas A. Giordano, Philadelphia Stock Exchange, to Jonathan G. Katz, Secretary, SEC (Dec. 11, 1992) ("Regional Exchanges Letter").

59. *See* NYSE Letter, *supra* note 58; NASD Letter, *supra* note 58; Regional Exchanges Letter, *supra* note 58.

60. *See* Amex Letter, *supra* note 58; NASD Letter, *supra* note 58.

61. *See* NYSE Letter, *supra* note 58; Regional Exchanges Letter, *supra* note 58; Letter from Thomas M. O'Donnell, Chairman and Marc E. Lackritz, President, Securities Industry Association, to Jonathan G. Katz, Secretary, SEC (July 1, 1993) ("SIA Letter").

62. *See* NYSE Letter, *supra* note 58.

63. One commentator suggested that the discussion over the proper allocation of regulatory costs should focus on maintaining investor safety. This commentator argued that simply spreading regulatory costs evenly among the SROs and the PTSs would leave investors unprotected from membership systems and unable to afford "safe" systems such as PTSs. *See* Letter from R. Steve Wunsch, President, AZX, Inc., to Jonathan G. Katz, Secretary, SEC (Oct. 1, 1992).

64. Securities Exchange Act Release No. 17258 (Oct. 30, 1980), 45 FR 73906 (Nov. 7, 1980).

65. Indeed, court decisions have recognized the seriousness of the Commission's responsibilities to address competitive concerns. *See, e.g.*, Exchange Servs., Inc. v. SEC, 797 F.2d 188, 190-91 (4th Cir. 1986); Clement v. SEC, 674 F.2d 641, 646-47 (7th Cir. 1982); Bradford Nat'l Clearing Corp. v. SEC, 590 F.2d 1085, 1105 (D.C. Cir. 1978).

66. *See, e.g.*, Securities Exchange Act Release No. 29237 (May 24, 1991), 56 FR 24853 (May 31, 1991) (NYSE after hours trading); Securities Exchange Act Release No. 31216 (Sept. 22, 1992), 57 FR 44780 (Sept. 29, 1992) (NASD SelectNet); Securities Exchange Act Release No. 28741 (Jan. 3, 1991), 56 FR 1038 (Jan. 10, 1991) (Amex competing dealers); Securities Exchange Act Release No. 28866 (Feb. 7, 1991), 56 FR 5854 (Feb. 13, 1991) (CSE preferencing).

67. *See, e.g.*, Securities Exchange Act Release No. 30569 (Apr. 10, 1992), 57 FR 13396 (Apr. 16, 1992) (trade reporting for NASDAQ securities); Clement v. SEC, 674 F.2d 641 (7th Cir. 1982).

68. *See* SIA Letter, *supra* note 61.

69. Other exchanges also have rules governing the withdrawal of securities from listing. Generally, they are not as stringent as the NYSE's Rule 500. *See* CHX Rule 3, Art. XXVIII, CHX Guide (CCH) ¶ 1893; PSE Rule 3.4, PSE Guide (CCH) ¶ 3579; Phlx Rule 804, Phlx Guide (CCH) ¶ 2804.

70. The NYSE has enforced this policy since at least a decade before it registered as an exchange with the Commission in 1934. Securities Exchange Act Release No. 2049 (Mar. 22, 1939) ("Dominion Stores Withdrawal Petition"). The NYSE adopted Rule 500 after the Commission rejected the NYSE's claim in the Dominion Stores Withdrawal Petition that it had a "settled practice" requiring a shareholder vote to withdraw a security from listing. LOUIS LOSS, SECURITIES REGULATION 836 n.171 (1961).

71. 15 U.S.C. § 78l(d).

72. *See* Schedule D, NASD Manual (CCH) ¶ 1813, § 6(5).

73. In connection with the NYSE's proposed rule change to modify its listing standards in 1984, the NASD noted that a restrictive provision such as Rule 500, together with the lower listing standards, would perpetuate and exacerbate the existing anti-competitive anomaly included in the exchange listing process. While the Commission acknowledged the potential anti-competitive effect, it declined to review Rule 500 in the absence of indications that it was serving to restrain companies seeking to withdraw from the NYSE. Securities Exchange Act Release No. 20649 (Feb. 13, 1984), 49 FR 6587 (Feb. 22, 1984).

The Division notes that NYSE-listed issuers have not voiced a strong desire for Commission action to abolish NYSE Rule 500. It is unclear, however, whether this is because, once listed, issuers simply do not wish to exit the NYSE, or because NYSE Rule 500's requirements are such an extremely effective deterrent that issuers do not even attempt to obtain the necessary shareholder vote to withdraw from listing.

74. *See* NASD Letter, *supra* note 58.

75. *See* NYSE Letter, *supra* note 58.

76. Michael J. Simon & Robert L.D. Colby, *The National Market System for Over-the-Counter Stocks*, 55 GEO. WASH. L. REV. 17 (1986).

77. *See supra* note 22.

78. 15 U.S.C. § 78k.

79. The Commission quickly used this exemptive authority to adopt a number of rules that effectively modified the impact of certain portions of Section 11(a). *See* Rule 11a1-1(T), 17 C.F.R. § 240.11a1-1(T) (known as the proprietary trading rule, the rule exempts exchange members' proprietary transactions from the operation of Section 11(a) when such members yield priority, parity, and precedence to certain public orders); Rule 11a2-2(T), 17 C.F.R. § 240.11a2-2(T) (known as the effect-versus-execute rule, the rule permits an exchange member to effect transactions that would otherwise be precluded by Section 11(a) by using an independent floor broker to perform the execution of the transactions on the exchange floor); Rule 11a1-3(T), 17 C.F.R. § 240.11a1-3(T) (permitting bona fide hedge transactions in certain securities); Rule 11a1-4(T), 17 C.F.R. § 240.11a1-4(T) (permitting transactions in debt instruments to be effected on exchanges); Rule 11a1-2, 17 C.F.R. § 240.11a1-2 (known as the look-through rule, the rule permits members to effect transactions for the public customers of their associated persons on the same basis as they can effect transactions for their own public customers); Rule 11a1-5, 17 C.F.R. § 11a1-5 (permitting certain transactions by a specialized class of exchange members).

80. Pub. L. No. 103-68, 107 Stat. 691 (1993).

81. *See* Merrill Lynch Letter, *supra* note 25.

82. *See* Rule 11a2-2(T), 17 C.F.R. § 240.11a2-2(T).

Study VII

Off-Shore and After-Hours Trading

A. Introduction

U.S. equities are traded after regular trading hours in the United States ("after-hours trading") and in foreign markets ("off-shore trading").[1] The average daily volume of after-hours and off-shore trading in U.S. stocks is approximately 17 million shares.[2] The relatively small volume of such trading may be attributed to U.S. institutional investors' and market professionals' preferences to trade during regular U.S. trading hours, when liquidity is greatest and prices reflect active market interest. Nevertheless, the combination of increasing institutional trading activity and the internationalization of securities markets makes it likely that after-hours and off-shore trading will grow in the future. The Division, therefore, believes that it is important to ensure that the Market 2000 Study principles of transparency, fair treatment of investors, fair competition, and open access between markets are applied to after-hours and off-shore trading.

As a preliminary matter, a thorough exchange of views among international regulators can prove helpful in examining issues regarding off-shore trading. For this reason, the Commission has considered many international issues through its participation in groups such as the International Organization of Securities Commissions ("IOSCO"), the Council of Securities Regulators of the Americas ("COSRA"), and the annual Futures and Options Regulators' Meeting. It appears, however, that international consensus on issues affecting two parts of the Division's Market 2000 program -- transparency and market access -- will be difficult to reach in the near future. The Division, therefore, undertook an examination of these issues for the Market 2000 Study.

In Study IV, the Division recommended increased transparency for after-hours trades and, as explained more fully below, also recommends that trades negotiated in the United States but executed off-shore be subject to U.S. transparency standards. The Division recognizes that, at present, this will affect only a small number of trades. The growth potential of this type of trading, however, warrants its inclusion in the Division's program to promote transparency in the United States.

Furthermore, technology and the emergence of screen-based trading has made it possible for exchanges to establish terminals outside their home country to facilitate foreign investor access to their markets. To date, several foreign exchanges have expressed interest in placing terminals in the United States to route orders to those exchanges, and more are likely to make such requests in the future. The U.S. regulatory scheme, however, makes it difficult for foreign exchanges to operate in the United States without being regulated as a U.S. exchange. The Commission should explore ways to accommodate foreign exchange access without sacrificing the standards underlying U.S. securities regulation.

B. Off-Shore Trading

Overseas markets generally compete for volume in U.S. stocks after regular U.S. business hours. This competition has arisen partly from the practice of U.S. broker-dealers "booking" trades through their foreign desks or foreign affiliates to avoid U.S. transparency requirements, off-board trading restrictions, transaction fees, or limits on short sales.[3] In what is commonly referred to as the "fax market," for instance, a U.S. broker-dealer acting as principal for its customer negotiates and agrees to the terms of a trade in the United States, but transmits or faxes the terms overseas to be "printed" on the books of a foreign office without reporting the trade in compliance with U.S. requirements. The Division estimates that approximately 7 million shares a day in New York Stock Exchange ("NYSE") stocks are faxed overseas.[4] Many of these trades are nominally "executed" in the London over-the-counter market. Transparency standards in overseas markets are often much weaker than in the United States, thus, off-shore trades generally are not reported publicly. Rather, they are reported weekly for regulatory purposes only to the NYSE pursuant to NYSE Rule 410B or to the National Association of Securities Dealers ("NASD") on Form T.[5]

Fairness and efficiency in U.S. secondary markets is directly related to the public availability of current transaction and quotation information. Transparency is weakened when trades in U.S. securities are negotiated and arranged in the United States, but sent off-shore for nominal execution. Due to the absence of an international consensus on adequate transparency standards, the Division believes it is necessary to examine which off-shore trades should be included in U.S. transaction reporting mechanisms.

The Division notes that the United Kingdom's Securities Investments Board ("SIB") takes a different approach toward off-shore transactions. In SIB's view, the issue with respect to off-shore transactions is not whether there is public reporting, but whether there is regulatory reporting. The Division disagrees with this viewpoint: regulatory reporting cannot substitute for transparency and its benefits of fair and accurate price discovery.

Thus, the Division is of the view that the U.S. transaction reporting system should capture trades in reported securities when the price discovery occurs in the United States, but the trades are nominally booked overseas for execution. For example, a U.S. money manager decides to sell a block of 500,000 shares in a NYSE security. The money manager negotiates a price with a U.S. broker-dealer, who sends the order ticket to its foreign trading desk for execution. The price discovery for this trade occurred in the United States as much as if the trade had been executed by the broker-dealer's U.S. trading desk.

To capture these trades, the Division believes that self-regulatory organizations ("SROs"), in developing an after-hours transaction reporting mechanism, should require that their members publicly report these types of off-shore trades.[6] At a minimum, the SRO reporting mechanism should include trades where the material terms are negotiated and arranged in the United States, but the trade is: (1) transmitted overseas to be entered into the books of an overseas branch office or affiliate of the U.S. broker-dealer; or (2) reflected in the books of a U.S. broker-dealer or affiliate, but is effected overseas -- either on an overseas exchange or through a broker-dealer in a foreign over-the-counter transaction. A transaction would be deemed negotiated and arranged in the United States if the essential terms of the transaction, such as price and quantity, were agreed upon in the United States.

SROs also must address other issues in defining the off-shore trades to be captured. First, should the trades include only those transactions negotiated between a U.S. registered broker-dealer and a U.S. customer, or should they extend to transactions negotiated directly between an affiliate of the registered broker-dealer and a U.S. customer? Suppose, for example, that the U.S. money manager calls a broker-dealer's foreign desk directly and negotiates a block transaction. It would be difficult to determine where the terms of this transaction were arranged. Second, should the reporting system capture only those trades that involve a U.S. resident customer? Third, should off-shore trades that are subject to comparable public reporting in a foreign jurisdiction be exempted from the reporting system?

In answering these questions, the overriding goal of the SROs should be to capture trades where price discovery occurred in the United States. The Division's recommended approach will increase the transparency of off-shore trades that are virtually indistinguishable from U.S. over-the-counter transactions while recognizing that some off-shore trades will be beyond the purview of U.S. transparency standards.

The Division believes that the cost to market participants for reporting these off-shore trades will be small. The most immediate cost will be to SROs that must establish procedures to report the trades. Even so, the Division expects this cost will be low, because SROs have trade reporting systems in place for trading during regular hours. As mentioned in Study IV, the existing reporting mechanism could be extended for the entire day, or alternatively, after-hours trades (including off-shore trades) could be reported hourly, or batched for dissemination before the opening of the regular trading day.

In arguing against this position, dealers have suggested that transparency of large off-shore trades will increase their position risk and result in wider spreads and less liquid markets. They argue further that if a block must be disclosed on a real-time basis, dealers could be "picked-off" by their competitors (who might guess their position in the security), and the dealers generally would receive lower prices on the sale of those securities to investors; therefore, dealers would be less willing to risk their capital, would widen their spreads for block trades, or would stop making markets altogether. As discussed in Study IV, this is the same argument dealers used against the Commission's initiatives to improve transparency in the 1970s. The evidence, however, shows that transparency has improved the liquidity of the equity markets in the United States, and that it has not led to an exodus of large traders to alternative markets. Thus, the Division believes increased transparency is warranted for off-shore trades.

C. U.S. Activity by Foreign Exchanges

As interest in trading foreign equities grows, U.S. investors are seeking more direct, efficient, and economical means of executing cross-border trades in foreign markets. Assisted by rapid technological advances in data processing and telecommunications, foreign exchanges now are able to provide U.S. investors with direct access to their quotation and execution capabilities. It is technologically possible for a foreign, non-U.S. registered exchange and its facilities (including specialists and market makers) to reach U.S. investors without intercession by a U.S. exchange or a foreign entity[7] ("cross-border exchange access"). When a foreign exchange provides this kind of direct access to U.S. investors and broker-dealers, whether through exchange-owned terminals located in the United States, software that permits a U.S. investor's own computer system to gain access to the foreign exchange, or any other mechanism using U.S. jurisdictional means, the foreign exchange conducts activity and establishes a presence in the United States that is subject to the Commission's jurisdiction.

In this context, the Division has two concerns: (1) that U.S. investors executing a trade through a foreign exchange facility located in the United States should be afforded the same or similar protection that U.S. investors who execute trades on domestic exchanges in the United States receive; and (2) that the proper level of U.S. regulation for foreign exchanges with a limited presence in the United States be determined.

The Commission has a significant regulatory interest in trades that are made by U.S. customers through foreign exchange facilities located in the United States, based on quotes displayed in the United States. For example, the Commission seeks to prevent the use of foreign exchange facilities for the perpetration of fraud and manipulation in the United States and must also ensure that these facilities are not being used by U.S. broker-dealers to avoid U.S. regulatory requirements. Also, the direct dissemination of a foreign market maker's quotes in the United States would typically require broker-dealer registration.[8]

At the same time, the limited presence of a foreign exchange that is adequately regulated abroad may not warrant the full application of rules designed to regulate U.S. exchanges. The Exchange Act, however, does not specifically identify the presence of a foreign regulatory scheme as a factor to consider when devising solutions to these issues.[9]

The Division believes that the issues facing the Commission as a result of cross-border exchange access are harbingers of future cross-border trading issues. In this regard, the Commission will need to consider whether the placement of foreign exchange terminals in the United States and other means of cross-border exchange access may trigger exchange registration requirements, regardless of the adequacy of home country regulation.

Although such issues may be raised in different forms as innovations in cross-border trading occur, the issues themselves will stem from fundamental jurisdictional and regulatory concerns endemic to a highly automated global trading environment.

As competition in the securities industry increases and communications between jurisdictions improve, reconciling the competitive and regulatory issues inherent in cross-border trading with the existing U.S. regulatory structure will be necessary. With this in mind, the Division is examining what regulatory changes or legislative amendments may be necessary to accommodate the jurisdictional and regulatory dilemmas raised by cross-border exchange access and other innovative cross-border trading mechanisms. The Division expects to produce recommendations for Commission consideration on these issues.

D. After-Hours Trading

1. Introduction

Over the past few years, after-hours trading has been the subject of much discussion. Some market participants are of the view that after-hours trading will increase as a result of four factors: (1) advances in telecommunications and computer technology; (2) the development of a global economy with multinational corporations demanding both international communication and international sources of capital; (3) the emergence of huge institutional investment funds that require cross-border diversification; (4) and regulatory changes such as those that open stock exchanges to foreign membership.[10] These factors are also contributing to an increase in international trading.

To date, volume of after-hours trading in U.S. equities is modest. Most customers and broker-dealers prefer to trade during primary market hours, when liquidity is greater, spreads are narrower, and information is more current. As a consequence, an active 24-hour market in U.S. equities has not developed. For instance, during the first six months of 1993, NYSE members executed after-hours trades involving only several million shares per day in NYSE stocks, with most of this nominally executed overseas; proprietary trading systems ("PTSs") that operate after-hours captured only one million shares per day in NYSE stocks; and broker-dealers averaged slightly over one million shares of after-hours trading in stocks quoted on the National Association of Securities Dealers Automated Quotation ("NASDAQ") system.

Given existing capabilities to trade on a 24-hour basis and the expansion of global securities trading, however, after-hours trading may develop further in the future. To attract order flow associated with certain trading strategies, several U.S. markets have already taken steps toward 24-hour trading. The NYSE, for example, has developed a multi-phase plan to respond to the evolving demand among NYSE members and customers to trade outside the 9:30 a.m. to 4:00 p.m. trading session. Phase one consists of revisions to its market-on-close procedures, discussed below, that permit firms to enter orders for guaranteed execution at the closing price, including matched buy and sell orders. Phase two, also discussed below, is an "Off-Hours Trading" ("OHT") facility that operates after the close of the regular NYSE trading day. (The OHT permits NYSE members to enter orders on closing-price, single-sided, and coupled orders from 4:00 p.m. until 5:00 p.m., and to enter orders for program trades from 4:00 p.m. until 5:15 p.m.)

2. Market-on-Close Procedures

In June 1990, the Commission approved, on a temporary basis, a rule filing that amended NYSE rules regarding market-on-close ("MOC") orders[11] to: (1) provide that MOC orders are to be executed in their entirety at the closing price on the NYSE, and if not so executed, are to be cancelled;[12] and (2) allow for the entry and execution of matched MOC orders.[13] Subsequently, the Commission gave permanent approval to the pricing and guaranteed execution provisions, and extended the pilot period for matched MOC orders.[14]

The NYSE proposed the changes to facilitate its members' program trading strategies, such as "portfolio rebalancing"[15] and "Exchange-for-Physicals" ("EFPs").[16] According to the NYSE, under the old NYSE order execution rules and procedures, member firms and their customers, fearing that both sides of a transaction would not be executed at closing prices, or that the firm side and customer side of an order would be executed at different prices, were having such orders executed off-shore.[17]

In its various orders approving the NYSE rule change, the Commission noted concerns that, under the new provisions, matched MOC orders would be executed without the opportunity for order exposure or interaction with the trading crowd, and some customer orders in the crowd or on the limit order book might be bypassed as a result. The Commission suggested that the NYSE evaluate whether a better way to accommodate the EFP market might be to develop an after-hours trading system that permits the participation of other orders or, in the alternative, amend NYSE Rule 390[18] to permit after-hours trading in the United States.

As discussed below, the NYSE has developed an after-hours trading session that members can use to execute orders that satisfy EFP procedures. The NYSE reports that, during the first year of the pilot period, no members used the matched MOC order procedures, opting instead to use the OHT system for EFP related programs. To provide the NYSE and the Commission with time to evaluate the viability and effectiveness of the matched MOC order procedures in light of the OHT opportunities, the Division will review the matched MOC orders provisions of the rule filing when it considers permanent approval of the OHT trading system.

3. Off-Hours Trading: NYSE's Crossing Sessions I and II

In May 1991, the Commission gave temporary approval to the NYSE's proposal to establish an OHT facility. The approval has been extended to January 31, 1994.[19] The proposal included two trading sessions: "Crossing Session I," which permits the execution of single-stock, single-sided, closing-price orders and crosses of single-stock, closing-price buy and sell orders; and "Crossing Session II," which allows the execution of crosses of multiple-stock, aggregate-price buy and sell orders.

In Crossing Session I, members can enter orders from 4:00 p.m. to 5:00 p.m. through the NYSE's network of electronic order processing and post-trade systems, SuperDOT. Orders are executed at 5:00 p.m. Only NYSE-listed equity securities that have been designated by the NYSE and are not subject to a trading halt as of the close of the regular trading session may be entered.[20] In addition, certain limit orders that have migrated from the regular trading session cannot participate in Crossing Session I. Members may designate unconditioned round-lot and partial round-lot limit orders entered during the regular trading session as "GTX" ("good 'till cancelled, executable through crossing session") to enable the orders to be executed against closing-price, single-sided orders during Crossing Session I.[21]

Members may enter and cancel orders up until the 5:00 p.m. execution time. Any closing-price, single-sided orders not executed by that time expire and must be re-entered to participate in the next day's opening. Unexecuted GTX orders are returned to the book, at their original priority. Closing-price, coupled orders that have been entered without the possibility of break-up are executed in full. Crossing Session I executions are reported over the high speed facility of the Consolidated Tape Association Plan and over the low speed line.[22]

Crossing Session II is an aggregate price session that enables members to enter crosses of buy and sell program orders that include at least 15 NYSE-listed stocks with a total market value of $1 million or more ("aggregate-price, coupled orders") and to effect their execution at an aggregate price. These orders are sent to the NYSE via facsimile and are not entered until after the 4:00 p.m. close of the regular session. Each side is executed against the other without regard to the priority of other orders entered into the OHT facility. The facsimiles are time-stamped and confirmed back to the entering brokers, thereby effecting continuous executions.

During the first six months of 1993, the average daily trading volume for Crossing Session I (individual stocks) was 173,522 shares, compared with 66,900 in 1992 and 139,700 for June through December 1991.[23] For Crossing Session II (program trading), the average daily share volume for the first six months of 1993 was 4,446,844 shares, compared with 1,910,000 in 1992 and 1,150,800 in June through December 1991.[24]

4. Other Marketplace Initiatives

Other markets have also made changes to accommodate after-hours trading. The Commission approved an American Stock Exchange proposal to permit the execution after the close of single-sided, closing-price orders and crosses of closing-price buy and sell orders.[25] Several regional stock exchanges established procedures for their specialists to provide for after-hours execution of certain limit orders to the extent of shares executed in the primary market's after-hours sessions.[26] In addition, the Pacific Stock Exchange's post-1:00 p.m. (Pacific time) auction trading market hours were extended to 1:50 p.m. (Pacific time).[27]

The NASD has also extended trading hours of the NASDAQ system. For example, SelectNet operations were extended to allow trading from 9:00 a.m. until 5:15 p.m,[28] and the NASD implemented its NASDAQ International Service, a trading system primarily designed to accommodate international trading by institutional investors in NASDAQ securities.[29] NASDAQ International currently operates from 3:30 a.m. until 9:00 a.m. Eastern time.[30]

Finally, PTSs have been developed to offer trading sessions where buyers and sellers can make offers, negotiate prices and other terms, and execute transactions, as well as matching sessions where orders to buy and sell are matched and executed at predetermined prices derived from the primary market. These sessions may occur before, during, or after regular trading hours.[31]

Although trading in futures and options contracts is outside the scope of this study, it should be noted that these derivative markets have developed their own after-hours trading system. Globex, which is a joint venture of the Chicago Mercantile Exchange and the Chicago Board of Trade, is an automated order entry and matching system for trading in futures and options contracts before and after regular trading hours.

5. Discussion

These developments may be early steps to full 24-hour trading. As such, they raise questions about the appropriate type of regulation for after-hours trading. Current after-hours trading systems are generally used for limited investment strategies executed sporadically by professionals. As noted above, in the United States the existing after-hours trading systems are limited in participation, scope, and hours. PTSs operate only for their subscribers and are limited in nature, and the exchanges' after-hours trading sessions operate only for limited types of orders (*e.g.*, matching buy and sell orders, program trading orders). Much of the after-hours trading on the NYSE, PTSs, and foreign OTC markets is based on closing prices during regular trading hours.

The Commission has recognized that all rules and regulations that apply to trading during regular trading hours may not be necessary or appropriate for after-hours trading. For example, the Commission has granted exemptions from the short sale rule, Exchange Act Rule 10a-1,[32] for the NYSE OHT sessions. (Rule 10a-1 provides that short sales of exchange-listed securities may not be effected at a price either below the last price reported in the consolidated transaction reporting system ("minus tick") or at the last reported price if that price is lower than the last reported different price ("zero minus tick").) Closing-price single-sided orders and closing-price coupled orders are priced by transactions that occur during the regular trading session, when Rule 10a-1 is in effect, and such pricing is not affected by orders entered during Crossing Session I. Aggregate-price coupled orders do not establish reported prices in the individual component stocks that comprise the orders in Crossing Session II. Because trading during Crossing Sessions I and II does not appear to be susceptible to the price manipulation abuses that the rule is designed to prevent, the Commission has exempted the OHT trading from the operation of the rule, under certain conditions.[33]

Although not all the rules that exist for continuous, regular-hours trading necessarily should apply to after-hours trading, the Division does not recommend wholesale deregulation of after-hours trading activity. Rather, the Commission should carefully examine whether rules designed for continuous trading, regular-hours markets are needed for after-hours trading. The focus should be on the structure of the after-hours trading facility or market, the nature of the market participants, the types of orders permitted, and the effects of any deregulation on the regular-hours trading markets. Where these factors permit the conclusion that the benefits of after-hours trading for market participants could be enhanced by a lessening of regulatory restrictions without a concomitant lessening of investor protection or other deleterious effect on the regular-hours market, the Commission should continue to be flexible in its regulatory approach. To the extent that an after-hours trading system attempts to emulate the regular-hours markets, however, the Division believes it should be treated the same as regular-hours systems. Finally, the Division is of the opinion that enhanced post-trade transparency should be extended to after-hours trading. Although the amount of trading effected after-hours is a small fraction of total trading, the Division is of the opinion that a lack of information on several million shares per day is still significant.

1. To date, off-shore trading primarily is related to derivatives trading. The Commission is considering regulatory issues regarding derivatives trading on an on-going basis and has issued a release soliciting comment on the net capital treatment of derivative products. Securities Exchange Act Release No. 32256 (May 4, 1993), 58 FR 27486 (May 10, 1993).

2. *See* Exhibits 11 and 12. Of this total, the Division estimates that approximately 15 million shares per day in NYSE stocks (or 5.5% of NYSE volume) were executed after-hours or off-shore.

3. *See* Securities Exchange Act Release No. 30920 (July 14, 1992), 57 FR 32587 (July 22, 1992). *But see* Letter from Richard Britton, Director, Securities and Derivative Markets and Investment Management Division, Securities and Investments Board ("SIB"), to Jonathan G. Katz, Secretary, SEC (Dec. 1, 1992) ("Although it is evident that booking of trades in other jurisdictions does take place, this may be for tax or accounting reasons - SIB has no evidence that trading of U.S. stock in the U.K. is undertaken for anything other than legitimate commercial reasons.").

4. *See* Exhibit 11.

5. Between 4:00 p.m. and 5:15 p.m., the NASD operates an automated after-hours trade reporting system to facilitate Form T trade reports. These trade reports are made available to vendors for public dissemination. For after-hours trades executed after 5:15 p.m., the NASD requires members to report on a paper Form T. Paper Form T reports are not publicly disseminated. The NASD has plans to automate all Form T reporting. Also, the NYSE has adopted Rule 410B that requires NYSE members to report to the NYSE their after-hours trades in NYSE-listed securities.

6. A trade that is negotiated in the United States would be considered a U.S. trade for trade reporting purposes even if deemed by the NYSE to be effected overseas for purposes of NYSE Rule 390. The Division has recommended, however, that the NYSE submit a proposed rule change to lift the off-board trade restrictions as they apply to after-hours trading. *See* Study III.

7. An example of a "foreign entity" would be a member of the foreign exchange that is not registered in the U.S.

8. Securities Exchange Act Release No. 27017 (July 11, 1989), 54 FR 30013 (July 18, 1989). Absent an exemption under Rule 15a-6 under the Exchange Act, foreign broker-dealers that induce, or attempt to induce, any securities transaction by a U.S. person are required to register as broker-dealers with the Commission and would be subject to the panoply of broker-dealer regulations.

9. Section 5 of the Exchange Act requires that an exchange operating in the U.S. register with the Commission. While Section 5 does permit an exemption from registration based on limited exchange volume, it is not clear that such an exemption would be available to foreign exchanges. In contrast, the United Kingdom's regulatory scheme provides for recognizing foreign exchanges as "overseas investment exchanges" if (1) the foreign exchange is subject to supervision in its country of origin that ensures investors in the U.K. protection at least equivalent to that provided by U.K. law; and (2) the foreign exchange is able to cooperate, by sharing information and otherwise, with regulators in the U.K. and that adequate arrangements exist for such cooperation. *See* Financial Services Act 1986, as amended, Section 40(2).

10. Office of Technology Assessment, U.S. Congress, *Trading Around the Clock: Global Securities Markets and Information Technology -- Background Paper*, OTA-BP-CIT-66 (and Update)(July 1990) at 11.

11. Securities Exchange Act Release No. 28167 (June 29, 1990), 55 FR 28117 (July 9, 1990) (order granting temporary approval of File No. SR-NYSE-89-10).

12. Pursuant to the rule change, a market order with the instruction "at the close" is to be executed in its entirety at the closing price on the NYSE, and, if not executed, is to be treated as cancelled. In certain circumstances, *e.g.*, when trading has been halted in the security, an execution at the closing price would not be possible. Where there is an imbalance of MOC orders, the imbalance must be executed against the prevailing bid or offer, and then the remaining MOC orders must be stopped against each other and executed at the price of the immediately preceding transaction just described.

13. The portion of the rule filing that involves permitting matched MOC orders to be entered by a member requires an exemption from Rule 10a-1 under the Exchange Act, 17 C.F.R. § 240.10a-1 (1993). *See* Letter to James E. Buck, Senior Vice President and Secretary, New York Stock Exchange (July 2, 1990), *reprinted in* [1990 Decisions] Fed. Sec. L. Rep. (CCH) ¶ 79,651.

14. In November 1991, the Commission granted permanent approval of the amendments relating to the pricing and execution of MOC orders. Temporary approval of the amendments relating to matched MOC orders has been extended several times. *See* Securities Exchange Act Release No. 29393 (July 1, 1991), 56 FR 30954 (July 8, 1991); Securities Exchange Act Release No. 29761 (Sept. 30, 1991), 56 FR 50743 (Oct. 8, 1991) (extending temporary approval of all the amendments); Securities Exchange Act Release No. 30004 (Nov. 27, 1991), 56 FR 63533 (Dec. 4, 1991) (granting permanent approval of the amendments concerning the pricing and execution of MOC orders and extending temporary approval of the matched MOC orders amendments); Securities Exchange Act Release No. 32362 (May 25, 1993), 58 FR 31565 (June 3, 1993) (extending temporary approval of the matched MOC orders portion of the filing until Jan. 31, 1994.)

15. "Portfolio rebalancing" occurs where a firm buys from and sells to its customer certain securities to adjust the customer's portfolio so that it continues to mirror a particular index.

16. An EFP is a transaction where a party exchanges a long (short) futures position for an equivalently valued long (short) portfolio stock position. EFP transactions normally take place after the NYSE close and are completed in accordance with futures contract market regulations which require that the purchase and sale of the futures contract be simultaneous with the sale and purchase of an equal quantity of stock, and that both the futures and stock legs of an EFP be executed solely between two parties. *See, e.g.*, Chicago Mercantile Exchange Rule 538. The NYSE believes that any potential for a "break-up" of the stock portion of an EFP would jeopardize the ability of a broker-dealer to engage in an EFP trade with its customer.

17. According to NYSE program trading reports, an average of 18.1% of program trades in NYSE stocks were being effected overseas in 1989 at the time of the MOC rule proposal. In the first half of 1993, 18.5% were effected overseas.

18. In general, NYSE Rule 390, 2 NYSE Guide (CCH) ¶ 2390, prohibits a member from effecting a transaction otherwise than on an exchange as principal or as an in-house agency cross in a security listed on the exchange before April 26, 1979.

19. Securities Exchange Act Release No. 29237 (May 24, 1991), 56 FR 24853 (May 31, 1991); Securities Exchange Act Release No. 32368 (May 25, 1993), 58 FR 31565 (June 3, 1993).

    For general news articles on the NYSE plan, see Power, *New York Stock Exchange Sets Its First Limited Off-Hours Trades*, WALL ST. J., Sept. 12, 1990, at C1, col. 3; Eichenwald, *Big Board Approves Late Trades*, N.Y. TIMES, Sept. 12, 1990, at D1, col. 1; Laderman, *Stock Around the Clock*, BUS. WK., July 2, 1990, No. 3167, p.30.

20. If a trading halt exists for a security at 4:00 p.m., Crossing Session I would not be available for that security that day. Also, during Session I, the Exchange might announce that, as the result of news of a corporate development, it may return unexecuted GTX orders to the specialist's book, maintaining their priority, cancel all unexecuted single-sided or coupled orders, and preclude the entry

of new closing-price orders into the OHT facility. Finally, if a market wide trading halt pursuant to NYSE Rule 80B were in effect at 4:00 p.m., Session I would not be available.

21. "Migrated" GTX orders retain the same priority among themselves as existed on the specialist's book and have priority over all closing-price, single-sided orders, which, in turn, have priority based on the time of entry into the OHT facility. Traditional rules of priority or precedence based on price or size do not apply to transactions in Crossing Session I. Closing-price, coupled orders are executed without regard to the priority of other orders entered into the OHT facility and do not interact with the single-sided orders.

22. *See* Appendix III for a discussion of quotation and transaction reporting.

23. Crossing Sessions I and II trading began on June 13, 1991.

24. The Reuter Business Report, Tuesday, BC Cycle (May 25, 1993); NYSE, FACT BOOK 1992 (1993).

25. Securities Exchange Act Release No. 29515 (Aug. 2, 1991), 56 FR 37736 (Aug. 8, 1991); Securities Exchange Act Release No. 32363 (May 25, 1993), 58 FR 31558 (June 3, 1993) (approving the filing until Jan. 31, 1994).

26. Securities Exchange Act Release No. 29301 (June 13, 1991), 56 FR 28182 (June 19, 1991); Securities Exchange Act Release No. 32365 (May 25, 1993), 58 FR 31560 (June 3, 1993) (Boston Stock Exchange); Securities Exchange Act Release No. 29297 (June 13, 1991), 56 FR 28191 (June 19, 1991); Securities Exchange Act Release No. 32368 (May 25, 1993), 58 FR 31563 (June 3, 1993) (Midwest Stock Exchange); Securities Exchange Act Release No. 29300 (June 13, 1991), 56 FR 28212 (June 19, 1991); Securities Exchange Act Release No. 29749 (Sept. 27, 1991), 56 FR 50405 (Oct. 4, 1991); Securities Exchange Act Release No. 32364 (May 25, 1993), 58 FR 31574 (June 3, 1993) (Philadelphia Stock Exchange); Securities Exchange Act Release No. 29305 (June 13, 1991), 56 FR 28208 (June 19, 1991); Securities Exchange Act Release No. 29543 (Aug. 9, 1991), 56 FR 40929 (Aug. 16, 1991); Securities Exchange Act Release No. 32367 (May 25, 1993), 58 FR 31570 (June 3, 1993) (Pacific Stock Exchange). The latest orders approve the filings until January 31, 1994.

27. Securities Exchange Act Release No. 29631 (Aug. 30, 1991), 56 FR 46025 (Sept. 9, 1991). Average daily trading volume for the 1:00 p.m. to 1:50 p.m. time period for 1992 was 441,600 shares. For the first seven months of 1993, the average daily volume was 514,653 shares.

28. Securities Exchange Act Release No. 30581 (Apr. 14, 1992), 57 FR 14596 (Apr. 21, 1992).

29. Securities Exchange Act Release No. 29812 (Oct. 11, 1991), 56 FR 52082 (Oct. 17, 1991).

30. In the first six months of 1993, daily activity in the NASDAQ International Service averaged 16,744 shares valued at $928,800.

31. *See* Appendix IV.

32. 17 C.F.R. § 240.10a-1 (1993).

33. *See* Letter regarding New York Stock Exchange, Inc. (June 13, 1991), [1991] Fed. Sec. L. Rep. (CCH) ¶ 79,736; *see also* Letter from Larry E. Bergmann, Associate Director, SEC, to Catherine R. Kinney, Senior Vice President, New York Stock Exchange (Oct. 11, 1991). The NYSE also requested exemptions from Rules 10b-6, 10b-7, and 10b-8 ("Trading Practices Rules") for transactions in Crossing Sessions I and II. Subsequently, the staff granted exemptions from the Trading Practices Rules for certain transactions in baskets of stocks occurring during regular hours or after hours. *See* Letter regarding Basket Trading During Distributions (Aug. 6, 1991), [1991] Fed. Sec. L. Rep. (CCH) ¶ 79,752.

Appendix I

Brief Profile of the Public Investor

Public investors have remained active participants in the U.S. equity markets.[1] Indeed, from 1975 to 1990, the number of shareholder accounts increased from 25 million to 51 million. The public participates in the equity markets in two forms: directly, through individuals purchasing stocks for their own accounts; and indirectly, through institutions such as mutual and pension funds.

Over the past decade, investors increasingly have used institutions to represent their interests in the equity markets. The share of U.S. equities owned by individuals has declined continually since the early 1980s and finally fell below 50% in 1992 (Exhibit 1). During the 1980s, households were net sellers of nearly $800 billion of equities and have only recently become net buyers. In contrast, mutual funds and pension plans were net buyers during this period and increased substantially their percentage of equity ownership. For example, mutual funds owned a mere 2.7% of all equities in 1980; their share increased to over 9% in the early 1990s. During this time frame, the percentage of all stocks held by public pension plans increased from 2.8% in 1980 to 9.1% in 1992, while the percentage held by private pension plans rose from 14.2% to 20.5%.

The increasing importance of the mutual fund as an investment vehicle for the individual investor is reflected in the number of mutual fund accounts. In 1980, the number of accounts in equity funds totaled 5.8 million. By 1992, this figure had soared to 31.9 million (Exhibit 4). The number of equity funds experienced an equally impressive increase during this period, rising from 267 funds in 1980 to 1,329 funds in 1992 (Exhibit 5). Further proof of this trend is seen in the allocation of household liquid financial assets. In 1980, households allocated 1.7% of these assets to mutual fund shares, a figure that increased to 9.2% by 1991 (Exhibit 2).

Among individuals who purchase equities directly for their own accounts, a 1990 survey found that the average size portfolio was $11,400. According to the same survey, 34.5% of individual shareowners had portfolios valued at less than $5,000, and 10% had portfolios valued at more than $100,000 (Exhibit 8). Many individual shareowners are not active traders: a full 44.9% of investors failed to trade a single share in a one year period measured from 1989 to 1990. In contrast, a study conducted in 1985 found that only 26% of investors surveyed had failed to make a single trade over the course of a year (Exhibit 9). The 1985 survey showed that 29% of investors had traded five or more times during that year. Just five years later, this figure had dropped to 18%. Over the past year, individual investor activity has increased along with the overall surge in equity trading volume.

A review of brokerage accounts with registered representatives ("RR"s) reveals the diminished activity of the individual investor in relation to overall market activity (Exhibit 10). Although the size of the average retail trade varies widely among participants, general industry practice puts the figure at about 300 shares per trade. Each RR manages an average of 336 client portfolios, the median value of which is approximately $42,818. Roughly 34.7% of this amount, or $14,800, is redirected by the RR into new financial products each year. Each retail transaction performed by the RR generates an average of $142 in commissions.

In contrast to the activity of the average retail investor, the average trade size on the New York Stock Exchange ("NYSE") rose from 495 shares in 1975 to 1,684 in 1992 (with a high of 2,303 shares in 1988) (Exhibit 14). As the average retail customer trade size is 300 shares, it is clear that the small retail trade accounts for an increasingly smaller percentage of activity on the NYSE.[2]

Individual investor activity in relation to institutional activity is greater in NASDAQ stocks than in NYSE stocks, although institutions' interest in NASDAQ stocks has increased over the past decade. The top 100 NASDAQ stocks have considerable institutional activity. The next several hundred NASDAQ stocks are receiving more institutional interest due to the extension of indexation and trading strategies to the middle and small capitalization indexes.

1. The Division collected information and data on the profile of the public investor from several sources. The information and data have been compressed into this narrative description. A number of exhibits in the Market 2000 Study contain the raw data referred to in this appendix.

2. This is partly due to the declining direct participation of individual investors and partly to the migration of small order flow away from the NYSE.

Appendix II

Intermarket Trading System

A. Introduction

The Intermarket Trading System ("ITS") is a subsystem of the National Market System ("NMS") approved by the Securities and Exchange Commission ("Commission") pursuant to Section 11A of the Securities Exchange Act of 1934 ("Exchange Act") and Rule 11Aa3-2.[1] ITS was developed to facilitate intermarket trading in exchange-listed equity securities based on the current quotation information emanating from the linked markets.[2] By linking eight national securities exchanges and the National Association of Securities Dealers' ("NASD") Nasdaq Stock Market, Inc. ("NASDAQ"),[3] ITS enables a broker or dealer who is physically present in one market center to execute orders, as principal or agent, in an ITS security at another market center.

As of December 31, 1993, 2,922 securities were eligible for trading through ITS. Generally, these were stocks listed on the American Stock Exchange ("Amex") and the New York Stock Exchange ("NYSE"), and traded by the regional exchanges pursuant to unlisted trading privileges and by third market dealers. During 1993, 2,673,468 trades were executed through ITS (10,567 average daily trades) totalling 2,906,501,300 shares (11,488,147 average daily shares). Trades in NYSE-listed securities executed through ITS in 1993 accounted for approximately 3.5% of the consolidated tape volume (Tape A).

ITS has both benefited the markets, broker-dealers, and investors and contributed to the implementation of the NMS. This Appendix examines the history and operation of ITS, the performance of ITS during critical market events, and commentators' views regarding ITS. The Division also recommends improvements to ITS.

B. History

1. Intermarket Linkage

In 1976, representatives of the Amex, Boston Stock Exchange, Inc. ("BSE"), Chicago Stock Exchange, Inc. ("CHX"), NASD, NYSE, and Philadelphia Stock Exchange, Inc. ("Phlx") formed the National Market Association ("NMA"). The Cincinnati Stock Exchange, Inc. ("CSE") joined the NMA later that year. The NMA was created to analyze means for implementing the NMS, which was called for by Congress in the Securities Acts Amendments of 1975.[4]

The NMA focused on the NMS goals of limit order protection and increased competition between and among marketplaces for listed securities. It proposed the Intermarket Execution System ("IME"), to link electronically the competing market centers.[5] The NMA believed that such a system would allow market centers to be independent and competitive with full and free access to each other, while protecting public limit orders to the maximum extent practical. The NMA also believed that the IME could be designed quickly and at a minimum cost. The proposed IME included the ability to execute orders in another market center, coordinate openings, and protection of public limit orders when blocks of securities were traded outside the composite quote.

In assessing the NMA's proposed system, the Commission noted that the IME would permit orders to be routed directly from one market to another, which would provide enhanced competition among market centers for listed securities and a means for increased protection of limit orders.[6] The Commission also noted, however, that the self-regulatory organizations ("SROs") had not agreed upon rules applicable to the IME and that it was unlikely that the IME would be implemented voluntarily. Implementation would require Commission intervention.[7]

In 1978, the Commission issued a policy statement on the development of the NMS ("1978 Statement").[8] In that statement, the Commission called for the prompt development of comprehensive market linkage and order routing systems to permit the efficient transmission of orders: (1) among the various markets for qualified securities, whether on an exchange or over-the-counter ("OTC"), and (2) from brokers and dealers to all markets. The Commission believed that communications and data processing facilities that link all qualified markets and permit orders in qualified securities to be transmitted promptly and efficiently from brokers or dealers to any qualified market, and from one such market to another, were necessary to increase the opportunities for brokers to secure best execution of their customers' orders. They also were necessary to ensure effective competition among qualified markets and to achieve the purposes of the NMS.

The Commission indicated that two types of facilities were needed as mechanisms to link qualified markets. The first was an intermarket order routing system that would permit orders for the purchase and sale of multiply traded securities to be sent directly from any qualified market to another market promptly and efficiently. The second was a universally available message switch that permitted any broker or dealer to route orders, on an order-by-order basis, for the purchase or sale of qualified securities from its offices to any qualified market trading in that security.[9]

In 1978, the Amex, BSE, NYSE, Phlx, and Pacific Stock Exchange, Inc. ("PSE"), filed a plan ("ITS Plan") with the Commission for the implementation of the ITS, based upon the IME.[10] The Commission approved the plan pursuant to Section 11A(a)(3)(B) of the Exchange Act.[11] The NYSE and the Phlx then linked their markets through ITS and intermarket trading commenced in 11 multiply traded securities in April 1978. The PSE, BSE, CHX, and Amex linked their markets to ITS by the end of 1978. The CSE became a participant in 1981,[12] when it was linked by manual interface between the CSE's National Securities Trading System ("NSTS") and ITS.[13] The NASD became a participant in 1982 through an automated link between the NASD's Computer Assisted Execution System ("CAES") and ITS.[14] The Chicago Board Options Exchange, Inc. ("CBOE") became an ITS participant in 1991.[15]

The ITS Plan responded to the request in the Commission's 1978 Statement that the SROs take prompt steps to link all qualified markets in a comprehensive, efficient, intermarket order routing system.[16] The Commission also had encouraged prompt development of a universal message switch to complete the linkage and order routing system that the Commission deemed necessary for the development of the NMS.[17] The Commission, however, deferred consideration of a universal message switch in 1979 because the NYSE and the Amex had offered their message switch to all market centers who desired such a linkage.[18] The Commission also stated that enhanced market linkage systems, such as ITS, might diminish the need to develop a system capable of order-by-order routing from upstairs offices to all market centers, at least from the standpoint of ensuring satisfaction of a broker's best execution responsibility.[19]

As discussed below, the ITS participants implemented several amendments to the ITS Plan to provide uniform rules governing intermarket trading of listed securities. The ITS Plan provides uniform rules governing: (1) trade-throughs, to provide price protection of customer orders; (2) block trades, to enable other markets to derive the benefit of a block without breaking it up; (3) pre-openings, to enable other markets to participate in the opening of a security; and (4) dispute resolution, to enable efficient resolution of disputes between market centers.

2. ITS/CAES Interface

In 1980, the Commission adopted Rule 19c-3 under the Exchange Act.[20] Rule 19c-3 requires that exchanges amend any rules that limited or conditioned exchange member firms from making markets in listed securities off an exchange ("off-board trading restrictions"). Specifically, Rule 19c-3 precludes off-board trading restrictions from applying, with certain exceptions, to any reported security: (1) that was not traded on an exchange prior to April 26, 1979, or (2) that was traded on an exchange on April 26, 1979 but that ceased to be traded on an exchange for any period of time thereafter ("Rule 19c-3 securities"). In adopting Rule 19c-3, the Commission considered the benefits of providing increased competition between OTC and exchange markets and in providing brokers, dealers, and investors with certain operational and cost efficiencies.[21]

In 1981, the Commission issued an order ("Implementation Order") that required implementation of an automated interface between the ITS and the NASD's CAES.[22] The NASD developed CAES to enable members to direct agency orders of up to 1,000 shares in both NASDAQ securities designated NMS ("NASDAQ/NMS") and exchange-listed securities to market makers for automatic execution. The automated interface between ITS and the NASD's CAES commenced operation in May 1982. The ITS/CAES interface permits members of participant markets to execute transactions in Rule 19c-3 securities between the exchanges and the OTC market.

In issuing the Implementation Order, the Commission noted that the absence of an efficient link between exchange and OTC markets in listed securities was frustrating progress toward important objectives of the NMS. First, the failure to achieve such a linkage inhibited a broker's ability to ensure best execution of customer orders. Second, without such a link in place, fair competition between and among different types of trading markets and market professionals was severely impeded because OTC market makers had limited ability either to interact with the vast majority of retail orders that were routed to the primary exchange markets or to attract additional order flow through their displayed quotations.

The ITS/CAES interface is designed to provide for execution of orders routed to exchange floors in the OTC market where more favorable prices are offered by OTC market makers. Conversely, the ITS/CAES interface provides OTC market makers the ability for rapid execution of their orders on exchange floors. In 1979, when the Commission proposed Rule 19c-3, third market trading in NYSE-listed securities accounted for only 0.6% of total consolidated trades in those stocks, and only 1.9% of total consolidated share volume. As of December 31, 1993, third market trading accounted for 9.6% of all reported trades and 7.4% of reported share volume.

3. CSE/NSTS Interface

In 1981, the CSE was linked to ITS through a manual interface between the CSE's NSTS and ITS.[23] In 1986, the Commission approved amendments to the ITS Plan to provide for an automated interface between ITS and NSTS.[24]

NSTS is an electronic securities communication and execution system through which bids and offers of public orders and competing dealers are consolidated for review and execution. The NSTS links exchange and "upstairs" market makers in physically dispersed locations. In addition to displaying limit orders, CSE quotes, and other market quotes, the NSTS matches orders and quotes with identical prices in the system and executes them electronically based on programmed price/time and agency/principal priorities. The NSTS enables CSE members to participate in the system by entering into computer terminals bids and offers for securities for their own account and as agent for their customers' accounts without the necessity of maintaining a presence on the floor of any other exchange.

C. ITS Operation

ITS provides facilities and procedures for: (1) the display of composite quotation information at each participant market so that brokers can readily determine the best available price for a particular security,[25] (2) the execution of orders between broker-dealers at respective ITS market centers, and (3) the coordination of market openings among the linked markets. A broker may execute orders in another market center by means of a computerized communications system that consists of a central computer, high-speed transmission lines, and input/output devices located on the floors of participating exchanges.

1. ITS Commitments

One of the features of ITS is that it allows broker-dealers to look beyond their own market to reach better bids or offers being displayed at other participating ITS market centers. This is accomplished by entering an order, known as a "commitment to trade," into a computer terminal located on the floor of a participating exchange, or for

ITS/CAES market makers, on the premises of the CAES market makers. A commitment to trade enables a member, located in one participant market, to buy from or sell to members of other participant markets.

A commitment to trade is delivered or queued for delivery to the destination market center output terminal in seconds.[26] Any commitment to trade entered into the system is a firm obligation for a fixed period of time on the part of its originator to buy or sell the specified security. Generally, the commitment is good for either one minute (T-1) or two minutes (T-2).[27] If the bid or offer is still available when the commitment reaches the destination market center or if a better price is available, and if the rules of the market center permit execution at that price, the destination market center can accept the commitment and execute the transaction at the bid or offer price. The destination market center reports the trade to the Consolidated Tape for dissemination under the Consolidated Tape Association ("CTA") Plan. The execution is reported back to the originating and receiving participant markets.

If the receiving market does not accept the commitment within specified time period (T-1 or T-2), the commitment automatically expires. The receiving market also may cancel the commitment, if, for example, the originating market center attempts to execute a commitment at a price better than the receiving market's displayed quotation. The Division understands that most commitments expire or are cancelled because they were not sent at the displayed quotation or because the quotation is no longer available when it reaches the receiving participant.

As discussed below, ITS participants have now implemented several improvements that enable ITS to handle a high volume of trading activity and to shorten the time needed to respond to ITS commitments. For example, the NYSE has integrated ITS into the electronic display book, which enables NYSE specialists to receive, send, and respond to ITS commitments using the electronic books. These improvements have reduced the response time to ITS commitments and, in turn, the percentage of expired commitments.

2. Trade-throughs and Locked Markets

In its 1979 Status Report, the Commission designated nationwide price protection as a critical NMS goal.[28] In setting this goal, the Commission stated that it believed that nationwide price protection -- whereby any appropriately displayed public limit order for a qualified security is ensured of receiving an execution prior to any execution by a broker or dealer at an inferior price -- should be a basic characteristic of the NMS. To this end, the Commission encouraged the ITS participants to adopt a trade-through rule to provide remedies if a broker in any ITS market center executes an order at a price less favorable to a customer than the price displayed by any other ITS market center.[29] In 1981, the Commission approved proposed rule changes by the ITS participants to adopt ITS trade-through and locked market rules.

a. Trade-through Rule. A trade-through occurs when an ITS participant initiates a purchase of an ITS security at a price that is higher than the price at which the security is being offered at another ITS participating market; or initiates the sale of an

ITS security at a price that is lower than the price at which the security is being bid at another ITS participant.[30] Members of participant markets are required to avoid initiating a trade-through when purchasing or selling, either as principal or agent, any ITS security on the participant market or when sending a commitment to trade through ITS.

In the event that a trade-through occurs and the aggrieved party (the market displaying the quote that was traded through) makes a timely complaint, the participant who initiated the trade-through must respond as promptly as practical to the aggrieved party's complaint. The ITS Plan requires the member to notify the aggrieved party that either the member was relieved of his obligation under an applicable condition described in the rule or that the complaint is valid and corrective action is being taken pursuant to the rule.[31]

The procedures for corrective action vary depending upon whether the broker-dealer initiating the trade-through and the broker-dealer representing the contra side are executing orders as agents or for their own account. If both the initiating and contra broker-dealers acted for their own accounts, the trade-through is cancelled and removed from the consolidated transaction reporting system.[32] In contrast, if either broker-dealer executed an order that originated from off the floor (in the case of ITS/CAES market makers, agency orders), the initiating broker must satisfy, in its entirety, the bid or offer traded-through at the price of such bid or offer, or, if the initiating broker-dealer elects not to do so, the initiating and contra side broker-dealers must correct the price of their transaction to a price at which the trade-through would not have occurred.[33] The price correction must be reported in the consolidated system.[34]

Regardless of which corrective procedure is followed, the initiating broker-dealer also must ensure that the off-floor orders (in the case of ITS/CAES market makers, agency orders) executed in the transaction which constituted the trade-through receive: (1) the price at which the bid or offer traded through was satisfied, if it was satisfied; or (2) the adjusted price, if there was an adjustment, whichever is most beneficial to that order.

b. Locked Market Rule. A "locked market" occurs when an ITS participant disseminates a bid for an ITS security at a price that equals or exceeds the price of the offer ("locked offer") for the security from another ITS participant or disseminates an offer for an ITS security at a price that equals or is less than the price of the bid ("locked bid") for the security from another ITS participant. Subject to certain exceptions, if a locked market occurs and the locking participant receives a complaint through ITS from the party whose bid or offer was locked (the aggrieved party), the member responsible for the locking offer or bid must, as specified in the complaint, either promptly "ship" (*i.e.*, satisfy through the system the locked bid or offer up to the size of the locking bid or offer) or "unlock" (*i.e.*, adjust his locking offer or bid so as not to cause a locked market). If the complaint specifies "unlock," the locking member may nevertheless ship instead.

3. Block Trade Policy

The ITS trade-through rule does not apply to transactions that are, or are a part of, a block trade.[35] The ITS block trade policy provides that the member who represents a block-size order(s) shall at the time of execution of the block trade send, or cause to be sent, through ITS to each participating ITS market center displaying a bid (or offer) superior to the execution price a commitment to trade at the execution price and for the number of shares displayed with that market center's better-priced bid (or offer). This policy is intended to enable other markets to derive the benefit of the block without breaking it up.

4. Pre-opening Notification Application

The ITS pre-opening application enables an ITS participant who wishes to open his or her market in an ITS security to solicit any pre-opening interest in that security from other market markers registered in that security in other participant markets. This allows other ITS market makers to participate, as either principal or agent, in the opening transaction, which may ameliorate disparities between pre-opening orders.

The ITS pre-opening rule prescribes that if an ITS participant anticipates that the opening transaction price in the stock will represent a change from the security's previous day's consolidated closing price, by more than the "applicable price change," the market maker shall notify other participant markets by sending a pre-opening notification through ITS.[36]

The pre-opening rule applies whenever an "indication of interest" is sent to the CTA plan processor before trading of an ITS security reopens after a trading halt, even if the anticipated price is not greater than the applicable price change.[37]

5. Dispute Resolution

The ITS Plan provides procedures by which participants can obtain a non-binding opinion on a dispute between ITS participants on the application or interpretation of the ITS Plan and model rules.[38] A participant may request that a panel of operating committee members render an interpretive opinion on the appropriateness of a ruling made by another participant for any situation involving a loss of $5,000 or more.

Under this procedure, representatives of the affected participants present the dispute to one or more agreed-upon ITS operating committee members for a non-binding, non-precedent setting opinion. All routine SRO surveillance reviews regarding the initial ruling must be completed before parties can seek assistance pursuant to this procedure. Opinions are subject to periodic review by the ITS operating committee.

D. ITS Performance During the 1987 and 1989 Market Breaks

During the 1987 Market Break, ITS experienced severe problems, most of which resulted from operational difficulties.[39] The Division determined that ITS virtually ceased to function during periods when additional order handling and market making capacities were most important.[40] ITS's lack of flexibility delinked the markets, substantially reduced market making capability on the regional exchanges, and caused broker-dealers to place more pressure on NYSE order processing systems. Moreover, the unavailability of ITS increased financial risks to regional specialists, reduced their ability to lay off inventory positions acquired from market making activities, and contributed to a reduction in volume guarantees on regional automated execution systems.[41] As a result, firms rerouted more orders to the NYSE, thus placing additional stress on the NYSE's order handling systems.

To rectify the problems occurring during the 1987 Market Break, the Division recommended that the NYSE separate the printing functions of its terminals from other NYSE systems, such as Designated Order Turnaround System ("DOT"), to facilitate the printing of ITS commitments.[42] In addition, the Division recommended that ITS adopt default procedures to provide that, when a commitment to trade is not accepted or rejected within the applicable two minute time frame, ITS automatically would execute a report based on the commitment price or the then current quotation for the security (whichever is better) in the receiving market.[43] The Division also stated that the 1987 Market Break revealed a need to review several ITS procedures, including ITS complaint procedures, pre-opening procedures after a trading halt, and communications among the ITS participant markets.[44]

Following the 1987 Market Break, the ITS participants took a number of steps to improve their computer and communications facilities. The ITS participants implemented systems enhancements to their order routing and execution systems. These enhancements ranged from adding computer hardware to revising software protocols and developing additional back-up facilities. The ITS participants also adopted new pre-opening procedures that apply after trading halts and when the primary market opens a stock within a certain range of the prior day's closing, and procedures to provide an effective dispute resolution mechanism. The ITS participants have not implemented a default execution requirement.

In contrast to 1987, the ITS performed exceptionally well during the October 1989 Market Break.[45] The NYSE routed orders received through DOT directly to the specialists' electronic display books, freeing up the capacity of its floor printers to handle ITS commitments.[46] As a result, on October 13, and 16, 1989, the NYSE link to ITS was completely operational.[47] Only the CSE reported operational problems during this period.

E. General Accounting Office Report

In March 1990, the U.S. General Accounting Office ("GAO") issued a report on the NMS.[48] Its examination concluded that effective trading linkages between the markets can enhance competition and may result in better prices for investors. In this regard, the GAO concluded that ITS has helped reduce market fragmentation through its electronic linkages. The report also found that the Commission has been effective in promoting ITS change when the Commission acts aggressively to overcome market inertia.

The GAO suggested that the Commission commence a comprehensive review of ITS in view of a number of incremental changes to ITS since the Commission's last comprehensive evaluation and the increase in trading volume.[49] The GAO recommended that the Commission determine the effectiveness of changes already made, the need for any additional changes, and the extent to which ITS continues to meet NMS goals. The GAO also recommended that the Commission review ITS's operational efficiency, effect on intermarket competition, and capability to handle future market crises.

The GAO further suggested that the Commission consider specific concerns in light of the 1987 Market Break: (1) the lack of pre-opening procedures after order-imbalance trading halts; (2) the lack of pre-opening procedures when the primary market opens the stock within a certain range of the prior day's closing; (3) the lack of time-stamping of floor broker orders by NYSE specialists; and (4) the lack of an effective dispute resolution mechanism. In addition, the GAO noted that some commentators had called for an enhancement to ITS to provide automatic execution for some orders.

As described above, the Division believes that the ITS participants have addressed these issues, including implementing system enhancements to handle a high volume of trading activity. The ITS participants also have adopted pre-opening and dispute resolution procedures recommended by the GAO and the Division.[50]

F. Market 2000 Comment Letters

ITS was established to address the market structure concerns raised at the time of the 1975 Amendments. In light of market developments since 1978, commentators to this study were asked whether ITS serves its original purposes, whether these purposes have changed, whether changes in ITS operations are necessary, and whether an enhanced linkage should be considered. Commentators also were asked whether the development of alternative trading mechanisms both on and off-exchange require a reconsideration of the scope of ITS. Finally, commentators were asked whether SRO concerns regarding a consolidated limit order book ("CLOB")[51] and a price protection rule[52] are still valid in light of technological advances and market developments since they were proposed.

Twelve commentators discussed ITS. Of these, the ITS participants believe that ITS has performed its limited, but intended, purpose and has contributed to the development of the NMS.[53] These commentators believe that the ITS design should not be changed. Several ITS participants, however, recommend improvements to ITS to facilitate the continued development of an NMS. Commentators who are not ITS participants state that ITS has provided a limited intermarket linkage.[54]

The ITS participants believe that ITS has performed its intended purpose. The Amex, NYSE, NASD, and Bernard Madoff Investment Securities ("Madoff"), for example, stated that ITS has provided benefits to investors and to market participants. These participants comment that the ITS trade-through rule and block trade policy have benefited customer orders and have facilitated best execution of those orders. These participants also comment that ITS has enhanced competition between markets and market participants and has provided a means to layoff excess risk.

The NYSE is of the opinion that major changes to ITS are not necessary. The NYSE especially believes that automated execution systems should not be extended to ITS. The CSE and Madoff, while not proposing a link to automatic execution systems, recommend automating the processing of ITS commitments to trade by all participants. These participants believe that automated executions of commitments would provide efficient and fair executions.

The NYSE and Madoff do not believe that changes to ITS are needed to protect undisplayed limit orders, and they specifically reject the development of a CLOB. The NYSE states that the ITS trade-through rule and block trade policy adequately have addressed price protection of limit orders and that systems previously proposed to protect undisplayed limit orders were too costly. Madoff states that a CLOB would expose market makers to greater risk without ensuring additional liquidity away from orders in the CLOB. Madoff believes that competition for order flow, with mandatory trade reporting, trade-through rules, and a truly automated ITS, would ensure best execution for all participants in the NMS.

The Amex, CSE, Madoff, NASD, and regional exchanges, however do recommend improvements to ITS to provide a more efficient market linkage. The Amex and Madoff, for instance, recommend that all the markets quote the actual price at which buying and selling interest exists. The Amex and Madoff recommend that markets also display a representative size that accurately reflects market interest. These participants states that requiring markets to quote actual interest would facilitate price improvement and matching of customer orders. The regional exchanges believes that the ITS does not provide incentives to market makers to compete on the basis of their displayed quotations because orders are very rarely routed on the basis of quotations. The regional exchanges stated that it is more effective to compete for order flow by marketing quicker and cheaper executions than by attempting to attract orders through displayed quotations.

The NASD and Madoff believe that the ITS/CAES linkage should be expanded to include all ITS eligible securities and thus provide equal participation for all markets. They state that expanding the ITS/CAES linkage would heighten competition by offering an opportunity for third market makers to attract orders via superior quotations. Madoff state that restricting access to ITS by ITS/CAES market makers precludes Madoff from being fully competitive to other market centers. The NASD further contends that the prohibition against third market maker access to ITS reduces the overall efficiency of multiple trading for non-Rule 19c-3 securities.

The Amex and the regional exchanges recommend that all third market makers be required to register as ITS/CAES market makers. The Amex states that requiring all third market makers to register as ITS/CAES market makers would subject all market participants to ITS price protection rules, which would facilitate best execution of customer orders and competition between markets and market participants.

The CSE recommends eliminating the formula that restricts the amount of ITS activity CSE can route to other ITS market centers. The CSE contends that it has had to revert to manual processing on occasion to avoid violating the formula. The CSE believes that removing the formula is a necessary step in reestablishing a climate that discourages unnecessary regulatory burdens and encourages technical innovation, efficient executions, and fair competition.

Other commentators, who are not ITS participants, believes that ITS has not been successful. The Arizona Stock Exchange ("AZX") and Donald Weeden ("Weeden"), for example, believes that the ITS has not provided an effective linkage because ITS does not guarantee price and time priority. These commentators believes that a CLOB would allow for improved price discovery and best execution for customer orders. The Instinet Corporation believes that ITS has not facilitated market efficiency, but has provided a means for market makers and specialists on regional exchanges to lay off market making risk.

G. Discussion

The Division believes that ITS benefits the markets, broker-dealers, and investors. The ITS linkage increases the opportunities to secure best execution of customer orders, ensures effective competition among qualified markets, and achieves the purposes of the NMS established by the Congress in Section 11A of the Exchange Act.

The Division recognizes, however, that the ITS design is limited in scope. ITS is not, and was not intended to be, a complete intermarket linkage. ITS does not provide order-by-order routing of customer orders, a CLOB, or automated or default based execution systems; it does not guarantee price and time priority. Rather, ITS utilizes communications and technological components of other NMS facilities, including the Consolidated Tape and the Consolidated Quotation System ("CQS"), and provides uniform trading rules governing transactions in exchange-listed securities. This centralizes all buying and selling interest in exchange-listed securities, thus reducing fragmentation of the markets. This, in turn, facilitates best execution of investors' orders, and the opportunity for their orders to be executed without the participation of a dealer, regardless of the market in which the order originates.

Notwithstanding the limited scope of ITS, some commentators, including some ITS participants, believe that several improvements to ITS are needed to facilitate the continued development of an NMS. As discussed above, commentators' opinions varied widely on how ITS should be changed, if at all. Commentators' recommendations included: (1) implementation of a CLOB; (2) automation of executions of commitments; (3) a requirement that markets quote actual market interest;[55] (4) expansion of the ITS/CAES linkage to include all ITS eligible securities; (5) a requirement that all third market makers register as ITS/CAES market makers; and (6) elimination of the formula for outgoing CSE orders.

With respect to the first two recommendations, the Division believes that it is not necessary to change ITS's original purpose. Specifically, as discussed in the Market

2000 Report, the Division believes that it is not necessary at this time to expand ITS into a CLOB or to require automated executions of commitments.

The Division, however, encourages the ITS participants to continue enhancing ITS to improve its efficiency and reliability. As discussed, enhancements to ITS order routing and execution systems, implemented after the 1987 Market Break, have improved its efficiency, especially during periods of high trading volume. To further improve ITS operations, the ITS participants should continue development of a back-up system to be used in the event the ITS processing system is rendered inoperable.

With respect to the fourth recommendation, the Division encourages the ITS participants to consider methods of providing equal access to all markets. The ITS/CAES interface permits members of participant markets to execute transactions in Rule 19c-3 securities between the exchanges and the OTC market. The ITS Plan, however, does not permit OTC trading of non-Rule 19c-3 listed securities through the ITS/CAES interface.[56] When the Commission ordered the exchanges and the NASD to link through ITS, it limited the mandated link to Rule 19c-3 securities because the Commission concluded that the adoption of Rule 19c-3 heightened the need for an efficient linkage between the exchanges and the OTC market. Specifically, the possibility of the execution in the OTC market of a significant percentage of the total volume in multiply traded securities increased the need to enhance interaction of orders in all market centers to eliminate trade-throughs and to provide market makers in those securities the ability to compete for order flow through their displayed quotations. The Commission, however, believed that the interface might be expanded in the future to permit trading in all ITS securities.[57] The Commission urged the ITS participants, after they had the opportunity to observe the effects of trading Rule 19c-3 securities through the ITS/CAES interface, to consider permitting the inclusion of all ITS securities through the interface.[58]

The Division believes that the ITS/CAES interface has enhanced the achievement of the NMS, and has facilitated competition between and among different types of trading markets and market professionals and brokers' ability to ensure best execution of customer orders. The Division also believes that, although third market trading has increased over the past several years, market quality in listed stocks has improved. In the Market 2000 Report, the Division recommends that the NASD amend Schedule G of its By-Laws to impose certain fair trading rules on the third market and that the NASD develop a program specifically designed to enhance oversight examination of the third market. Once these two recommendations are addressed, the ITS participants should expand the ITS/CAES interface to all ITS stocks.[59]

Regarding the final recommendation, the CSE argued that it is the only exchange subject to a restriction on the number of commitments it may send through ITS, which requires it to revert to manual processing on occasion to avoid violating the formula. The ITS participants included this restriction to limit the use of NSTS as an order delivery system primarily to route orders to ITS.[60] The Division encourages ITS participants to consider whether the CSE has adequately addressed concerns regarding its use of ITS.

1. The Commission issued a temporary order ("ITS Temporary Approval Order") on April 14, 1978, authorizing participating exchanges to act jointly in planning, developing, operating, and regulating the ITS in accordance with a plan filed with the Commission contemplating the implementation of ITS. Securities Exchange Act Release No. 14661 (Apr. 14, 1978), 43 FR 17419. On August 11, 1978, the Commission approved an extension of ITS for an additional year and on September 21, 1979, the Commission extended approval through January 31, 1983. Securities Exchange Act Release No. 15058 (Aug. 11, 1978), 43 FR 36732; Securities Exchange Act Release No. 16214 (Sept. 21, 1979), 44 FR 56069. On January 27, 1983, the Commission authorized the participants to operate ITS on an indefinite basis. Securities Exchange Act Release No. 19456 (Jan. 27, 1983), 48 FR 4938 (Feb. 3, 1983).

2. Securities eligible for trading through ITS include securities listed or admitted to unlisted trading privileges on the New York Stock Exchange, Inc. ("NYSE") or the American Stock Exchange, Inc. ("Amex"), and securities listed or admitted to unlisted trading privileges on a regional exchange which substantially meet the NYSE or Amex listing requirements.

3. Participants to the ITS Plan include the Amex, the Boston Stock Exchange, Inc. ("BSE"), the Chicago Board Options Exchange, Inc. ("CBOE"), the Chicago Stock Exchange, Inc. ("CHX"), the Cincinnati Stock Exchange, Inc. ("CSE"), the National Association of Securities Dealers, Inc. ("NASD"), the NYSE, the Pacific Stock Exchange, Inc. ("PSE"), and the Philadelphia Stock Exchange, Inc. ("Phlx").

4. Pub. L. No. 94-29, 89 Stat. 131 (1975).

5. *See* SUBCOMM. ON OVERSIGHT AND INVESTIGATIONS AND THE SUBCOMM. ON CONSUMER PROTECTION AND FINANCE OF THE COMM. ON INTERSTATE AND FOREIGN COMMERCE, 95TH CONG., 1ST SESS. 91-146, THE FUNCTIONING AND ADMINISTRATION OF THE SECURITIES ACTS AMENDMENTS OF 1975 - NATIONAL MARKET SYSTEM AND NATIONAL CLEARANCE AND SETTLEMENT SYSTEM (Comm. Print 1975).

6. Securities Exchange Act Release No. 13662 (June 23, 1977), 42 FR 33510.

7. *Id.*

8. Securities Exchange Act Release No. 14416 (Jan. 26, 1978), 43 FR 4354.

9. The Commission specifically commented on the relation of the ITS (which was still in the planning stage at that time) to the desired market linkage facility, stating that the need to develop and implement a new intermarket order routing system to link all qualified markets could be obviated if participation in the ITS market linkage then under development was made available on a reasonable basis to all qualified markets and if all qualified markets joined that linkage. *Id.*

   In a March 1979 Status Report on the Development of a NMS ("1979 Status Report"), the Commission deferred consideration of order-by-order routing of retail orders to the best market. Securities Exchange Act Release No. 15671 (Mar. 22, 1979), 44 FR 20360 (Apr. 4, 1979).

10. Subsequently, the CHX joined ITS in April 1978.

11. 15 U.S.C. § 78k-1(a)(3)(B); *see supra* note 1.

12. Securities Exchange Act Release No. 17532 (Feb. 10, 1981), 46 FR 12919 (Feb. 18, 1981).

13. The CSE's NSTS is an electronic securities communication and execution system through which bids and offers of public orders and competing dealers are consolidated for review and execution. In addition to displaying limit orders and CSE and other market quotes, the NSTS matches orders and quotes at the same price in the system and executes them electronically based on programmed

price/time and agency/principal priorities. On June 23, 1986, the Commission approved amendments to the ITS Plan to provide, among other things, an automated interface between ITS and NSTS. Securities Exchange Act Release No. 23365 (June 23, 1986), 51 FR 23865 (July 1, 1986); Securities Exchange Act Release No. 22340 (Sept. 20, 1985), 50 FR 30209 (Sept. 27, 1985).

14. Securities Exchange Act Release No. 18713 (May 6, 1982), 47 FR 20413 (May 12, 1982).

15. Securities Exchange Act Release No. 28874 (Feb. 12, 1991), 56 FR 6889 (Feb. 20, 1991).

16. Securities Exchange Act Release No. 14661 (Apr. 14, 1978), 43 FR 17419 (ITS Temporary Approval Order).

17. *Id.*; *see also* Securities Exchange Act Release No. 14885 (June 23, 1978), 15 SEC Docket 138. The Commission solicited comments on whether order-by-order routing of retail orders to the market center disseminating the best quotation should be a characteristic of the NMS. In response to the Commission's request, commentators opposed any Commission mandate to establish a single order routing facility. The commentators argued that this would eliminate broker discretion by forcing automatic routing of all orders on the basis of displayed quotations. The commentators argued that brokers must consider factors other than price in routing orders, including the size of the order, execution and clearing costs, perceptions as to the reliability of the displayed quotation, and the likelihood of obtaining an execution at a price more favorable than indicated by the displayed quotation. *See* 1979 Status Report, *supra* note 9.

18. The NYSE generally expressed support for enhancing order switching mechanisms but noted that a variety of such facilities, including its own common message switch, were available. The NYSE recommended that the NYSE/Amex facilities be modified to provide other exchanges linkage to their message switch. *See* Letter from James E. Buck, Secretary, New York Stock Exchange, to George A. Fitzsimmons, Secretary, SEC (Apr. 17, 1978); Letter from Robert Birnbaum, President, American Stock Exchange, to George A. Fitzsimmons, Secretary, SEC (Apr. 24, 1978); *see also* 1979 Status Report, *supra* note 9.

19. The Commission, however, stated that it continued to believe that a broker routing retail orders in a particular security to a single market must at least make periodic assessments of the quality of competing markets to assure that it is taking all reasonable steps under the circumstances to seek out best execution of customers' orders.

20. Securities Exchange Act Release No. 16888 (June 11, 1980), 45 FR 41125 (June 18, 1980).

21. *Id.*

22. The order required the ITS participants and the NASD by March 1, 1982, to implement an automated interface between the ITS and the NASD's NASDAQ system, as enhanced to include, among other things, an order routing and automated execution capability, and to submit to the Commission proposed amendments to the ITS Plan reflecting the inclusion of the NASD as an ITS participant. Securities Exchange Act Release No. 17744 (Apr. 21, 1981), 46 FR 23856 (Apr. 28, 1981). On March 4, 1982, the Commission deferred the implementation date of the interface from March 1, 1982 to May 1, 1982. Securities Exchange Act Release No. 18537 (Mar. 4, 1982), 47 FR 10682 (Mar. 11, 1982). On May 6, 1982, the Commission adopted final amendments to the ITS Plan to provide for the inclusion of the NASD in ITS. Securities Exchange Act Release No. 18713 (May 6, 1982), 47 FR 20413 (May 12, 1982).

23. Securities Exchange Act Release No. 17532 (Feb. 10, 1981), 46 FR 12919 (Feb. 18, 1981).

24. Securities Exchange Act Release No. 23365 (June 23, 1986), 51 FR 23865 (July 1, 1986).

25. Through the Consolidated Quotation System ("CQS"), members of participant markets can readily obtain the best bid price and the best offer price for each ITS security.

26. At the time of transmission, each commitment undergoes validation procedures. If the commitment passes the validation procedures, ITS assigns a unique commitment identifier number (a "CID") to the commitment, time stamps it, and logs it on a mass storage device (the "daily log"). ITS also sends a transmission acceptance message to the participant market that originated the commitment. The commitment is then routed to the destination participant market.

27. The sender of the commitment may designate which of the two options is to apply. If a commitment is not accepted during the designated time period, the commitment is automatically cancelled.

28. *See supra* note 9.

29. The Commission also proposed a rule which would have required intermarket price protection for public limit orders. *See* Securities Exchange Act Release No. 15770 (Apr. 26, 1979), 44 FR 26692. The Commission withdrew the proposed rule in Securities Exchange Act Release No. 31344 (Oct. 21, 1992), 57 FR 48581 (Oct. 27, 1992).

30. The ITS Plan further divides trade-throughs as exchange trade-throughs or third participating market center trade-throughs. A third participating market center trade-through occurs when the purchase or sale of the security traded-through is initiated by sending a commitment to trade through ITS. For example, an ITS participant purchases an ITS security by sending a commitment to trade through ITS and such commitment results in an execution at a price which is higher than the price at which the security is being offered at another ITS participant or sells an ITS security by sending a commitment to trade through ITS and such commitment results in an execution at a price which is lower than the price at which the security is being bid for at another ITS participant. Securities Exchange Act Release No. 17704 (Apr. 9, 1981), 46 FR 22520 (Apr. 17, 1981).

31. The rule does not apply under certain conditions, such as: (1) the size of the bid or offer traded-through was for 100 shares; (2) the member who initiated the trade-through made every reasonable effort to avoid the trade-through, but was unable to because of a system or equipment failure or malfunction; (3) the transaction which constituted the trade-through was not a regular way contract; (4) the trade-through occurred during "unusual market conditions;" (5) the bid or offer traded-through had caused a locked market in the ITS security which was the subject of such bid or offer; (6) the complaint is not received within 5 to ten minutes (depending on whether the trade-through was an exchange or third market trade-through; and (7) in the ITS/CAES market, the commitment received by an ITS/CAES market maker which caused the trade-through was originated by an exchange participant.

32. In the case of ITS/CAES market makers, if ITS/CAES market makers are on both sides of a principal trade, the price of the transaction which constituted the trade-through shall be corrected, by agreement of the parties, to a price at which the trade-through would not have occurred, and the price correction shall be reported in the consolidated system; otherwise: (1) the initiating broker shall satisfy, or cause to be satisfied, the bid or offer traded through in its entirety at the price of such bid or offer, or (2) if the initiating ITS/CAES market maker elects not to do so, the transaction shall be voided.

33. In the case of a third participating market center trade-through, the initiating broker-dealer must obtain the agreement of the contra broker-dealer.

34. If ITS/CAES market makers are on both sides of a trade and one or both are acting as agent, the price of the transaction which constituted the trade-through shall be corrected, by agreement of the parties to a price at which the trade-through would not have occurred, and the price correction shall be reported in the consolidated system; otherwise, the initiating ITS/CAES market maker shall satisfy,

or cause to be satisfied, the bid or offer traded-through in its entirety at the price of such bid or offer.

35. Under the ITS block trade policy, a block trade is a trade that:

(A) involves 10,000 or more shares of a common stock traded through ITS or a quantity of any such security having a market value of $200,000 or more ("block size");

(B) is effected at a price outside the bid or offer displayed from another ITS participating market center; and

(C) involves either
(i) a cross of block size (where the member represents all of one side of the transaction and all or a portion of the other side), or
(ii) any other transaction of block size (*i.e.*, in which the member represents an order of block size on one side of the transaction only) that is not the result of an execution at the current bid or offer on the exchange.

Contemporaneous transactions at the same price filling an order or orders represented by a member of a participant market constitutes a single transaction. ITS Plan, Exhibit C, § (a)(1).

36. The ITS Plan defines "applicable price changes" as:

Security	Consolidated Closing Price	Applicable Price Change (more than)
Network A	Under $15	1/8 point
	$15 or over*	1/4 point
Network B	Under $5	1/8 point
	$5 or over	1/4 point

* If the previous day's consolidated closing price of a Network A eligible security exceeded $100 and the security does not underlie an individual stock option contract listed and currently trading on a national securities exchange, the applicable price change is one point.

See ITS Plan, § 7(a).

37. *Id.*; *see also* Securities Exchange Act Release No. 27472 (Nov. 24, 1989), 54 FR 49829 (Dec. 1, 1989).

38. ITS Plan, § 4(e).

39. The unusually high volume of trades caused a substantial number of expired commitments due to queuing problems caused by printer delays. Commitments from the regional exchanges to the NYSE specialists were often delayed beyond the two minute expiration period during which commitments may be executed. Therefore, during the high volume periods on October 19 and 20, 1987, some NYSE specialists did not have the opportunity to accept regional commitments to trade because the orders had expired before they arrived at the specialists' posts. DIVISION OF MARKET REGULATION, SEC, THE OCTOBER 1987 MARKET BREAK (1988) ("1987 Market Break Report").

40. *Id.*

41. Regional exchanges also expressed concern regarding the absence of any requirement in the ITS Plan that NYSE specialists issue pre-opening notifications prior to resuming trading after an order imbalance halt -- the ITS Plan required notifications only after a regulatory halt.

42. 1987 Market Break Report, *supra* note 39, at 7-48.

43. *Id.*

44. *Id.* at 7-49.

45. DIVISION OF MARKET REGULATION, SEC, MARKET ANALYSIS OF OCTOBER 13, AND 16, 1989 (1990) ("1989 Market Analysis").

46. The electronic display book shows both market and limit orders for each of the specialist's assigned stocks on a computer screen.

47. 1989 Market Analysis, *supra* note 45, at 49.

48. GAO, SEC ACTION NEEDED TO ADDRESS NATIONAL MARKET SYSTEM ISSUES, GAO/GGD-90-52 (Mar. 1990).

49. The Commission issued studies in 1981 and 1982 on the operation of ITS. DIRECTORATE OF ECONOMIC AND POLICY ANALYSIS, A MONITORING REPORT ON THE OPERATION OF THE INTERMARKET TRADING SYSTEM (Feb. 1981); DIRECTORATE OF ECONOMIC AND POLICY ANALYSIS, A REPORT ON THE OPERATION OF THE INTERMARKET TRADING SYSTEM: 1978 - 1981 (June 1982).

50. In 1990, the U.S Congress, Office of Technology Assessment ("OTA"), criticized the Commission for not insisting on more competition among market facilities. The OTA report focused on the Commission's approval of ITS without pressing for an universal message switch which would encourage the regional specialists to compete more effectively by offering better quotations than the NYSE or Amex specialists. The OTA reported that regional exchanges compete with the NYSE and Amex through speed and reduced transaction costs, but that there is no inducement to compete by bettering NYSE and Amex quotations. Specifically, the OTA report stated that regional exchanges compete by offering less expensive services to brokers for the automatic execution of small trades, and enabling block positioners to complete crossed transactions without exposing orders to the NYSE specialist or customer orders on the NYSE floor. The OTA noted that this may pressure the major exchanges to reduce the cost of executing small transactions, but may deny customer orders routed to the NYSE floor an opportunity to participate in the crossed transaction. The OTA report concluded, however, that an universal message switch might not strengthen the regional exchanges as competitors with the NYSE, but might instead create an integrated electronic market in which all of the exchanges would become mere service centers for brokers and issuing companies and regional regulatory organs. At this time, the Division does not recommend that the Commission require the SROs to build an universal message switch. OFFICE OF TECHNOLOGY ASSESSMENT, U.S. CONGRESS, ELECTRONIC BULLS AND BEARS: U.S. SECURITIES MARKETS AND INFORMATION TECHNOLOGY, OTA-CIT-469 (Sept. 1990).

51. Securities Exchange Act Release No. 12159 (Mar. 2, 1976), 41 FR 19274.

52. Securities Exchange Act Release No. 15770 (Apr. 26, 1979), 44 FR 26692.

53. Letter from James R. Jones, Chairman and Chief Executive Officer, American Stock Exchange, to Jonathan G. Katz, Secretary, SEC (Dec. 8, 1992); Letter from Bernard L. Madoff and Peter B. Madoff, Bernard L. Madoff Investment Securities ("Madoff"), to Jonathan G. Katz, Secretary, SEC (Oct. 16, 1992); Letter from Joseph R. Hardiman, President, National Association of Securities Dealers, to Jonathan G. Katz, Secretary, SEC (Nov. 20, 1992); Letter from William H. Donaldson, Chairman and Chief Executive Officer, New York Stock Exchange, to Jonathan G. Katz, Secretary,

SEC (Nov. 24, 1992); Letter from William G. Morton, Jr., Boston Stock Exchange, John L. Fletcher, CHX, Leopold Korins, Pacific Stock Exchange, and Nicholas A. Giordano, Philadelphia Stock Exchange ("Regional Exchanges"), to Jonathan G. Katz, Secretary, SEC (Dec. 11, 1992).

54. Letter from Charles R. Hood, Senior Vice President and General Counsel, Instinet Corporation ("Instinet"), to Jonathan G. Katz, Secretary, SEC (Oct. 20, 1992); Letter from Donald E. Weeden, Chief Executive Officer, Weeden & Co. ("Weeden"), to Jonathan G. Katz, Secretary, SEC (Sept. 1, 1992); Letter from R. Steve Wunsch, President, AZX, Inc. ("AZX"), to Jonathan G. Katz, Secretary, SEC (Oct. 1, 1992).

55. As discussed in the Market 2000 Report, the Division believes that markets should display all limit orders that better the inside market.

56. On June 4, 1991, the NASD introduced two motions to the ITS participants that would have allowed ITS/CAES market makers, that are not members of an exchange, to trade non-Rule 19c-3 securities through the ITS/CAES interface. Both motions failed for lack of a second. On July 3, 1991, the NASD filed an appeal with the Commission to petition review of the ITS failure to act on the NASD's request. File No. 3-7540.

57. Securities Exchange Act Release No. 17744 (Apr. 21, 1981), 46 FR 23856 (Apr. 28, 1981).

58. *Id.*

59. Regarding the fifth recommendation, the NASD has filed a proposed rule change with the Commission that would require third market makers, registered with the NASD as CQS market makers, to register as ITS/CAES market makers. Securities Exchange Act Release No. 32573 (July 1, 1993), 58 FR 36726 (July 8, 1993). The NASD also has stated that it would consider extending ITS price protection rules to all third market transactions if ITS provides access to third market makers, not registered as CQS market makers, similar to exchange floor brokers' access to ITS. *See* Letter from Joseph R. Hardiman, President and Chief Executive Officer, National Association of Securities Dealers, to Jules L. Winters, Executive Vice President, Operations, American Stock Exchange, John G. Weithers, Chairman, Chicago Stock Exchange, William G. Morton, Jr., Chairman and Chief Executive Officer, Boston Stock Exchange, Frederick Moss, Chairman, Cincinnati Stock Exchange, Donald Solodar, Executive Vice President, New York Stock Exchange, William W. Uchimoto, General Counsel, Philadelphia Stock Exchange; and Leopold Korins, Chairman and Chief Executive Officer, Pacific Stock Exchange (Sept. 4, 1991).

60. Securities Exchange Act Release No. 23365 (June 23, 1986), 51 FR 23865 (July 1, 1986).

Appendix III

Quotation and Transaction Reporting

A. Current Reporting Requirements

1. Quote Reporting Requirements.

Public quote reporting (*i.e.*, bid and offer prices) for equity securities is governed by Section 11A of the Exchange Act [1] and Rules 11Ac1-1 (the "Quote Rule") and 11Aa3-1 (the "Plan Rule") thereunder.[2] Under these rules, registered exchanges[3] and securities associations[4] are required to file quotation reporting plans to collect and transmit quotation information on a real-time basis for securities in their respective markets.[5] These quotes are made available to vendors for dissemination to the public.[6] The information that must be reported publicly, pursuant to the Quote Rule, includes: (1) the best bid, best offer, and size for each market trading the security; and (2) the consolidated best bid and offer.[7] If an exchange determines, however, that the level of trading activity or the existence of unusual market conditions is such that the exchange is incapable of collecting, processing, and making available "firm" quotations, the exchange is temporarily relieved of the responsibility for disseminating firm quotations upon notice to affected parties.[8]

Brokers and dealers also are required to report and honor their quotations under the Quote Rule.[9] Brokers and dealers, including dealers trading listed securities over-the-counter (*i.e.*, third market makers), must supply quotations to their exchange or association for dissemination to quotation vendors. The specialist or market maker quote must be firm so that it is obligated to execute any offer or bid at a price at least as good as its published bid or offer.[10] This requirement for firm quotations is limited to the market maker's published size limit. A market maker also may reject an order if it is in the process of updating its quotation.[11] Furthermore, an order may be rejected if a market maker is in the process of effecting a transaction in the security and, immediately after the completion of the transaction, communicates a revised bid or offer to its exchange or association.[12]

Proprietary trading systems ("PTSs") are not required to collect or transmit quotation information on a real-time basis.[13] As a result, the orders entered by PTS participants are communicated to other PTS participants only and are not reflected in the consolidated best bid and offer.[14]

The eight national securities exchanges and the National Association of Securities Dealers ("NASD") participate in the consolidated quotation system ("CQS"). Participants collect quotations from market makers in the various markets and make those quotations available to commercial vendors.[15] An "operating committee" composed of the CQS participants monitors CQS operations.[16] The Securities Industry Automation Corporation ("SIAC") manages the collection, processing, and dissemination of information.[17]

Participant exchanges collect quotation information when the exchange is open for trading. The exchanges furnish to SIAC the highest bid and the lowest offer communicated on the floor of that exchange by any broker or dealer for each security listed or admitted to unlisted trading privileges on that exchange that is a "subject security" within the meaning of the Quote Rule.[18] The exchanges are not required to submit bids or offers that are executed immediately after communication and any bids or offers communicated by a responsible broker or dealer, other than an exchange market maker, that are cancelled or withdrawn if not executed immediately after communication.

The NASD collects quotation information in listed stocks from over-the-counter ("OTC") market makers. It furnishes to SIAC the highest bid and lowest offer communicated otherwise than on the floor of an exchange by each NASD member of such association acting in the capacity of an OTC market maker (as defined in Rule 11Ac1-1)[19] for each security that is a "subject security." The NASD must also furnish an appropriate symbol identifying the broker or dealer that submitted the bid or offer. Each bid and offer for an eligible security furnished to SIAC must also be accompanied by the quotation size or aggregate quotation size for that bid or offer. CQS then calculates and disseminates the best bid and offer to vendors.

2. Transaction Reporting Requirements.

Public transaction reporting for equity securities is governed by Section 11A of the Exchange Act and Rules 11Aa2-1, 11Aa3-1, and 11Aa3-2.[20] Under these rules, each registered exchange and the NASD must file a transaction reporting plan regarding transactions effected on its market.

a. The Consolidated Tape. In March 1973, five exchanges[21] and the NASD (collectively "Participants") formed the Consolidated Tape Association ("CTA")[22] and established the Consolidated Tape to disseminate last sale transaction information for trades executed on any of the Participant exchanges or through the National Association of Securities Dealers Automated Quotation ("NASDAQ") system.[23] The CTA filed a plan with the Commission that set forth the rules for the operation of the Consolidated Tape and the rights and obligations of the Participants ("CTA Plan"). The CTA is comprised of individual voting members appointed by each Participant[24] and acts as the policymaking body for the Consolidated Tape.[25] The day-to-day operations of the Consolidated Tape, including the collection, processing, and dissemination of last sale transaction information, and the development and maintenance of a database to facilitate surveillance of the markets, are conducted by SIAC subject to the administrative oversight of the CTA. SIAC is also subject to oversight by the Commission as an exclusive registered securities information processor ("SIP").[26]

For each transaction, the Consolidated Tape disseminates the stock symbol of the security traded, the volume of the trade in round lots, and the price at which the transaction was executed. The information is disseminated through two low-speed networks ("Networks A and B")[27] and one high-speed network.[28] Network A disseminates last sale transaction information for securities listed on the NYSE, regardless of the market where the transaction was executed. Network B disseminates last sale transaction information for securities listed on the Amex, as well as securities listed on any other national securities exchange (except securities also listed on the NYSE), regardless of the market where the transaction was executed. The high-speed network disseminates data from both Network A and Network B.

The Consolidated Tape only disseminates information on trades in "eligible securities," including: (1) any common stock, long-term warrant, or preferred stock registered or admitted to unlisted trading privilege on the NYSE or the Amex, or, if a security meets the Amex listing criteria, listed on any other Participant exchange; (2) rights to buy an eligible security, so long as the right and the eligible security are listed on the same exchange; and (3) trust interests, limited partnership interests, certificates of deposit for common stock, and American Depositary Receipts.[29]

CTA Participants derive income from the fees charged to vendors and subscribers to the Consolidated Tape. Each network's net income is divided among the network's Participants based on a Participant's annual share of each network's net income. The annual share is calculated by dividing the total number of last sale transactions in the networks' eligible securities reported by the Participant during the year by the total number of last sale transactions reported by all of that network's Participants. Excluded from the calculation of net income are high-speed line revenues and expenses, and last sale transaction reports in eligible securities that a Participant has exclusive rights to trade or discretion to determine which other Participants may trade. Each Participant is responsible for its own costs of collecting and validating last sale reports and reporting them to SIAC.

b. Listed Securities. During the operating hours of the Consolidated Tape, *i.e.*, 9:30 a.m. to 5:15 p.m. Eastern Standard Time ("EST"), transactions in listed securities are reported in accordance with the CTA Plan.[30] Under "normal" conditions, not less than 90% of all transactions must be publicly reported within 90 seconds of execution. In practice, most trades are reported in a matter of seconds.[31] If a trade is not reported within the 90 seconds, the report must so indicate with the appropriate designation.[32]

Trade reports are submitted to SIAC. The information that is reported for each trade includes the price, the volume, and a market indicator. Transactions in the third market are reported through the NASD's Third Market Trade Reporting System, which interfaces with the Consolidated Tape reporting system.[33] In turn, SIAC reports to securities information vendors the information received from all the exchanges that has been consolidated during the hours of the Consolidated Tape.

c. OTC Securities. Transactions in OTC securities are reported through the trade reporting system operated by the NASD. NASDAQ securities designated National Market System ("NASDAQ/NMS securities") represent the top tier in that market and are subject to real-time reporting pursuant to a transaction reporting plan filed with the Commission by the NASD.[34] All NASD members must report securities transactions executed during normal market hours within 90 seconds after a trade. Transactions not reported within 90 seconds are designated as late and must include the time of execution.[35] The lower tier of NASDAQ stocks, NASDAQ Small-Cap, is also subject to real-time transaction reporting pursuant to Schedule D of the NASD By-Laws, but is not subject to a transaction reporting plan.[36]

d. PTSs. Trades effected on PTSs sponsored by broker-dealers are reported on a real-time basis to the trade reporting systems in the same manner as trades in the exchange and OTC markets. For example, for transactions on Instinet, the broker-dealers effecting the trade must report it according to the requirements of the NASD By-laws. Thus, trades effected during the hours of operation of the consolidated tape by or through a PTS registered as a broker-dealer are as transparent as trades effected on exchanges or NASDAQ.

e. After-Hours Trades. Trades effected outside the hours of operation of the Consolidated Tape are subject to limited reporting requirements. Third market trades in listed securities are reported on a weekly basis to the NASD.[37] NASDAQ/NMS and NASDAQ Small-Cap trades are similarly reported to the NASD on a weekly basis.[38] In addition, the Arizona Stock Exchange, Inc. ("AZX") (formerly Wunch Auction Systems, Inc.) does not publicly report its trades to the Consolidated Tape but only reports them to the NASD for regulatory purposes under a special arrangement.[39] AZX trades are made publicly available immediately after the 5:00 p.m. auction over a vendor, the Bridge Data Service.

The NYSE's Crossing Session I ("CSI") and Crossing Session II ("CSII") are exempt from the transaction reporting requirements. CSI, an NYSE closing-price session, was created to enable single-stock, single-sided closing price orders entered after 4:00 p.m EST as well as certain limit orders that migrated from the regular trading session, to be executed at 5:00 p.m. EST at the last price at which the stock traded during regular hours. Trades in CSI are not reported individually. Instead, the total volume for each stock in that session is reported.[40] CSII allows NYSE members to cross stock portfolios at aggregate prices. Only coupled orders that include at least 15 NYSE listed stocks with a total market value of at least $1 million can be traded. Crossing instructions are communicated to the NYSE via facsimile for immediate execution and confirmation until 5:15 p.m. EST. For trades in CSII, only total dollar and share volume for all stocks traded during the session are reported. The Commission granted the NYSE temporary exemptive relief from the requirement that the exchange disseminate on a consolidated basis trading volume for each of the component stocks in CSII.[41]

The NASD's NASDAQ International Service ("NASDAQ International") also is exempt from transaction reporting requirements. NASDAQ International supports an early-hours trading session in London ("European Session"), from 3:30 a.m. to 9:00 a.m. EST, on each U.S. business day that coincides with the business hours of the London financial markets. This system supports market making by NASD members in NASDAQ, NASDAQ/NMS, and exchange-listed securities.[42] The Commission originally granted the NASD a two-year exemption from the requirement that consolidated volume from other markets trading the same securities be reported.[43] The NASD, however, promised to work with the CTA towards future consolidation.[44] Because no other comparable U.S. market is open during the hours of NASDAQ International, the Commission also allowed the NASD to use its own facilities to disseminate market information on CTA securities.[45] The Commission further concluded that it was appropriate to grant a temporary exemption from the provisions of Rule 11Aa3-1 (requiring the NASD to disseminate transaction reports for reported securities).[46]

B. Historical Background

In the 1960s, the only information concerning securities trading that was available on a "real-time" basis was the trade information disseminated through the stock tickers of the Amex and the NYSE.[47] Real-time trade and quotation information was not publicly available from regional exchanges or the OTC market.

The need for a consolidated transaction reporting system had been discussed by the Commission as early as 1971.[48] At that time, the Commission believed that a consolidated transaction reporting system would be an essential component of a strong central market system.[49] At a minimum, the Commission envisioned that such a system would provide nationwide disclosure of price and volume information in all markets and quotations from all market makers. The Commission also called for the integration of third market makers in the reporting system.

With the Securities Act Amendments of 1975 ("1975 Amendments")[50] Congress advanced the concept of an NMS. One of the goals that Congress incorporated into Section 11A of the Exchange Act is the availability to brokers, dealers, and investors of information with respect to quotations for and transactions in securities.[51] At the time, Congress was concerned with market fragmentation due to geographically separate markets trading the same security. Congress believed that the wide dissemination of information regarding quotes and trades would ameliorate the effects of market fragmentation and envisioned that communications systems, particularly those designed to provide automated dissemination of last sale reports and quotation information with respect to securities, would form the heart of the NMS.[52]

1. The Consolidated Quotation Reporting System.

In 1972, the Commission proposed Rule 17a-14.[53] The proposed rule would have required that all exchanges and associations make the quotations of their members available, but would not have required that the quotes be firm. Comments on the proposed rule focused on the lack of: (1) any requirement to file reporting plans; and (2) any provision regarding quotation size. Two years later, Rule 17a-14 was re-proposed.[54] In response, the NYSE and the Amex questioned the Commission's authority to adopt the rule. The Commission deferred consideration of the proposed rule and requested that the exchanges amend any rules or practices that restricted access to or use of any quotation information disseminated by such exchange.[55] Shortly after the Commission announced that the required changes to exchange rules had been made, the 1975 Amendments, which clarified the Commission's authority to implement market transparency objectives, were adopted.

In July 1976, the Commission proposed Rule 11Ac1-1.[56] Under this rule, exchange specialists and third market makers would have been required to make firm quotations available and, if they chose, report quotation sizes. In making this proposal, the Commission noted that the efforts of individual vendors to create a composite quotation system had been largely ineffectual due to the unreliability of quotation information made available by the exchanges. In June 1977, the Commission republished Rule 11Ac1-1 in a revised format.[57] This version of the proposed rule differed from the earlier version in that: (1) it did not require exchanges to collect and make available the highest bid and lowest offer of any broker or dealer at the post for trading in a security; (2) it did not require the exchange to make available an aggregate quotation size if the bid or offer made available to the exchange represented the bid or offer of more than one broker or dealer; and (3) exchanges would be granted an additional exception to firm quotes during periods of unusual market activity. The Quote Rule was eventually adopted in 1978.[58] The self-regulatory organizations then created the CQS to collect quotations and make them available in a single data stream. The Consolidated Quotation Plan ("CQ Plan") to implement Rule 11Ac1-1 was declared temporarily effective in 1978,[59] and was permanently approved in 1980.[60] The first single quotation stream became available in August 1978. As disseminated by the SIAC, the stream included quotes from the NYSE, Amex, Boston Stock Exchange, Pacific Stock Exchange, Midwest Stock Exchange (currently the Chicago Stock Exchange), and Philadelphia Stock Exchange. In December 1978, the NASD became a participant in the CQ Plan. Dissemination of third market information (*i.e.*, trades of listed stocks on the OTC market) through the CQS began in February 1979.

2. The Transaction Reporting System.

In 1972, the Commission also proposed Rule 17a-15. This proposed rule required every exchange and association (and non-member broker or dealer effecting transactions in listed securities) to file a plan with the Commission for the dissemination of transaction reports in listed securities.[61] In response to the proposed rule, the NYSE and the Amex questioned the Commission's authority to adopt the rule, asserted proprietary rights in last sale data, and suggested a consolidated reporting system be implemented by SIAC, their jointly-owned subsidiary. The proposed rule was republished for comment reflecting some of the features suggested by the NYSE and the Amex.[62]

Concurrent with the adoption of Rule 17a-15, the Commission requested the filing of reporting plans thereunder by the end of 1972.[63] The plans were published for comment in early 1973,[64] and a year later a joint plan was declared effective by the Commission.[65] The NYSE portion of the consolidated tape began operating on a low-speed basis in July 1975. Rule 17a-15 was subsequently redesignated Rule 11Aa3-1.[66]

The OTC market participants initially were reluctant to develop real-time trade reporting for NASDAQ stocks. They were concerned that such reporting would harm the competitive dealer market. The Commission disagreed, stating that the benefits of last sale reporting outweighed these concerns, particularly for the most actively traded OTC securities. Consequently the Commission required the introduction of real-time last sale reporting for certain OTC stocks by adopting Rule 11Aa2-1 under the Exchange Act to designate certain securities, including certain OTC securities, as NMS securities.[67] Under that rule, an NMS Security is designated as any "reported security" as defined in Rule 11Aa3-1, and Rule 11Aa3-1(a)(4) defines a reported security as any listed equity or NASDAQ security for which transaction reports are required to be made pursuant to a transaction reporting plan.

In January 1982, the Commission approved the NASD's plan to designate certain NASDAQ securities as NMS securities.[68] In March 1982, the Commission approved a transaction reporting plan that provided for a transaction reporting system for NASDAQ/NMS securities.[69] Last sale information for these securities was first disseminated by major vendors in mid-July 1982. After the effects of real-time reporting on the trading of NASDAQ/NMS securities was studied, more OTC securities were phased into last sale reporting over the following year.[70] In April 1992, the Commission approved real-time trade reporting for all NASDAQ securities (NASDAQ/NMS and NASDAQ Small-Cap Securities).[71]

1. 15 U.S.C. § 78k-1 (1988).

2. 17 C.F.R. §§ 240.11Ac1-1, .11Aa3-1 (1993).

3. The national securities exchanges are: the New York Stock Exchange, Inc. ("NYSE"); the American Stock Exchange, Inc. ("Amex"); the Boston Stock Exchange, Inc. ("BSE"); the Philadelphia Stock Exchange ("Phlx"); the Chicago Stock Exchange, Inc. ("CHX"); the Cincinnati Stock Exchange, Inc. ("CSE"); the Pacific Stock Exchange ("PSE"); and the Chicago Board Options Exchange ("CBOE"). The Arizona Stock Exchange, Inc. ("AZX") received a "limited volume" exemption from registration as a national securities exchange under Section 5(2) of the Act.

4. The National Association of Securities Dealers ("NASD") is the only national securities association.

5. *See* Rule 11Ac1-1(b)(1), 17 C.F.R. § 240.11Ac1-1(b)(1) (dissemination requirements for exchanges and associations).

6. Rule 11Ac1-2 ("the Vendor Display Rule") requires vendors of market information to display quotation information in a non-discriminatory manner. 17 C.F.R. § 240.11Ac1-2.

7. Exchanges are only required to publish the quotations and sizes that brokers "communicate" on the exchange floor.

8. *See* Rule 11Ac1-1(b)(3)(i), 17 C.F.R. § 240.11Ac1-1(b)(3)(i).

9. 17 C.F.R. § 240.11Ac1-1(c)(1) & (2).

10. *See* Rule 11Ac1-1(c)(1), 17 C.F.R. § 240.11Ac1-1(c)(1). In 1990, the NASD required market makers to display quote size for National Market System ("NMS") stocks in tiers of 1000, 500, or 200 (depending on the security) or better. In 1993, the NASD further required market makers to display quote size equal to 500 or 100 shares for Small-Cap Securities. Notwithstanding these obligations, market makers have not been overly zealous in quoting markets at the required sizes.

11. 17 C.F.R. § 240.11Ac1-1(c)(3)(ii)(A).

12. *See* Rule 11Ac1-1(c)(3)(ii)(B), 17 C.F.R. § 240.11Ac1-1(c)(3)(ii)(B). A market maker is deemed to be in the process of effecting a transaction from the moment an order is presented to it for execution until the completion of communication of all information necessary to complete the transaction. An identical exception is provided for an update in the size of the market maker's quotation. *See* generally Securities Exchange Act Release No. 32092 (Apr. 1, 1993), 58 FR 18279 (Apr. 8, 1993).

13. *See* Rule 11Ac1-1(b)(1), 17 C.F.R. § 240.11Ac1-1(b)(1) (dissemination requirements for exchanges and associations).

14. In practice, however, the major participants trading in equity securities know the prices offered on PTSs, such as Instinet, because the majority of trading desks have access to most PTSs.

15. *See supra* note 6.

16. Each participant to the plan is represented and has one vote on all matters that are considered by the operating committee.

17. SIAC was originally formed as a jointly owned subsidiary of the NYSE and Amex for the purpose of planning, developing, and operating data processing, computer, automation and communication facilities for the two exchanges and others in the securities industry.

18. *See* Rule 11Ac1-1(a)(20), 17 C.F.R. § 240.11Ac1-1(a)(2).

19. 17 C.F.R. § 240.11Ac1-1(a)(1).

20. *See* Exchange Act Section 11A, 15 U.S.C. § 78k-1; Rules 11Aa2-1, 11Aa3-1, and 11Aa3-2, 17 C.F.R. §§ 240.11Aa2-1, .11Aa3-1, and .11Aa3-2.

21. The exchanges that filed the Consolidated Tape Association ("CTA") Plan were: the NYSE, the Amex, the Midwest Stock Exchange ("MSE") (currently the CHX), the Phlx (then called the Philadelphia-Baltimore-Washington Stock Exchange), and the PSE. The current parties to the CTA Plan include the original participants and the BSE, CBOE, CSE, and the NASD. The CTA Plan provides that any other national securities exchange, or national securities association, registered under the Securities Exchange Act of 1934 may become a participant by subscribing to the CTA Plan and executing the necessary agreements.

22. The same entities are members of CTA and CQS.

23. Prior to this time, the NYSE and the Amex each had private leased wire facilities that disseminated last sale prices over ticker tapes and electronic displays. These systems only disseminated last sale prices transactions in listed securities that were effected on the listing exchange. They did not display trades in the listed securities executed on regional exchanges or in the "third market." Eventually, each of the regional exchanges developed its own private leased line to report transactions executed on that particular exchange.

24. Except as otherwise provided in the CTA Plan, the affirmative vote of a majority of all the voting members of the CTA is deemed to be the action of the CTA when such action is taken at a meeting of the CTA.

25. Pursuant to authority delegated by the CTA, the NYSE and the Amex administer the signing of contracts with vendors and subscribers and calculate and distribute the revenues generated from dissemination of the information.

26. *See* Exchange Act Section 11A(b)(1), 15 U.S.C. § 78k-1(b)(1).

27. The low-speed networks generally supply information to "ticker-displays" operated by various subscribers. Because transactions sometimes occur faster than can be displayed on these devices, information regarding transactions that is normally displayed may be omitted to ensure that the display is current. For example, trades effected at the same price as the prior transaction in that security, or trades below a certain size, may be omitted. Administrative messages are sent on the display to alert investors that such procedures are being followed.

28. The high-speed network typically serves vendors and subscribers using interrogation units. In addition to last sale prices, the high-speed network may display market identifiers, corrections, indicators of special conditions, administrative messages, index values, and aggregate information.

29. A security ceases to be an Eligible Security if it fails to meet NYSE or Amex listing criteria (whichever is appropriate); the issuer enters into a bankruptcy proceeding; fewer than 25% of the U.S. transactions in the security take place on national securities exchanges for a 12-month period; or the security is no longer listed on a national securities exchange.

    The Consolidated Tape does not disseminate information regarding transactions in Eligible Securities that are: (1) part of a primary distribution by an issuer, a registered secondary distribution, or an unregistered secondary distribution effected off the floor of an exchange; (2) made in reliance on Section 4(2) of the Securities Act of 1933; (3) transactions where the buyer and seller have agreed to trade at a price unrelated to the current market for the security; (4) odd-lot transactions; (5) the acquisition of securities by a broker-dealer as principal in anticipation of making an immediate exchange distribution or exchange offering on an exchange; (6) purchases of securities off the floor of an exchange pursuant to a tender offer; and (7) purchases or sales of securities effected upon the exercise of an option pursuant to the terms thereof or the exercise of any other right to acquire securities at a pre-established consideration unrelated to the current market.

30. The hours of the Consolidated Tape were extended from 4:00 p.m. to 5:15 p.m. EST in 1991.

31. Restatement and Amendment of the Consolidated Tape Plan, § VII(a), p. 27; *see also* Schedule G, Section 2 of the NASD By-Laws, NASD Manual (CCH) ¶ 1917; Securities Exchange Act Release No. 30437 (Mar. 3, 1992), 57 FR 8370 (Mar. 9, 1992) (amendments to Schedule G requiring transaction reporting for exchange-listed securities traded OTC until 5:15 p.m. EST). Also, trading on the NASD's SelectNet during the pre-opening session (9:00 a.m. to 9:30 a.m. EST) and after-hours session (4:00 p.m. until 5:15 p.m. EST) is subject to real-time trade reporting. *See* Securities Exchange Act Release No. 30581 (Apr. 14, 1992), 57 FR 14596 (Apr. 21, 1992).

32. The designation "SLD" is used to indicate a late trade report.

33. Reporting requirements for NASD members registered as third market makers in listed equity securities during regular trading hours are set forth in Schedule G to the NASD By-Laws.

34. Part X of Schedule D to the NASD By-Laws contains the real-time reporting requirements applicable during the hours of NASDAQ to market makers in NASDAQ/NMS securities.

35. Trades executed during the morning session (9:00 a.m. to 9:30 a.m. EST) must also be reported within 90 seconds of the trade and are designated as "T" trades to denote their execution outside of normal market hours of 9:30 a.m. to 5:15 p.m EST. Additionally, last sale reports of transactions between 4:00 p.m. and 5:15 p.m. EST must be reported within 90 seconds and are also designated as "T" trades. The Commission also recently approved the NASD's rule filing to require the use of a special indicator "W" for average-price weighted trades to clear up the confusion between those trades and trades at a current negotiated price. Certain institutions find such trades attractive because they ensure that the institution will not purchase at the high for the day or sell at the low. However, trade reports such as these, although made in a timely manner, may not relate to the last sale price on NASDAQ and carry no identifier describing their specialized nature. *See* Securities Exchange Act Release No. 32553 (June 29, 1993), 58 FR 36489 (July 7, 1993); *see also* Appendix IV (discussion of Instinet's "Market Match" Service and POSIT's volume average-weighted pricing sessions).

36. *See* Securities Exchange Act Release No. 30569 (Apr. 10, 1992), 57 FR 13396 (Apr. 16, 1992).

37. Schedule G, Section 2(a)(4) of the NASD By-Laws, NASD Manual (CCH) § 1919. Trades in listed securities are reported manually via Form T, which requires NASD member firms to provide the date and time of execution, number of shares traded, stock's name, symbol, and price. Form T trades are not publicly reported. Automation of Form T continues to be desirable.

    After-hours trading in Instinet and the Portfolio System for Institutional Trading ("POSIT") crossing networks is not publicly reported but trade reports are sent to the NASD for regulatory purposes.

38. Schedule D, Part X, Section 2(a)(5) of the NASD By-Laws, NASD Manual (CCH) § 1867; Part XI, Section 2(a)(5) of the NASD By-Laws, NASD Manual (CCH) §1867C.

39. *See* Securities Exchange Act Release No. 28899 (Feb. 20, 1991), 56 FR 8377 (Feb. 28, 1991); *see also* Appendix IV.

40. Exemptions have been made from the last price and volume information reporting requirements of Rule 11Aa3-1 for both the NYSE CSI and CSII.

41. While the Commission noted the industry's goal of consolidation of all market data for a security, wherever transactions in those securities may occur, the Commission granted exemptive relief stating that real-time last sale reporting for the individual component stocks underlying an aggregate-type execution may not be appropriate. *See* Letter from William H. Heyman, Director, Division of Market Regulation, SEC, to Catherine Kinney, Executive Vice President, Equities/Audit, New York Stock Exchange (May 24, 1991). The pilot program for CSII was recently extended to January 31, 1994. Securities Exchange Act Release No. 32362 (May 25, 1993), 58 FR 31565 (June 3, 1993). The exemption to Rule 11Aa3-1(b)(2)(iv) was also extended. *See* Letter from Katherine A. England, Assistant Director, Division of Market Regulation, SEC, to Catherine Kinney, Executive Vice President, Equities/Audit, New York Stock Exchange (June 18, 1993).

42. Securities Exchange Act Release No. 29812 (Oct. 11, 1991), 56 FR 52082 (Oct. 17, 1991); *see also* Letter from Frank J. Wilson, Vice President and General Counsel, National Association of Securities Dealers, to Christine A. Sakach, Branch Chief, National Market System Branch, Division of Market Regulation, SEC (Aug. 15, 1991).

43. Securities Exchange Act Release No. 29812, *supra* note 42. The NASDAQ International pilot program was extended for an additional two years, terminating October 11, 1995. *See* Securities Exchange Act Release No. 33037 (Oct. 8, 1993), 58 FR 53752 (Oct. 18, 1993).

44. *See* Securities Exchange Act Release No. 29812, *supra* note 42.

45. The Commission noted that if another U.S. self-regulatory organization ("SRO") system was opened for trading during the same time, quotation and transaction information would have to be consolidated. *See* Securities Exchange Act Release No. 29812, *supra* note 42.

46. *See* Securities Exchange Act Release No. 29812, *supra* note 42.

47. *See* Michael J. Simon & Robert L.D. Colby, *The National Market System for Over-the-Counter Stocks*, 55 GEO. WASH. L. REV. 17, 34-38 (1986); *see also* David Ruder & Alden Adkins, *Regulation and the Automation of Information Dissemination and Trading in the United States, in* INNOVATION AND TECHNOLOGY IN THE MARKETS: A REORDERING OF THE WORLD'S CAPITAL MARKET SYSTEMS (Daniel R. Siegel ed. 1990).

48. *See* SEC, INSTITUTIONAL INVESTOR STUDY REPORT, H.R. Doc. No. 64, 92d Cong., 1st Sess. (1971).

49. *See id.* (Letter of Transmittal).

50. Securities Acts Amendments of 1975, Pub. L. No. 94-29, § 7, 89 Stat. 97, 111 (1975) (adding § 11A to the Securities Exchange Act of 1934.)

51. 15 U.S.C. § 78k-l(a)(1)(c)(iii).

52. *See* H.R. CONF. REP. NO. 229, 94th Cong., 1st Sess. 93 (1975).

53. Securities Exchange Act Release No. 9529 (Mar. 8, 1972), 37 FR 5760 (Mar. 21, 1972) (proposed composite quote system rule).

54. Securities Exchange Act Release No. 10969 (Aug. 14, 1974), 39 FR 31920 (Sept. 3, 1974). The revised version of Rule 17a-14 differed from the initial version of the rule in that it permitted the SROs to file plans, similar to those filed pursuant to Rule 17a-15, to implement a composite quotations system. Vendors too could file plans, after a certain date, pursuant to which SROs would be required to make available quotations.

55. Securities Exchange Act Release No. 11288 (Mar. 11, 1975), 40 FR 15015 (April 4, 1975).

56. Securities Exchange Act Release No. 12670 (July 29, 1976), 41 FR 32856 (Aug. 5, 1976).

57. Securities Exchange Act Release No. 13626 (June 14, 1977), 42 FR 32418 (June 24, 1977).

58. Securities Exchange Act Release No. 14415 (Jan. 26, 1978), 43 FR 4342 (Feb. 1, 1978) (adoption of Rule 11Ac1-1). Rule 11Ac1-1 was adopted when the Commission issued its *Statement on the Development of a National Market System.* In its statement, the Commission indicated the steps it believed must be taken during the following 12 months to establish a national market system, including the establishment of a composite quotation system.

59. Securities Exchange Act Release No. 15009 (July 28, 1978), 43 FR 34851.

60. *See* Securities Exchange Act Release No. 16518 (Jan. 22, 1980), 45 FR 6521.

61. Securities Exchange Act Release No. 9529, *supra* note 53.

62. *See* Securities Exchange Act Release No. 9731 (Aug. 14, 1972).

63. *See* Securities Exchange Act Release No. 9850 (Nov. 8, 1972), 37 FR 24172 (Nov. 15, 1972).

64. Securities Exchange Act Release No. 10026 (Mar. 5, 1973), 38 FR 6443 (Mar. 9, 1973).

65. Securities Exchange Act Release No. 10787 (May 10, 1974), 39 FR 17799.

66. Securities Exchange Act Release No. 16589 (Feb. 19, 1980), 45 FR 12377 (Feb. 26, 1980).

67. Securities Exchange Act Release No. 17549 (Feb. 17, 1981), 46 FR 13992 (Feb. 25, 1981).

68. *See* Securities Exchange Act Release No. 18399 (Jan. 7, 1982), 47 FR 2079 ("Designation Plan"). A two-tiered approach to designation was adopted. The tier 1 criteria were based on NYSE and Amex initial listing standards, whenever possible, thus automatically designating many NYSE and Amex securities as NMS securities. Tier two securities were initially designated only upon application to the designation body by the issuer or by two or more market centers trading the security.

69. Securities Exchange Act Release No. 18590 (Mar. 24, 1982), 47 FR 13617 (Mar. 31, 1982).

70. In December 1982, the Commission approved amendments to the NASD's Designation Plan providing for designation of 100 additional NMS securities, and on February 8, 1983, an additional 100 securities became subject to last sale reporting in accordance with Rule 11Aa2-1 and the NASD's Designation Plan.

71. *See* Securities Exchange Act Release No. 30569 (Apr. 10, 1992), 57 FR 13396 (Apr. 16, 1992).

Appendix IV

Description of Proprietary Trading Systems

Proprietary trading systems ("PTSs") are screen-based automated trading systems, typically sponsored by broker-dealers. PTSs are not operated as, or affiliated with, self-regulatory organizations ("SROs"). Instead, sponsors operate PTSs as independent, for-profit businesses. PTSs currently provide for trading in equities, municipal and government securities, corporate debt, and options. Participation in these systems is typically limited to institutional investors, broker-dealers, specialists, and other market professionals. The systems that have developed to-date offer participants the capacity to execute automatically transactions based on derivative pricing and also offer the opportunity to advertise purchasing and selling interest. PTSs have not, however, evolved into interdealer quotation or transaction mechanisms in which participants enter two-sided quotations on a regular or continuous basis, thus ensuring a liquid marketplace.

The development of PTSs primarily can be attributed to two factors. First, PTSs fulfill the needs of institutional investors not satisfied by the traditional markets. For example, some "matching systems" compliment the trading needs of patient investors who do not need the instant liquidity that exchange markets provide by allowing investors orders to meet directly at pre-announced times during the day. Such matching of orders may reduce transaction fees, eliminate the bid-ask spread, and minimize the market impact of large trades. Second, technology has revolutionized securities trading and trading no longer must take place on the floor of an exchange or be negotiated by telephone, but can be accomplished through networks of computer terminals. The sponsors of PTSs have developed sophisticated, innovative trading systems to accomplish this.

PTSs have combined technology and features that are attractive to institutional investors to gain an increasing share of volume in the past few years. For the first half of 1993, the total share volume on PTSs was 4.7 billion shares, which was almost the same amount as for the entire year in 1992. The total share volume for 1992 was nearly 4.9 billion, up more than 60 percent from 1991's volume of 2.9 billion.[1] Most of the PTS volume has been in securities included for quotation on the National Association of Securities Dealers Automated Quotation System ("NASDAQ"). Almost 87% of the PTS volume in the first half of 1993 was in NASDAQ stocks, and only 13% in listed stocks.

Even though equity trading volume on PTSs is growing rapidly, it is important, however, to keep these numbers in perspective. First, it should be noted that the rising trend in PTS volume is consistent with the increasing volume occurring in equity markets as a whole. Further, notwithstanding their growth, the PTSs that currently operate represent only a small segment of primary market activity. Since the 1975

Amendments to the Securities Exchange Act of 1934 ("Exchange Act"), the Division of Market Regulation ("Division") has provided no-action relief for 21 PTSs, one of which has been granted an exemption from exchange registration. Many of the systems granted relief from exchange registration either never operated or did not continue in business. Indeed, only ten systems are presently active;[2] seven of these systems trade equities. The total PTS volume in exchange-listed securities represented by the seven active systems is 1.3% of the volume in the New York Stock Exchange ("NYSE") stocks and 13% of the volume in NASDAQ National Market System stocks.

The manner in which the systems that have sought no-action relief operate, and the regulatory issues they raise vary. Although the focus of the Market 2000 Study is on the U.S. equities markets, the issues raised by PTSs trading non-equity products are similar to systems trading equities and accordingly, descriptions of all PTSs are provided to develop an overview of the universe of systems granted relief. This appendix divides the systems into four categories: (1) hit or take systems; (2) matching systems; (3) auction-based systems; and (4) automated internal systems.

A. Hit or Take Systems

These systems are typically designed to afford a network of participants the opportunity to execute transactions in securities by hitting an existing bid displayed in the system or lifting an offer in the system. The systems gather and disseminate, on an anonymous basis, priced limit orders and indications of interest, among system participants, through an automated, screen-based network. Through the intermediation of a broker-dealer, they provide participants an opportunity to execute against the best contra side order, either through automatic matching of orders, telephonic contact initiated by the participant, automated keystroke, or a combination of those options.[3] In addition, many hit or take systems also have negotiation features which permit participants to enter indications of interest into the system, rather than firm orders, with the specific terms for a trade being negotiated through the system by two participants. The broker-dealer sponsoring the system generally, but with some exceptions, executes the matched trades as agent. The broker-dealer then reports the security price and size to both participants and to the clearing broker or clearing bank.

These systems are often described as "interactive" because they rely on participants to set order price and size levels, initiate executions, and, in many systems, negotiate the terms of a transaction with other participants. Finally, they are designed to accommodate so-called "active" traders, who seek to make prompt trading decisions during the day based on changing market information.

1. Systems for Equity Securities

a. Instinet.[4] This system consists of a network of computer terminals that permits broker-dealers and institutions ("subscribers") to anonymously enter indications of trading interest and execute against those indications of interest automatically through a computerized system. Instinet does not accept so-called "retail" customers. Acting as agent, Instinet, a registered broker-dealer, executes matched trades on behalf of subscribers in exchange-listed and over-the-counter ("OTC") securities. In addition to facilitating trades in domestic securities, Instinet also operates internationally. The list of "international" securities currently available for trading on the Instinet System includes UK, French, German, Swiss, Dutch, Swedish, Finnish, Norwegian, Austrian, Belgian, Danish, Italian, and Spanish issues. It should be noted, however, that U.S. subscribers can only access and interact with securities that trade legally in the United States (*i.e.*, registered or exempt securities).

Instinet is a member of the National Association of Securities Dealers, Inc. ("NASD"). INC Trading Corporation, a domestic Instinet subsidiary, is a member of the American ("Amex"), Boston ("BSE"), Philadelphia ("Phlx"), Cincinnati ("CSE"), Chicago ("CHX"), and Pacific ("PSE") Stock Exchanges; the Chicago Board Options Exchange ("CBOE"); and the European Options Exchange in Amsterdam. A foreign broker-dealer affiliate, Instinet UK Limited, is a member of the London Stock Exchange, and the Frankfurt and Paris Stock Exchanges. Instinet Canada Limited, also a foreign-broker dealer Instinet affiliate, is a member of the Toronto Stock Exchange.

Instinet terminals are located domestically at the Amex, the CBOE, and all of the regional stock exchanges. Outside of the United States, Instinet terminals are located in a total of 13 countries: Belgium, Denmark, England, France, Germany, Italy, Liechtenstein, Luxembourg, Monaco, the Netherlands, Spain, Switzerland, and the United Arab Emirates. Trading between U.S. and international customers is restricted, however, according to U.S. law.

The Instinet system is presently open for trading from 2:30 a.m. (EST) to 6:00 p.m. (EST). Subscribers access Instinet via a network of dedicated communications circuits located on exchange floors and in the offices of institutional and broker-dealer participants. Order executions in the Instinet system result from one subscriber matching the terms of another subscriber's offer to buy or sell securities. A match may result either from a subscribing member entering the matching contra side (*i.e.*, price and size) to another subscribers's bid or offer, or from a negotiation between two subscribers.

Specifically, Instinet's Trading Service ("Service") allows a subscriber to anonymously enter a firm aggressive order[5] designating a security, price, and size into the Instinet System. The Service, in turn, compares it against all existing passive firm orders in the Instinet Book. Institutions may, however, employ an "I-Only" feature to limit exposure of their orders to other institutions.[6] Orders that exactly match as to price and size are automatically executed by the System. Alternatively, Instinet's "Negotiation Service" permits participants to negotiate the terms of an order. Customers may enter indications of interest, *i.e.*, orders that are either priced or sized (but not both), and conduct dialogues anonymously through the System to negotiate the specific terms of a trade and thereby execute the trade through Instinet. As with firm orders, the "I-Only" feature also may be used to disseminate indications of interest. Matches requiring special handling under exchange off-board trading or other rules are routed to a special terminal on Instinet's brokerage desk for handling by more traditional means. Instinet broadcasts a transaction report to both parties to a match; it reports transactions in both listed securities and NASDAQ securities to the NASD, for transmission to the Consolidated Tape Association Trade Reporting System ("Consolidated Tape").

Instinet has made several enhancements to the System since its inception in 1969, most notably, adding an after-hours matching session entitled the Crossing Network, and a pre-opening session entitled Market Match, in which securities are matched at so-called "volume-weighted" average prices.

b. Lattice.[7] Lattice Trading, Inc. ("Lattice"), a subsidiary of CS First Boston Group, Inc., has developed an automated order-routing and matching system to facilitate the trading of registered equity securities. The System is operated by Lattice, a registered broker-dealer affiliated with First Boston Corporation ("FB").[8] System participants consist of institutions and broker-dealers who have met the standards for creditworthiness and sophistication established by Lattice. Registered broker-dealers may execute trades through the System as principals for their own accounts or as agents for their customers' accounts.

Lattice is a dial-up system. During Lattice's operating hours (currently 8:30 a.m. (EST) to the close of the Participating Exchanges and proprietary trading systems), a participant may call up the Lattice Network on its existing personal computer using an error checking modem and standard telephone circuits. Once tied-in to the Lattice Network, a participant may avail itself of several options for order execution. Specifically, the participant may route the order to an exchange to which the Lattice Network is connected ("Participating Exchange");[9] direct the order to the Lattice Network to be matched with other contemporaneous orders within the System and sent to one of the Participating Exchanges for printing; or combine these options by instructing the System to locate the best price for an order, whether the price is found internally in the Lattice Network or on a Participating Exchange. If "Best" is selected, the Lattice Network works the order on a price/time priority basis within the Lattice Network and/or one or more Participating Exchanges based on the customer's instructions and the best available markets determined by current quotations. Should there be no match that meets the price specified by the participant (if any), the Lattice Network will leave the participant's bid or offer with the primary exchange, within the Lattice Network, or all of the above, depending upon the participant's instructions. Irrespective of which option is chosen, the participant identifies a "Designated Broker," which will be responsible for the execution and clearance of the order and the transfer of customer funds and securities. The Designated Broker also is responsible for the failure of its customers to pay for or deliver securities sold through the System.

The System accepts firm offers and indications of interest to the extent that orders can remain partially hidden in the System with regard to their size parameters. The Lattice Network also affords participants the option of designating other named participants with whom they do not wish to trade (*e.g.*, a specific broker-dealer). The Lattice Network does not possess a negotiation feature, which would permit anonymous bidders and sellers to negotiate electronically on price and size; however, participants have the option of changing size parameters of an order to facilitate a match. Unless a customer specifies otherwise, or a better price is available on an exchange, orders that match exactly are matched in the System. Matches of exchange-listed securities are effected on or through the facilities of a national securities exchange, although transactions in stocks which are exempted by Exchange Act Rule 19c-3 from exchange trading restrictions may be crossed within the Lattice Network. Orders are routed to a Participating Exchange for printing via electronic linkages, such as FB's communications linkage with the NYSE's Designated Order Turnaround system ("DOT") and the Boston Exchange Automated Communications Order Routing Network ("BEACON").

c. Cantor Fitzgerald.[10] This system is operated by Cantor Fitzgerald, G.P. ("CF"), a registered broker-dealer and member of the NASD. Open only to registered broker-dealers or banking institutions that may participate pursuant to an Exchange Act exemption (collectively "Customers"), the System facilitates trading in limited partnership interests. The System accepts offers to sell and bids to purchase publicly registered limited partnership interests. The units traded on the System consist of those limited partnership units which CF, in its discretion, elects to broker.

Each Customer can view the System through an existing terminal or a personal computer with modem capability.[11] The information displayed on the screens viewed by Customers includes: (i) a program overview, which displays all eligible partnership units; (ii) a valuation/distribution screen showing an extract of data filed by the general partner in its Form 10K or 10Q on recent valuations and distributions and information otherwise obtained from the general partner; (iii) a resale history screen displaying actual prices paid for completed transactions over a finite time period; and (iv) a current market screen showing bid and ask prices currently available. Should they desire, Customers may modify their screens to display selected information only.

To have a bid or offer entered into the System, the Customer's resale/trading desk or authorized person must contact CF and transmit the specifics of the order either electronically or over the telephone. CF then confirms the transaction information and that the initiating Customer has obtained signed transfer documents from its clients (in the case of a sale) or has available funds (in the case of a purchase). CF also determines at that time whether any of the terms of the order are negotiable. Thereafter, CF enters the order into the System. All orders entered into the System are posted without any identification of the Customer or the underlying client. Until a trade is confirmed, only CF knows both sides of each transactions. Once entered, buy and sell orders remain in the System for a maximum of 60 days without execution. During this period, CF will attempt to negotiate transactions by telephone if instructed to do so by the initiating Customer. Orders not executed within 60 days, however, may not be reentered until another 30 day period has expired.

Should a match occur, the transaction is executed by CF on an agency basis. On the trade date of a transaction, a notification is sent electronically by CF to each counterparty. Upon receipt of this notification, each counterparty is required to respond affirmatively within one business day of the receipt of confirmation. By trade date plus 3, each counterparty must submit to CF the appropriate transfer documentation for review and approval by the general partner. Upon approval by the general partner, a confirmation will be sent to each counterparty. CF will receive and deliver funds on settlement date for approved transactions in special accounts dedicated to the System.

Purchasers will be required to transmit same day funds to CF no later than 12 noon EST on settlement date. Sellers, in turn, will be paid only after funds are collected by CF from the purchaser but no later than 3:00 p.m. (EST). If funds are not received by CF from the purchaser, the entire transaction will be nullified and the parties will then be subject to the default provisions of the CF master agreement which governs the responsibility of Customers to CF and to other Customers.

2. Systems for Debt Securities

CrossCom Trading Network.[12] CrossCom is operated by Intervest Financial Services, Inc. ("Intervest"), a registered broker-dealer, to facilitate the trading of corporate high-yield and other fixed-income bonds among institutional money managers and broker-dealers. CrossCom permits those participants to enter, on an anonymous basis, a limit order to buy or sell securities, and to match that buy or sell interest with interest in the same security on the other side of the market. Participants also may seek contra side orders by placing unpriced indications of interest in the System. The System permits institutional investors to trade designated bonds as principal for their own accounts and broker-dealers to trade both for their own accounts and as agent for the accounts of their customers.

Order executions are conducted in CrossCom through a network of subscribers linked by computers via modem to CrossCom. These subscribers enter limit orders into personal computers located on their premises and programmed with CrossCom software. To enter an executable order, a subscriber must enter a description of the security, the amount and price at which it desires to buy or sell the security, and whether partial contra orders will be accepted. As an optional measure, participants may employ a "tattooing" function that allows customers to choose not to trade with a type of counterparty (*e.g.*, a broker-dealer).

If a contra order is entered into CrossCom at the same price (and amount, if partial orders are not accepted by the participants), the orders will be matched and automatically executed by CrossCom. Partial orders also are capable of automatic execution by the System, if permitted by the respective buyer and seller, in which case any balance remaining can be carried as an open order. If there is no matching contra order, the System stores the information in CrossCom and it is displayed as a bid or offer on the accounts of all other subscribers holding an active contra order in that security. All orders are good for 90 days or until cancelled. Where multiple orders are entered at the same price, the priority of execution will depend on the time and date of entry, with senior orders being filled first. The benefit of any price differential between the respective requirements of the buyer and seller will inure to the benefit of the participant placing the senior order.

As noted above, CrossCom also allows participants to solicit bids and offers by posting an indication of interest to buy or sell a particular security. Indications of interest require information identical to firm orders, with the exception of price. This information is communicated to participants via modem through the CrossCom network. CrossCom does not possess a negotiation feature. Hence, it is expected that a participant will respond to a bid or offer by raising or lowering its contra order to a price that will permit an automatic execution.[13] When orders are matched in the System, Intervest, acting as agent, introduces the transaction on a fully disclosed basis to its clearing broker, WFS Clearing Services, Inc. ("WFS"), a registered broker-dealer. WFS then clears the transaction and issues the confirmations.

3. Systems for Derivatives

Delta Government Options System.[14] Delta Government Options Corporation ("Delta"), together with RMJ Options Trading Corporation ("RMJ") and Security Pacific National Trust Company ("SPNTCO"), operate this system to facilitate the trading of options on United States Treasury bills, notes, and bonds ("Treasury options"). Delta, a registered clearing agency, issues and clears the Treasury options traded in the System;[15] RMJ, a registered government securities broker, disseminates indications of interest displayed through the System and executes transactions on an anonymous basis; and SPNTCO operates as facilities manager for Delta. The System permits participation by broker-dealers, insurance companies, commercial banks and other institutional investors meeting net capital requirements established by Delta.

To enable the execution of trades, RMJ disseminates bid and ask quotations, updated continuously, to participants through an automated communications network linking video display terminals in participants' offices. Participants receiving the quotation information may effect trades through Delta in one of two ways. Option one permits a participant to anonymously effect a trade with a contra party at a price quoted by the contra party through the communications network. In this scenario, the participant instructs RMJ by telephone to effect the trade with the contra party on a "blind" basis. Alternatively, the second option permits participants to make direct contact with a contra party based on buy or sell interest disseminated in the System to negotiate a trade on a fully disclosed basis.

The System does not provide for automatic execution of matching orders. Once two parties have agreed to trade a specific put or call option at a specified price, whether on an anonymous basis or fully disclosed, Delta executes two transactions -- it sells the option to the option buyer, and simultaneously buys a "matching" option from the option seller. Thus, Delta becomes the contra party to both the option writer and the option buyer. Each side, therefore, looks to Delta, and not the original contra party, for performance of the obligations under the option contract. Delta in turn looks to the participants for the payment of the option premium and the exercise price, and for delivery of the underlying securities.

B. Matching Systems

These systems are characterized by order execution features that match orders to buy and sell securities and execute the orders at a predetermined prices agreed upon by system participants and derived from trading in the security in the primary market. In other words, the securities are "passively" priced. These systems, which deal exclusively in equity securities, generally facilitate program trading strategies such as "passive or index management" where an institution sells to and buys from a broker-dealer certain securities to adjust its portfolio so that it continues to mirror a particular index. Portfolio matching systems afford these traders, who are typically less sensitive to changes in the prices of particular securities comprising their portfolios, execution on an anonymous basis with smaller transaction fees than organized markets, minimal brokerage charges, and avoidance of the potential market impact such an order may have in an exchange or dealer market.

1. Portfolio Matching Systems

a. Portfolio System for Institutional Trading ("POSIT").[16] This system is operated by Investment Technology Group, Inc. ("ITG"),[17] a registered broker-dealer and member of the NASD, to facilitate trading in portfolios of exchange-listed and OTC equity securities. POSIT may be accessed by broker-dealers and institutional participants, such as mutual funds, commercial banks, insurance companies, and pension funds. Matched trades are executed through the System on an agency basis by ITG. The System, which is available from 7:30 a.m. (EST) to 6:00 p.m. (EST) for the submission of orders, conducts matches 10:00 a.m., 11:15 a.m. and 1:15 p.m. (EST). By means of personal computers located in participants' offices and connected by modems over telephone lines to the POSIT's computer, computer to computer interfaces between participants' mainframe computer and POSIT's VAX computer, or telephone contact with POSIT employees, participants may transmit orders to trade portfolios of stocks. Upon receipt of an order, POSIT's computer searches, on a confidential basis, for a match with other orders in the System. Once orders have been matched, a registered person associated with ITG determines whether the trade should be executed as matched by the POSIT computer, or whether to contact the customers with any questions or suggested modifications.

While the System is designed to accommodate portfolios, customer orders may range from large portfolios consisting of several securities, to orders consisting of only a single stock. Matched trades are executed on an agency basis by ITG, at a price which is the mid-point between the best bid quotation and best ask quotation for each matched security in the portfolio in the primary market on the pricing day. Customers may specify how POSIT should handle that part of an order which cannot be matched to the customer's specifications against other orders in POSIT, *i.e.*, the "residual" component. Specifically, a participant may instruct that the residual component of an order be cancelled, retained for future matching in POSIT, or worked in another market, *e.g.*, the NYSE, a regional stock exchange, or the NASDAQ. Participants also may specify how much information about their orders may be revealed by POSIT. Finally, participants may choose to limit exposure of their portfolios to institutions rather than exposing those portfolios to all POSIT participants, including broker-dealers. Following the execution of matched trades, ITG sends trade reports and formal confirmations to its participants.

There have been several modifications to POSIT since its inception, among the most notable, permitting single-stock orders to be executed in the System. Additionally, POSIT has added a pre-opening matching session, in which matched securities are executed at so-called "volume-weighted average" prices.

b. Instinet Crossing Network.[18] In addition to the regular Trading Service, Instinet operates the Crossing Network, a daily after-hours session that enables subscribers to submit orders to buy or sell particular stocks comprising their portfolios, match those orders with contra orders for the same securities, and receive executions at prices derived from primary market trading. The Crossing Network originally accommodated trading in U.S. equity securities, and has been expanded to include U.K. equity securities and Yen-denominated equity issues. Crossing Network participants are broker-dealers, institutions, exchange specialists, options market makers, and other investment professionals who satisfy Instinet's credit requirements. Instinet executes matched transactions as agent for Crossing Network subscribers, just as it does in connection with its regular Trading Service.

Participants access the Crossing Network through their personal computers via assigned dial-up lines to the Crossing Network computer. To process the orders received, the Crossing Network establishes tiers or categories of participants, ranging from those whose investment strategy is entirely "passive" (*e.g.*, index funds) to "active" investors such as broker-dealers. Participants categorized as passive may opt not to match their orders with participants in the more active tiers.

Between 5:30 p.m. and 6:00 p.m. (EST), the Crossing Network computer searches participants' lists, seeking to maximize matches of buy and sell orders. Participants may add, delete, or alter orders up to a few minutes before the matching process begins. Once the matching process begins, all orders for which there is contra interest are automatically matched. Trades are subsequently executed at a predetermined price, which is the day's closing price on the primary market for exchange-listed stocks and the mean of the closing inside bid and ask prices on NASDAQ for issues traded in the OTC market.[19] Unmatched orders are cancelled, absent a participant's instructions to the contrary. Instinet sends a trade report to participants after each cross. Matched transactions are reported to the NASD on Form T.

2. Volume Weighted Average Pricing Systems

a. Instinet's "Market Match" Service; POSIT'S Volume Weighted Average Pricing Session.[20] Instinet's Market Match service, which is a subcomponent of the Crossing Network, and POSIT's volume-weighted average pricing session employ a volume-weighted pricing mechanism for transactions conducted by broker-dealers and institutional investors in U.S. equity securities. The two systems are similar in many respects. Specifically, both systems match open orders to buy securities in a session that occurs prior to the opening of trading on registered U.S. exchanges and on the NASDAQ System. These matches are subsequently priced after the close of the day's regular trading on the exchanges and the NASDAQ system based on a volume-weighted average price. The trades, in turn, are executed by Instinet and ITG, respectively, on an agency basis for system participants.

Instinet's Market Match determines the price of securities based on a volume-weighted average price that reflects: (1) for exchange-listed securities, consolidated trading volume on all the exchanges on which that security is traded; and (2) for NASDAQ/NMS securities, trading volume on the NASDAQ system for that security.

POSIT, by contrast, derives the average volume-weighted price based on the trading of the security only on its primary exchange during normal trading hours, although subscribers may separately specify that their matches be priced to reflect consolidated volume.

As with regular POSIT and the regular Instinet service, participants access the volume-weighted average pricing sessions for Market Match and POSIT through personal computers located in participants' offices. Here again, participants are allowed to enters orders for execution on an anonymous basis. With regard to any unmatched portion of an order (residual), both volume-weighted average pricing sessions allow participants to handle that portion of the order in whatever manner they choose. Unmatched orders, however, do not automatically migrate to the regular Instinet service or the regular POSIT service.

Volume data for securities matched during the pre-opening portion of Instinet's Market Match and Posit's volume-weighted average pricing session is available to vendors for public dissemination as soon after the morning session is concluded as it is technically feasible but no later than 9:15 a.m. (EST). Because the securities are not priced until after the close of the markets, this volume data does not include price information; rather, it reflects the volume of all trades that have been matched for pricing and execution after the close of the market. Matched trades executed at volume-weighted average prices for both services are reported to the NASD by 5:15 p.m. (EST) for transmission to the Consolidated Tape.

C. Auction-Based Systems

Some proprietary trading systems function as one of two types of auction systems. First, "single price" or "dutch" auctions bring together supply and demand at a given point in time to generate an "equilibrium price" for the sale of a security. A bid known as the determinative bid establishes the clearing spread for all other winning bids. Second, "one-sided" auctions employ a pricing algorithm that attempts to identify the highest bid for the security being sold; the transaction is then executed between the seller and the highest bidder at that level.

1. Single Price Auctions

The Arizona Stock Exchange ("AZX").[21] AZX, Inc. (formerly Wunsch Auctions Systems, Inc.)[22] is the only proprietary trading system that operates as an exempt exchange. AZX, in conjunction with BT Brokerage Corporation, a registered broker-dealer, operates a computerized "single price" auction system to facilitate secondary market trading in U.S. equity securities listed on an exchange or traded in the OTC market (and potentially registered corporate debt securities and government securities). The System's customers are limited to registered broker-dealers and institutional customers, such as private and public pension funds, endowments, foundations, money managers, and bank trust departments. Auctions occur once a day, at 5:00 p.m. (EST), after the close of normal trading hours of the NYSE, Amex, and NASDAQ. BT Brokerage Corporation, at its option, either executes all orders as agent obligated to complete the trade or purchases from each "in the money" offeror and sells to each "in the money" bidder the requisite amount of securities at the auction price.

By means of linkages from the participants' terminals to AZX's main computer in Phoenix, Arizona, participants enter limit orders into the System until a pre-established deadline (the "Auction Cutoff Time"). Seconds after the Auction Cutoff Time, the System commences review of all orders with respect to each security for which orders have been entered and determines the price at which the volume of buying interest is most nearly equal to the volume of selling interest (the "Auction Price"). Participants that have entered bids above and offers below the Auction Price will be entitled to executions of their orders at the Auction Price. Limit orders equal to the Auction Price will be filled on the basis of time priority to the extent that counterparties are available. Since the commencement of its operations, the System has been enhanced to include a "reserve book" feature which permits customer orders to be held in reserve, outside of the auction, until a contra order for the same security is entered into the System.

On February 20, 1991, the Commission granted AZX, Inc. a "limited volume" exemption from exchange registration pursuant to certain terms and conditions including, among other limitations and requirements, a limitation of traded securities to registered securities and government securities.[23] Concurrently, on February 28, 1991 the Division issued AZX, Inc. a no-action letter with respect to: (1) the non-registration of AZX as a broker-dealer; (2) the non-registration of BT Brokerage Corporation as a national securities exchange; and (3) the non-registration of AZX and BT Brokerage as a securities information processor, transfer agent, and clearing agency.[24] By letter dated July 7, 1993, the staff approved an enhancement to the System to implement a "Match Book" service which permits subscribers with prematched orders not eligible for the single-price auction prices to use AZX facilities to route the orders directly to BT Brokerage Corporation.[25] Such orders will not participate in the price discovery function of the AZX auction described above. Rather, AZX will essentially serve as a routing mechanism between BT Brokerage Corporation and AZX subscribers for matched orders that do not participate in the single-price auction. Staff approval of the Match Book service was granted with the condition that all volume through the Match Book service be aggregated with total AZX volume for purposes of AZX's limited volume exemption. In addition, the staff stipulated that the Match Book service would have to be limited to transactions where both sides of the trade must be entered by the same participant.

2. One-Sided Auctions

The National Partnership Exchange ("NAPEX").[26] The National Partnership Exchange, Inc., in conjunction with a registered broker-dealer, Napex Financial Corp. ("NFC"), operates this system to facilitate trading in publicly registered limited partnerships. NAPEX gathers and disseminates indications of interest for these partnerships; NFC provides clearing services for agreed-upon transactions. All subscribers of the System are registered broker-dealers or their registered representatives.

This system permits subscribers to use personal computers to submit offers to buy or sell partnership units on behalf of their clients anonymously and to check listings of various partnerships. Specifically, a subscribers's computer screen will show the units of each listed partnership offered for sale as well as all bids thereon. After an offer to buy or to sell a unit has been exposed on the system for seven business days, NAPEX will contact the subscriber who represents the person with the highest bid and the subscriber who represents the seller to ascertain whether their respective clients wish to close the transaction.[27] Should the parties agree to the trade, NFC will execute the trade as broker and perform the clearing operations for the trade on a best efforts basis.[28]

D. Systems that Automate the Internal Order-Routing and Execution Mechanisms of a Market Maker

The Division has granted no-action relief to several systems which are currently inactive. These systems typically provided guaranteed execution of securities at an execution price which was frequently the best bid or ask available in the NASDAQ system -- the so-called "inside" market. Such systems usually ensured guaranteed execution of relatively small sized orders to buy or sell securities. Frequently, the systems were aimed at providing an automatic execution for retail customers.

1. B&K CUSTOMER ORDER PROTECTION SYSTEM ("COPS")[29]

This system was developed by B&K Securities to facilitate automatic executions of trades in OTC stocks quoted on NASDAQ. Registered broker-dealers could enter agency or principal orders up to 1,099 shares for automatic execution at the NASDAQ inside bid or ask, or better.

2. Transaction Routing Automated Network ("TRAN")[30]

This system was operated by Transaction Services, a registered broker-dealer, to facilitate the automatic execution of broker-dealer agency orders for NASDAQ stocks at the NASDAQ inside bid or ask.

3. Inside[31]

Troster Singer Corporation ("Troster"), a registered broker-dealer and member of the NYSE, developed this system to permit certain broker-dealer subscribers to route principal and agency orders to buy and sell NASDAQ securities to Troster for automatic execution.

E. Other Inactive Systems

1. ADLER & CO., INC.[32]

Adler & Co., Inc. ("Adler"), a registered broker-dealer, developed this hit or take system to facilitate the secondary market trading of municipal bonds. The System was intended to provide participating broker-dealers with centralized and immediate access to major bond sellers and purchasers.

2. CapitaLink[33]

This "single price" auction system was to be operated by CapitaLink Securities Corporation ("CSC"), through a wholly owned-subsidiary, CapitaLink Bond Auctions, Inc. ("CBA"), a registered broker-dealer, to facilitate the offering of investment grade debt securities registered on Form S-3 and offered pursuant to Rule 415(a)(1)(x) of the Securities Act of 1933.[34]

3. Econ Investment Software[35]

This system was developed by Petruzzi and Associates ("PA"), a New York partnership seeking registration as a broker-dealer, to facilitate executions of customer orders in stocks, bonds, and warrants. PA intended to manage, or enter into a contractual arrangement with, a fund that would be used to fill customer orders.

4. Exchange Services[36]

This hit or take system was operated by Exchange Services, Inc. ("ESI"), a registered broker-dealer, as an after-market trading system to facilitate the purchase and sale of securities listed on the NYSE, the Amex, or quoted on NASDAQ. The System operated during a time period that began 15 minutes after the regular close of each primary market and ended 15 minutes prior to the opening of each primary market.

5. LIMITrader[37]

This hit or take system was developed to facilitate trading by broker-dealers and institutional money managers in corporate debt, including high yield and municipal bonds. Both institutions and broker-dealers were to be permitted access to the System.

6. New York Securities Auction Corp. ("NYSAC")[38]

NYSAC, a registered broker-dealer, developed this "one-sided" auction system to facilitate trading in equity and debt securities (other than government and municipal securities) that may be illiquid because of scarcity or large block size. Participants were to be registered broker-dealers and institutions qualified under state law to participate in the auction.

1. The growth in volume was less dramatic in prior years, but still impressive. For example, in 1990, the total volume on PTSs was 2.3 billion.

2. *See infra* descriptions of Instinet, the Instinet Crossing Network, POSIT, POSIT Volume Weighted Average Pricing Session, the Lattice Network, AZX Inc., NAPEX, Delta, Cantor, and CrossCom.

3. Automatic execution is usually provided when two contra orders exactly match. Hitting a bid often involves depressing a key that signals acceptance of some or all of the size of a bid at some price, usually the best bid.

4. The staff of the Division issued a no-action letter regarding Instinet's non-registration as an exchange on August 8, 1986. *See* Letter from Richard G. Ketchum, Director, Division of Market Regulation, to Daniel T. Brooks, Cadwalader, Wickersham and Taft (Aug. 8, 1986).

5. A "passive order" is a standing order to buy (or sell) a specific quantity of a specific security at a specific price; an "aggressive order" is entered by a participant in response to a passive order, and thereby creates a transaction.

6. The I-Only feature is designed to address institutional customers' concerns that brokers could take advantage of information regarding institutions' interest in trading. Although the I-Only feature may be used with respect to the exposure of institutional orders, incoming orders are matched against all interest in the Book. Hence, a broker-dealer's order will execute against an existing institutional order, even if the institutional customer uses the I-Only feature.

7. The staff issued Lattice a no-action letter dated September 9, 1993, with respect to the non-registration of the System as an exchange. *See* Letter from Brandon Becker, Director, Division of Market Regulation, to Lloyd H. Feller, Morgan Lewis & Bockius (Sept. 9, 1993).

8. The System may be operated by any FB affiliate which is a registered broker-dealer. Currently, Lattice is the system operator.

9. The Lattice Network currently has connections with the NYSE, the Amex and the BSE.

10. The staff issued Cantor Fitzgerald, G.P. a no-action letter with regard to its non-registration as an exchange on October 1, 1993. *See* Letter from Larry Bergmann, Associate Director, Division of Market Regulation, to Deborah S. Tuchman, Skadden, Arps, Slate Meagher and Flom (Oct. 1, 1993).

11. CF anticipates utilizing a widely used information network such as Telerate, Reuters, or Bloomberg to display bids and offers on a blind basis in the future. Access to the information network will permit non-subscribers to view the bid and offer screens and information screens. However, only Customers will be allowed to place buy and sell orders with CF.

12. The Division issued a no-action letter with regard to CrossCom's non-registration as an exchange on November 24, 1992. *See* Letter from Larry Bergmann, Associate Director, Division of Market Regulation, to Larry E. Fondren, Intervest Financial Services, Inc. (Nov. 24, 1992).

13. On occasion, Intervest contacts participants by telephone and encourages them to move to a price at which a trade will occur. CrossCom does not, however, facilitate or enable participants to communicate directly among each other except through CrossCom transmissions.

14. The predecessor of this system was a similar system operated by Security Pacific National Bank. The Division issued two letters regarding its non-registration as an exchange. *See* Letters from Richard Ketchum, Director, Division of Market Regulation, and Richard T. Chase, Associate Director, Division of Market Regulation, to Eric D. Roiter, Debevoise & Plimption (Aug. 8, 1986 and July 19, 1985). The staff of the Division issued a no-action letter regarding the non-registration of the System as an exchange to its current operators on January 12, 1989. *See* Letter from Richard G.

Ketchum, Director, Division of Market Regulation, to Robert A. McTamaney, Carter, Ledyard & Milburn (Jan. 12, 1989).

15. The System is the only non-exchange proprietary trading system that is affiliated with a registered clearing agency (Delta). Initially, by Order dated January 12, 1989, the Commission granted Delta temporary registration as a clearing agency under Section 17A of the Exchange Act, without deciding whether the options trading system of which Delta is apart was an exchange. Securities Exchange Act Release No. 26450 (Jan. 12, 1989), 53 FR 2010 (Jan. 18, 1989). On petition for review of the Commission's Order brought by the Chicago Board of Trade ("CBT") and the Chicago Mercantile Exchange ("CME"), the Seventh Circuit vacated and remanded that Order, and directed the Commission to decide whether the System was an exchange and, based on that determination, to either re-register Delta as a clearing agency or decline to do so. Board of Trade of the City of Chicago v. SEC, 883 F.2d 525 (7th Cir. 1989).

    The Commission registered Delta, on a temporary basis, as a clearing agency under Section 17A of the Exchange Act, premised upon a finding that the System was not an exchange. Securities Exchange Act Release No. 27611 (Jan. 12, 1990), 55 FR 1890 (Jan. 19, 1990). The Order was upheld in Board of Trade of the City of Chicago v. SEC, 923 F.2d 1270 (7th Cir. 1991), *rehearing en banc denied*, No. 90-1246 (7th Cir. 1991).

16. The Division issued a no-action letter regarding POSIT's non-registration as an exchange on July 28, 1987. *See* Letter from Brandon Becker, Associate Director, Division of Market Regulation, to Lloyd H. Feller, Morgan Lewis & Bockius (July 28, 1987).

17. ITG is a subsidiary of Jefferies & Company, Inc. ("Jefferies"), a registered broker-dealer and member of the NASD. Jefferies operated the System until the creation of ITG in late 1991.

18. The staff of the Division issued a letter advising Instinet that enhancements to its Crossing Network would not adversely affect its ability to rely on its no-action letter issued August 8, 1986. *See* Letter from Alden S. Adkins, Chief, Office of Automation and International Markets, Division of Market Regulation, to Charles R. Hood, Vice President and General Counsel, Instinet Corporation (Dec. 6, 1991). These enhancements to the Crossing Network included the implementation of Instinet's Market Match service for executing transactions at volume-weighted average pricing (*see* discussion *infra*).

19. As noted above, the Crossing Network offers similar matching services for U.K. equity securities and for Yen-denominated equity issues.

20. The Division issued a letter dated December 6, 1991, advising Instinet that the Market Match enhancement to its Crossing Network would not adversely affect its ability to rely on its no-action letter issued on August 8, 1986 regarding Instinet's non-registration as an exchange. *See* Letter from Alden S. Adkins, Chief, Office of Automation and International Markets, Division of Market Regulation, to Charles R. Hood, Vice President and General Counsel, Instinet Corporation (Dec. 6, 1991). Similarly, by letter dated October 28, 1991, the Staff advised Jefferies that implementation of its volume-weighted average pricing session would not adversely affect its ability to rely on its earlier no-action letter issued July 28, 1987. *See* Letter from Alden S. Adkins, Chief, Office of Automation and International Markets, Division of Market Regulation, to Lloyd H. Feller, Morgan, Lewis & Bockius (Oct. 28, 1991).

21. Unlike the other systems described herein that operate pursuant to letters that grant no-action relief from exchange registration, this system operates pursuant to an exemption from exchange registration.

22. Pursuant to an amended application for exemption from registration as a national securities exchange, dated March 2, 1992, Wunsch Auction System, Inc. changed its company name to AZX, Inc. In addition, the amended application advised the Commission that the trading system would be moved from Minneapolis, Minnesota to Phoenix, Arizona.

23. The Commission stated that, although the Exchange Act provides no absolute guidelines as to what level of volume would not justify a continuing exemption, it would revisit the appropriateness of the exemption if AZX volume equaled that of the smallest of the registered national securities exchanges, *e.g.*, the CSE. *See* Securities Exchange Act Release No. 28899 (Feb. 20, 1991), 56 FR 8377 (Feb. 28, 1991).

24. *See* Letter from Richard G. Ketchum, Director, Division of Market Regulation, to Daniel T. Brooks, Esq., Cadwalader, Wickersham & Taft (Feb. 28, 1991).

25. *See* Letter from Larry E. Bergmann, Associate Director, Division of Market Regulation, to Steven R. Wunsch, President, AZX, Inc. (July 7, 1993).

26. The Division issued NAPEX a no-action position with regard to its non-registration as an exchange on August 2, 1985. *See* Letters from Michael J. Simon, Assistant Director, Division of Market Regulation, to D. Roger Glenn, Esq., Schifino & Fleischer (Aug. 2, 1985 and July 14, 1986).

27. The seven day period that partnership units are exposed on the System is intended to allow time for potential buyers to be contacted by NAPEX, and time for those buyers to conduct research regarding the partnerships for which units are offered for sale on the System. In light of the illiquidity of the securities traded on the System and the absence of market makers trading in those securities, the System substitutes time for capital to bridge the gap between buyers and sellers of partnership units.

28. As distinguished from NAPEX, the staff of the Division have also issued no-action letters for systems that are automated "bulletin boards" and by their terms only collect and disseminate indications of interest without providing execution or settlement procedures. These systems are designed to serve specialized markets that lack the degree of liquidity present in the market for listed equity securities. *See* Letter from the Division, to Schwartz, Kobb, Scheinert Hamerman (Feb. 15, 1979) (automated system facilitating trading in mortgages); Letter regarding Petroleum Information Corporation (automated service facilitating trading in gas and oil properties) from John M. Ramsay, to Alan P. Baden, Vinson & Elkins (Nov. 28, 1989); Letter regarding Investex Investment Exchange (automated system facilitating trading in limited partnerships) from John M. Ramsay, to Howard Wynn, Gusrae, Kaplan & Bruno (Apr. 9, 1990); Letter regarding Troy Capital Services, Inc. (automated system facilitating the transfer of limited partnership interests) from Kathryn V. Natale, to Edward M. Olson, McDonnell Douglas Capital Corporation (May 1, 1990); Letter regarding Real Estate Financing Partnership (automated system facilitating trading in commercial real estate interests) from Kathryn V. Natale to Joseph H. Huston, Jr., Stevens & Lee (May 1, 1990); Letter regarding Farmland Industries Inc., (automated system facilitating trading in farmland stocks) from Dirk Peterson, to Paul A. Belvin, Stinson Mag & Fizzell (Aug. 26, 1991).

29. The Division issued a no-action letter regarding the non-registration of COPS as an exchange on March 18, 1985. *See* Letter from Michael J. Simon, Assistant Director, Division of Market Regulation, to Bruce C. Klien, Secretary-Treasurer, B&K Securities, Inc. (Mar. 18, 1985).

30. The Division issued a no-action letter regarding the non-registration of TRAN as an exchange on May 15, 1985. *See* Letter from Michael J. Simon, Assistant Director, Division of Market Regulation, to Michael J. Tario, Co-Chief Executive Officer, Transaction Services, Inc. (May 15, 1985).

31. This Division issued a no-action letter regarding the non-registration of the System as an exchange on May 23, 1985. *See* Letter from Michael J. Simon, Assistant Director, Division of Market Regulation, to Carl J. Hewitt, Assistant General Counsel, Troster Singer Corporation (May 23, 1985).

32. The Division issued a no-action letter regarding the non-registration of Adler as an exchange on August 7, 1985. *See* Letter from Richard T. Chase, Associate Director, Division of Market Regulation, to James M. Anderson, Taft Stettinius & Hollister (Aug. 7, 1985). This system never began operations.

33. The Division issued a no-action letter regarding the non-registration of the CSC as an exchange on May 9, 1986. *See* Letter from Michael J. Simon, Assistant Director, Division of Market Regulation, to Peter F. Olberg, Battle Fowler, Jaffin & Kheel (May 9, 1986). By letter dated December 11, 1989, the staff of the Division issued a second no-action letter regarding refinements to the System since 1986 and the non-registration of CSC and CBA as exchanges. *See* Letter from Brandon Becker, Associate Director, Division of Market Regulation, to Peter F. Olberg, Battle Fowler (Dec. 11, 1989).

34. 17 C.F.R. § 230.415(a)(1)(25) (1993).

35. The staff of the Division issued a no-action letter regarding the non-registration of this system as an exchange on October 11, 1988. *See* Letter from Kathryn V. Natale, Assistant Director, Division of Market Regulation, to Christopher R. Petruzzi, ECON Investment Software (Oct. 11, 1988).

36. The Division issued a no-action letter regarding the non-registration of ESI as an exchange on May 22, 1985. *See* Letter from Michael J. Simon, Assistant Director, Division of Market Regulation, to Patterson Branch, President, Exchange Services, Inc. (May 22, 1985). After the issuance of that letter, the System was enhanced to permit banks to enter unexecuted customer orders into the System by computer or telephone communication with ESI. By letter dated September 11, 1991, the staff advised ESI that implementation of the enhancement would not adversely affect its ability to rely on the no-action letter. *See* Letter from William H. Heyman, Director, Division of Market Regulation, to Patterson Branch, President, Exchange Services, Inc. (Sept. 11, 1991).

37. The Division issued a no-action letter with regard to the non-registration of LIMITrader as an exchange on November 25, 1991. *See* Letter from William H. Heyman, Director, Division of Market Regulation, to Daniel T. Brooks, Cadwalader, Wickersham & Taft, (Nov. 25, 1991).

38. The Division issued a letter regarding the non-registration of this system as an exchange on June 15, 1990. *See* Letter from Brandon Becker, Associate Director, Division of Market Regulation, to Michael J. Simon, Milbank, Tweed, Hadley & McCloy (June 15, 1990).

Appendix V

Trading by Exchange Members

A. Background

Section 11(a) of the Securities Exchange Act of 1934 ("Exchange Act") addresses concerns regarding principal trading by exchange members for their own account on an exchange.[1] The provision was intended to encourage fair dealing and fair access to the exchange markets by reducing the conflicts arising from exchange members trading for their own accounts on the exchange.[2]

During consideration of the Exchange Act, Congress focused on two issues raised by the system of permitting members of securities exchanges to trade in securities as principals.[3] The first issue was whether the existing system inherently engendered an inappropriate conflict of interest. Congress believed that a member acting for the public as a broker was acting as an agent and had fiduciary duties to its customer. When acting as a principal, however, its investment advice or handling of public orders might be biased by virtue of self interest. The second issue was whether trading by members for their own accounts might either unduly influence price movements or result in excessive speculation.

To reduce speculation and conflicts of interest, the Exchange Act, as originally introduced, prohibited virtually all principal transactions by exchange members.[4] The bill provided for the complete segregation of broker and dealer activities and contemplated exchange markets composed exclusively of brokers.

The initial version of the bill generated much debate. The exchanges argued that eliminating dealer activities of their members would seriously disrupt the exchange markets. In response, Congress softened the segregation provisions of the original bill. The first amended version of the bill, while limiting membership on national securities exchanges to brokers, provided several exceptions to this limitation.[5] The amended proposal was still opposed by the New York Stock Exchange, Inc. ("NYSE"), which supported eliminating abuses through less drastic means, such as simply giving the Commission authority to regulate floor trading by members for their own accounts.[6] A later version of the bill adopted this approach and qualified the prohibition against floor trading by permitting members, if the Commission concurred, to combine broker and dealer functions as specialists, and to register as odd-lot dealers.

As enacted, the Exchange Act did not require segregation of broker and dealer functions or eliminate any type of member function. Instead, it prohibited manipulation of securities prices and the use of manipulative and deceptive devices and specifically conferred the power to regulate members' trading on the Commission. Section 11(a) provided that "[t]he Commission shall prescribe such rules and regulations as it deems necessary or appropriate in the public interest or for the protection of investors, (1) to regulate or prevent floor trading by members of national securities exchanges, directly or indirectly for their own account or for discretionary accounts . . . ."

Congress also directed the Commission to complete a study, by 1936, of the feasibility of completely separating the functions of broker and dealer.[7] The resulting report ("Segregation Report"), which was highly critical of floor traders and specialists, found that during a four-month period in 1935, 24% of the trading on the NYSE was for its members' own accounts.[8] The Segregation Report did not go so far, however, as to recommend the complete segregation of the functions of broker and dealer. Instead, the Commission recommended rulemaking to effect a partial segregation through the functional segregation of members on the exchange floor, with the exception of specialists.[9] Under the system suggested by the Segregation Report, floor traders would not be permitted to act as brokers, and commission brokers would not be allowed to initiate orders for their own accounts. This prohibition would not, however, extend to off-floor trading, so a commission broker could trade for his or her own account in the over-the-counter market.

News of the potential segregation struck hard at the exchanges, causing a precipitous drop in the price of a seat on the NYSE by December 1936. Partial segregation was as vehemently opposed by the exchanges as the complete abolition of floor trading had been in 1934. In the end, the Commission only prohibited member trading on margin and made minor changes in specialists' trading.[10]

B. Floor Trading

After passage of the Exchange Act and publication of the Segregation Report, the Commission monitored floor trading, but did not promulgate rules to circumscribe this activity until 1964. The former Division of Trading and Exchanges ("former Division") compiled extensive data and conducted numerous empirical studies,[11] including the Special Study of Securities Markets ("Special Study"),[12] that established the following characteristics of trading on the NYSE floor between 1934 and 1964:

1. Most floor trading tended to be done by a relatively small number of traders.

2. Floor trading tended to be concentrated in more active stocks, although floor traders were sometimes active in relatively inactive stocks if such stocks were volatile and sufficiently active to sustain a moderate price trend and provide an opportunity to cover a short position.

3. Floor traders tended to concentrate activities in a limited number of stocks and did so to a far greater degree than any other exchange member.

4. Floor trading often developed or increased in a given stock when the stock experienced unusual activity.

5. Floor traders traded predominantly with the price trend and tended to accentuate price movements and the imbalance of buyers and sellers, both with respect to individual stocks and the market in general.

The Commission's two major comprehensive studies on floor trading, a 1945 report[13] by the former Division ("1945 Report") and the Special Study, both concluded that floor traders enjoyed a substantial and unjustified advantage over all other traders. In addition, the two studies found that floor trading was not only inimical to the orderly functioning of the market, but was also a significant factor in market destabilization.

Specifically, the 1945 Report found that floor traders enjoyed a "formidable" advantage over the general public, that floor trading distracted brokers from their duties to the public, and that floor traders' tendency to trade with the trend had a destabilizing influence in the market. Finding that the existing exchange rules were ineffective to meet these problems, the 1945 Report concluded that the only adequate solution was to prohibit floor trading completely.[14]

The Commission tentatively determined to abolish floor trading in 1945, but after considering the matter and holding conferences with the NYSE, reversed its decision in light of repeated assurances that the exchanges would develop effective self-regulation of this activity. Shortly thereafter, the NYSE adopted Rules 108, 109, and 374 (subsequently replaced by NYSE Rule 110), which were designed to solve the problem. Specifically, NYSE Rule 108 addressed the issues of parity and precedence of members' orders for accounts in which they had an interest.[15] NYSE Rule 109, which was later rescinded, prohibited floor traders from accepting the privilege of "stopping" stock unless the stock was stopped against the order of another member.[16]

NYSE Rule 374 provided that if a member increased a long position by purchasing stock on the floor on a plus or zero plus tick, none of that position could be sold until the second succeeding trading day unless it was sold at a loss. In addition, if a member sold "long" stock on the floor on a zero minus tick, the stock could not be replaced until the second succeeding trading day. Specific prohibitions on floor trading were gradually removed, until the NYSE rule 374 was finally abandoned, in 1953, in favor of NYSE Rule 110. In its current form, NYSE Rule 110 prohibits members, when trading for accounts in which they have an interest, from congregating in and dominating the market. The rule also prohibits purchases or sales for traders' own accounts in other than an orderly manner.

The Special Study also took a critical view of floor trading. The Special Study found that, because of their physical presence on the exchange floor, floor traders could take advantage of information affecting stock prices more rapidly than investors who relied on tapes and quotations from brokers.[17] This was found to be especially true with respect to short-term market swings. The Special Study also found that floor traders' activity tended to accentuate market movements.

The exchanges responded to the Special Study by arguing that floor traders contributed to the liquidity or marketability of stocks by increasing the number of available buyers and sellers, and suggested that these advantages outweighed the possible injury to public investors. The Special Study noted the floor traders' willingness to commit capital to aid in situations where there was a temporary imbalance between supply and demand for stock had also been recognized.[18] The

Special Study also found, however, that floor traders tended to trade mostly in active securities. Thus, the argument that floor traders added to exchange market liquidity was weak because floor traders traded where they were needed least. Only when a floor trader volunteered to act like a specialist in order to stabilize a security's price could its existence be justified.[19] The Special Study, therefore, recommended that floor trading be abolished unless further Commission or exchange studies demonstrated that some floor traders could perform in the formal role of an "auxiliary specialist."[20]

1. Rule 11a-1

In April 1964, after intense negotiations with the exchanges, the Commission proposed Rule 11a-1 to restrict floor trading. The rule was subsequently adopted in August 1964.[21] Despite previous conclusions that exchange regulation had been inadequate in this area, however, the Commission left floor trading regulation to the exchanges, subject to closer Commission oversight. This was done to alleviate the detrimental effects of floor trading, yet retain its purported beneficial attributes.[22]

Rule 11a-1 provided, with certain exceptions, that no member of a national securities exchange could initiate any transaction while on the floor of such exchange in any security admitted to trading on the exchange for an account in which such member had an interest. The rule defined "floor trading" broadly to include both transactions initiated on the actual trading floor and transactions initiated by members from other exchange premises made available for the use of members generally. The prohibition also extended to orders initiated off the floor for an account in which a member had an interest, if the member was vested with more than the usual broker's discretion on the floor in the execution of an order for such account.

The rule provided exemptions for transactions of registered specialists and odd-lot dealers, transactions constituting stabilizing activities under the Exchange Act, *bona fide* arbitrage transactions, transactions approved for the purpose of maintaining a fair and orderly market, and transactions made to offset errors. Finally, the rule permitted floor transactions that were effected in conformity with a plan adopted by an exchange and approved by the Commission.[23] This final exemption was designed to permit floor trading activities deemed beneficial to the market.

Concurrently with adoption of Rule 11a-1, the Commission declared effective a floor trading plan, including rules and policies, that the NYSE had filed in May 1964.[24] Briefly, the plan contained the following provisions:

1. The NYSE undertook to establish a category of members known as "registered traders."

2. Each registered trader would have to meet an initial minimum capital requirement of $250,000.

3. To engage in floor trading, registered traders would have to pass an appropriate examination.

4. Registered traders would be prohibited from executing brokerage orders and engaging in floor trading in the same security during a single trading session.

5. A series of rules was designed to compel registered traders to contribute to the orderliness of the markets and to prohibit them from engaging in transactions with disruptive market effects:

   a. Destabilizing acquisitions of a security above the previous day's closing price would be prohibited.

   b. At least 75% of all registered trader acquisitions and 75% of all liquidations (except for liquidations at a loss) would have to be "stabilization" transactions in the sense of purchases below and sales above the last different price.

   c. Existing NYSE rules against members' trading in such a way as to "dominate" markets in the acquisition of positions would be extended to cover liquidations as well.

6. In acquiring positions, registered traders would have to yield the floor to orders originated off the floor by giving up priority based on time and parity with or precedence based on size; when liquidating positions, they would have to yield precedence based on size.[25]

The Commission also declared effective a separate plan by the American Stock Exchange ("Amex") which was similar to that of the NYSE, except that the minimum net capital requirement was to proceed gradually to a maximum of $75,000.[26] Because of the lower average price of securities traded on the Amex, the Amex believed that the lower net capital requirement would permit registered traders to carry approximately the same inventory as traders registered on the NYSE.[27]

Subsequent statistical analyses demonstrated that approximately three-quarters of all floor trading had ended as a result of the new rule on floor trading.[28] In particular, casual or part-time floor trading, the main source of abuse in the Commission's staff view, was also virtually eliminated.[29]

Between 1965 and 1976, floor trading on the NYSE and the Amex was the subject of numerous Commission inspections and reports.[30] With respect to the NYSE, the Commission staff found that surveillance of floor traders regarding compliance with applicable floor trading rules was ineffective. The staff also found a strong reluctance on the part of the NYSE to take action against registered traders who repeatedly violated exchange rules and the federal securities laws. In addition, as discussed below, the staff found off-floor NYSE members were able to use direct lines to the floor to receive information concerning block trades prior to its dissemination to the general public. Pursuant to the Commission's request, the NYSE took steps to correct these deficiencies.

2. Off-floor Trading

As a result of the promulgation of the floor trading rules, off-floor trading by members increased significantly.[31] Off-floor trading comprised transactions initiated or originated off the floor of the exchanges, but executed on the floor for accounts in which a member had an interest.[32] Although members' off-floor trades had received attention during Congressional hearings preceding the enactment of the Exchange Act[33] and between 1935 and the 1960s, off-floor trading received little attention from the Commission or the NYSE.

Because a member could easily institute a trade off the floor, member off-floor trading increased as on-floor trading declined.[34] A Congressional study ("1967 Study") of off-floor trading by members found that these members engaged in the very practices that were specifically prohibited to floor traders. The 1967 Study found that, like on-floor members, off-floor members concentrated their trading activity in a particular stock. This activity resulted in off-floor members, whether individually or as a group, intentionally or unintentionally, dominating the market in a stock and effecting their purchases in a destabilizing manner.[35] The Study also found that off-floor NYSE members were able to evade Rule 11a-1 under the Exchange Act by using direct lines to the floor to receive information concerning block trades prior to their dissemination to the general public.[36]

In 1968, the Commission again studied the issue of off-floor trading by members, in particular members' short-term trading ("1968 Report").[37] In light of its focus on short-term trading, the 1968 Report recommended that members trading from off the floor for their own accounts not be able to effect any purchases on plus ticks or zero plus ticks at or above the previous day's close when establishing or increasing a long position. In addition, the 1968 Report recommended that members be prohibited from entering sell orders for their own accounts in securities in which they had effected any purchases earlier in that day, unless at least one hour had elapsed since its last purchase.[38]

C. The 1975 Amendments

Section 11(a) of the Exchange Act was revised in 1975 by the Securities Acts Amendments of 1975 ("1975 Amendments").[39] In general, Section 11(a), as amended, prohibited members from effecting securities transactions on the national securities exchanges of which they were members, for their own accounts, the accounts of their associated persons, or accounts managed by the member or its associated persons ("managed accounts"). This general prohibition was qualified by eight exceptions. The amendments reflected two Congressional concerns: the traditional concern regarding the potential conflict of interest arising from exchange members trading for their own accounts in exchange markets and a newer concern regarding the problems inherent in combining brokerage and money management functions within a single entity.

1. Floor Trading

Prior to the 1975 Amendments, floor trading on exchanges was conducted either according to the rules of the exchange that were filed under Rule 11a-1, or pursuant to exemptions granted to exchanges under that rule. In addition Section 11(a) circumscribed the Commission's authority to regulate or prohibit member trading to floor trading or excessive trading.

The 1975 Amendments to Section 11(a) gave the Commission more extensive authority to regulate floor trading.[40] In doing so, the House noted that expanding communications technology enabled exchange members to transmit information to and from the exchange floor with increasing speed. While stating that this advantage would become less significant with the advent of the national market system, the House stressed the importance of giving the Commission full authority to regulate transactions made by exchange members for their own accounts and for the accounts of their affiliates, as well as for their managed accounts.[41]

Notably, although the Commission had, by rule, provided a specific exemption for exchange floor trading transactions effected in accordance with an approved exchange plan,[42] Congress did not incorporate this exemption into amended Section 11(a).[43] Rather, floor trading transactions did not generally qualify for any of the specific exemptions to Section 11(a). In considering whether to apply its exemptive authority under Section 11(a)(1)(H) to floor trading, the Commission stated:

> Because of the record developed since 1934 with respect to the problems created by floor trading, there would necessarily be anomalies in proposing that floor trading . . . be freed of all statutory constraints and, in particular, of statutory constraints imposed by Section 11(a)(1)(G) on those members for whom there was no prior history of trading problems. . . . [T]he Commission believes that inquiries focused exclusively on the meaning of [the words in Section 11(a)] . . . will lose sight of the critical question -- the role, if any, of proprietary trading by exchange members in the evolving national market system. The inquiry should instead concentrate initially on the utility of exchange members' proprietary trading from the perspective of promoting fair and orderly markets.[44]

In response to the prohibition of floor trading in the 1975 Amendments to Section 11(a), the NYSE and the Amex created new programs that permitted their members who had previously functioned as floor traders to engage in on-floor proprietary trading, subject to a number of requirements that were intended to have these members effectively function like market makers. Individuals complying with these programs are designated as Registered Competitive Market Makers ("RCMMs") on the NYSE and as Registered Equity Market Makers ("REMMs") on the Amex. They are permitted to trade for their own accounts pursuant to the exemption for market makers in Section 11(a)(1)(A).[45]

2. Managed Accounts

Exchange trading volume began to increase rapidly during the 1960s, largely due to a marked increase in trading by money managers on behalf of institutional accounts, such as pension funds, trust accounts, insurance accounts, and investment companies. Institutional trading increased both in absolute terms and as a proportion of total market volume. As a result, the execution of orders for institutional investors became an increasingly important part of the business of many brokers.

As fiduciaries, institutional money managers are obligated to obtain best execution on their transactions.[46] An important element affecting the quality of the execution is the commission paid to the broker. Because NYSE rules established that the commission rates to be charged on large trades were usually the same as those applicable to small trades, institutional investors failed to realize any appreciable economies of scale in executing large transactions. Instead, exchange member broker-dealers benefited from fixed commission rates that were artificially high for large trades, as well as from limits on the availability of exchange memberships.

In response, institutional money managers in the fixed commission era used a variety of devices to circumvent fixed commission costs. Some institutions formed brokerage subsidiaries that became members of regional exchanges.[47] Using their affiliates, institutions would route their orders for NYSE- or Amex-listed stocks through a regional exchange.[48] The routing, in effect, reduced the institutions' commission costs by allowing their money managers to recapture part of the fixed commission through their regional member firms. Other methods used by institutions to lower their effective commission costs included reciprocal trading between affiliates of institutions and exchange members, give-ups to broker-dealers,[49] execution of trades in the third market,[50] and the use of soft dollars.[51]

Although the NYSE and the Amex did not allow institutional money managers to become members, they did allow existing members to engage in the money management business. As a result, unlike their non-member institutional counterparts, NYSE and Amex members could increase the performance of their accounts under management by simply reducing their management fees, while continuing to profit from the fixed commissions charged in executing transactions for those accounts. The accounts of institutional money managers who could not join these exchanges typically were charged both a normal management fee and the cost of the fixed commissions.[52] Thus, non-exchange members who were also money managers were at a competitive disadvantage when compared to member firm money managers who were exchange members.

In response to these and other systemic problems in the securities industry, Congress and the Commission undertook extensive studies of the changes in the securities markets.[53] The result of these studies was enactment of the 1975 Amendments, including the amendments to Section 11(a). At the same time, fixed commission rates were eliminated and access to exchange membership was made available on a relatively unrestricted basis.

The Congressional studies preceding the 1975 Amendments cited, in addition to the competitive effects of the institutional membership rules, several perceived conflicts of interests from the combination of money management and brokerage functions.[54] For example, Congress noted the potential for broker-dealers to churn their managed accounts to increase their commissions or pressure the managers of their advised accounts to buy particular securities that would benefit the broker-dealers.[55] In addition, there was concern that broker-dealers might prefer their managed accounts over the accounts of other customers when executing orders.[56] These concerns were summed up in the 1975 Senate Report, which stated:

> While there is no evidence that the conflicts of interest described above have led to widespread breaches of fiduciary duty, the existence of these conflicts is extremely troublesome. The distortion in market trading patterns resulting from the combination of money management and brokerage, as well as the competitive unfairness between stock exchange members and nonmembers, are also of serious concern.[57]

Before the 1975 Amendments, the Commission had taken steps to address the issues of exchange membership and fixed commission rates. In 1973, after prolonged discussions with the exchanges, the Commission attempted to resolve the issues of differing institutional membership rules by adopting Rule 19b-2. This rule required that each national securities exchange adopt a rule mandating that every exchange member make the conduct of a public securities business the principal purpose of its exchange membership.[58] An exchange member was deemed to meet this requirement if at least 80% of the volume of the exchange securities transactions effected by it during the preceding six months resulted from transactions for or with persons other than affiliates of the member, or from certain other types of transactions.[59] Rule 19b-2 was controversial and, ultimately, short-lived.[60]

After more than a decade of gradual revision of the exchange fixed commission rate structure, the Commission totally eliminated fixed exchange commission rates on May 1, 1975, one month before enactment of the 1975 Amendments.[61] In light of this change and the anticipated opening of access to exchange membership, the Commission expressed concern that the amendments to Section 11(a) being considered by Congress were fundamentally unnecessary and could create inefficiencies in the order execution process for managed accounts.[62] In addition, the Commission thought that these amendments might place smaller regional exchange members that offered money management services at a competitive disadvantage with large money managers that could negotiate lower commissions. It was feared that the ultimate result of such a situation would be more concentration in the money management industry, which would reduce the availability of money management services to the regional institutional accounts that had traditionally been serviced by small regional brokerage firms.

Despite Commission opposition to the proposed amendments to Section 11(a), Congress remained concerned about the combination of money management and brokerage functions. Noting that the system of fixed commission rates had tended to either create or aggravate conflicts of interest, Congress stated that this system had also, to some extent, eliminated the problem of determining an appropriate commission for a broker to charge for executing transactions for its managed accounts. Thus, Congress expressed its concern that as the securities industry adopted competitive commission rates, a new conflict of interest would arise "as money manager-brokers have to determine, without the benefit of arm's length bargaining, what constitutes a fair commission charge for transactions they execute for their managed accounts."[63]

Moreover, Congress did not view Rule 19b-2 as an adequate response to the institutional exchange membership issue. The Senate stated that Rule 19b-2 failed to address the fundamental unfairness inherent in a system that permitted brokers to combine money management with their brokerage business while prohibiting money managers from combining brokerage with their money management business.[64] In addition, while noting the validity of the Commission's objective that the securities markets serve public, rather than private purposes, the Senate viewed Rule 19b-2 as an inappropriate mechanism for the task.[65]

As a result, Congress adopted amendments to Section 11(a) that included many elements from the Rule 11a-1 regarding floor trading, including an exemption for exchange members that principally engaged in a public securities business and yielded priority to public orders[66] and also prohibited exchange members from effecting any orders for managed accounts. In response to the Commission's concerns, however, Congress included in Section 11(a) a broad grant of exemptive authority to the Commission.

D. The Rules Adopted Under Section 11(a)

The Commission quickly used its exemptive authority to adopt a number of "temporary" rules that effectively modified the impact of certain portions of Section 11(a).

1. Rule 11a1-1(T) -- The Proprietary Trading Rule

Adopted in 1976, Rule 11a1-1(T)[67] exempts transactions of exchange members for their own accounts (*i.e.*, proprietary transactions) that would otherwise be prohibited by the operation of Section 11(a) if such members yield priority, parity and precedence to certain other orders.[68] Specifically, Rule 11a1-1(T) provides that a member's proprietary order may be executed on the exchange to which the member belongs, as long as: (1) the member discloses to the broker employed and to the trading floor that the order is proprietary; and (2) any member presenting a proprietary order on the exchange floor yields priority to any bid or offer at the same price that is not also a proprietary order, notwithstanding any otherwise applicable rules of priority, parity, and precedence.[69] The exemption provided by Rule 11a1-1(T) is only available with respect to a member's own proprietary transactions; it does not apply to transactions either for an account of a person associated with a member or for an account over which a member or its associated person has investment discretion (*i.e.*, managed accounts).[70] In addition, a member relying on the exemption provided by Rule 11a1-1(T) must also meet the criteria enumerated in Section 11(a)(1)(G)[71] and in certain exchange rules.[72]

2. Rule 11a2-2(T) -- The Effect-Versus-Execute Rule

Adopted in 1978, Rule 11a2-2(T) permits an exchange member to effect transactions for "covered accounts" (*i.e.*, the member's own account, the account of an associated person, and an account over which either the member or its associated person has investment discretion) if, among other things, the member actually uses an independent floor broker to execute the transactions on the exchange floor.[73] Providing the broadest exemption from the operation of Section 11(a) for most members, the effect-versus-execute rule attempts to place member and non-member money managers on equal footing by allowing exchange members to continue handling orders for their managed accounts as long as they do not perform the actual execution of such orders on the exchange floor.

Rule 11a2-2(T) also addresses issues of compensation and conflicts of interest, requiring affiliated brokers to disclose any transaction-related compensation received in connection with effecting a trade for a managed account.[74] This provision is designed to enable money managers to select their brokers based on their assessment of the quality of executions and other services provided by the brokers and the amount of commissions paid, regardless of whether the broker is affiliated with the money manager.

3. Other Rules Under Section 11(a)

In the late 1970s, the Commission adopted four rules to exempt certain transactions for the accounts of members or their associated persons from the operation of Section 11(a).

a. Rule 11a1-3(T). Rule 11a1-3(T) permits *bona fide* hedge transactions in certain securities, because these types of transactions are deemed consistent with the purposes of Section 11(a), the protection of investors, and the maintenance of fair and orderly securities markets.[75] Transactions effected for managed accounts, however, are not covered under the rule.

b. Rule 11a1-4(T). Rule 11a1-4(T) permits transactions in debt instruments to be effected on exchanges.[76] As with hedge transactions, these types of transactions are deemed consistent with the purposes of Section 11(a), the protection of investors, and the maintenance of fair and orderly securities markets. Transactions effected for managed accounts are not covered by the rule.

c. Rule 11a1-2. Rule 11a1-2 permits members to effect transactions for the public customers of their associated persons on the same basis as transactions for their own public customers. Known as the "look-through rule," Rule 11a1-2 allows a member to effect transactions for the omnibus accounts carried in the name of its associated persons, such as a foreign parent company or subsidiary, if the member itself could permissibly effect such transactions in an account it carries on the same basis. Thus, this rule grants no independent exemption that would not also be available to a member firm.

As the Commission explained in adopting the rule, the prohibition in Section 11(a) is sufficiently broad to prohibit a member from ever effecting a transaction for the account of an associated entity, regardless of the economic interests of the associated entity in the account.[77] Congress had indicated that it believed such trading might be consistent with the purposes of Section 11(a) if the associated entity had no economic interest in, and no investment discretion over, such accounts.[78] Thus, the Commission believed that the look-through rule was an appropriate method of overcoming the inequities arising as a matter of corporate structure and business practices unrelated to either the market impact of transactions or any professional advantage.[79]

d. Rule 11a1-5. Rule 11a1-5 provides that any transaction by a NYSE RCMM or an Amex REMM effected in compliance with the governing exchange's rules will be deemed to be permitted under Section 11(a).[80] As delineated by the NYSE, a RCMM may act as a floor broker or a RCMM, but may not act in both capacities in the same stock during the same trading session.[81]

RCMMs and REMMs, the successors to floor traders, are regulated by the exchanges.[82] For example, to be a RCMM an individual must meet a minimum capital requirement[83] and pass an examination prescribed by the NYSE.[84] In addition, RCMMs are required to perform certain *bona fide* market making functions for the exchange.[85] Steadily declining in number over the years, there are currently less than a dozen RCMMs on the NYSE.

e. Additional Commission Rulemaking Authority Under Section 11(a). In Section 11(a)(2), Congress expressly grants the Commission broad discretion to make rules regulating or prohibiting other transactions on a national exchange not expressly prohibited by Section 11(a)(1), transactions effected in over-the-counter markets, and certain exchange transactions effected by non-member broker-dealers. To date, the Commission has not exercised this rulemaking authority.

E. The 1993 Amendments to Section 11(a) -- Summary and Recommendations

Congress recently passed a law effectively repealing the managed account provisions of Section 11(a). The Division believes the time has come to reexamine the other provisions of Section 11(a) in light of the evolving securities markets.

1. The Repeal of the Managed Account Provisions of Section 11(a)

In October 1987, Fidelity Management & Research Co., an investment adviser, submitted to Congress a legislative proposal to amend Section 11(a) to delete the prohibition against an exchange member effecting transactions on the exchange for its managed accounts.[86] Supported by the securities industry[87] and the NYSE,[88] as well as by the Commission,[89] a bill was introduced in the House and the Senate in 1991 to repeal the managed account provisions of Section 11(a). Although the bill passed in both the House and the Senate, it was not enacted in the 102nd Congress.[90]

An identical bill, H.R. 616, was proposed in the 103rd Congress and included as part of S. 423 in the Senate. These provisions had the support of the securities industry and the Commission. In studying the bill, the House Subcommittee on Telecommunications and Finance determined that "there may no longer be a compelling need" for the managed account provisions of Section 11(a). Explaining that the managed account provisions appeared largely unnecessary due to post-1975 changes in the securities markets,[91] this Subcommittee further noted that:

> [W]ith the enactment of Rule 11a2-2(T), most of the barriers to effecting orders of managed accounts through affiliated brokers already have been effectively removed, and it is unlikely therefore that the use of affiliated brokers would increase significantly with the repeal of the statutory restriction. The repeal of the managed account restrictions are not intended to change the fiduciary obligations of advisers regarding broker-dealer affiliates.[92]

In addition, the Subcommittee cited industry studies indicating that the amendment of Section 11(a) would result in substantial savings of both administrative time and money.[93] H.R. 616 was enacted in August 1993.[94]

2. Proprietary Accounts

Members of the securities industry have consistently asserted that the requirements of Section 11(a) and the rules thereunder that currently govern trading by broker-dealers for their own accounts from off the floor are complex, cumbersome, and of little or no benefit to the investing public. They point out that under the effect-versus-execute rule, exchange members can satisfy the requirements of Section 11(a) by using independent floor brokers to effect their proprietary trades. They argue that the practical effect of these provisions is to increase the cost of executing proprietary trades while offering few protections to the investing public or to the markets generally.

The Division believes that exchanges should serve public customers first and foremost and that exchange members should not be permitted to trade for their own accounts in a way that displaces or otherwise disadvantages public customers. At the same time, unnecessary costs and impediments to efficient trading should be eliminated wherever possible, both for public customers and exchange members. Therefore, the Division believes that the Section 11(a) requirements governing exchange member off-floor trading should be reexamined to determine whether these requirements are still warranted.[95]

In particular, the Division believes that the operation of the effect-versus-execute rule should be reviewed. In satisfying the technical requirements of the statutory provision, Rule 11a2-2(T) has had the intended effect of allowing member trading for managed and proprietary accounts to continue, subject to a number of safeguards benefiting managed accounts such as commission disclosure and account authorization requirements. In requiring the use of an independent floor broker, however, the rule forces the exchange member originating the order to pay an additional commission to the floor broker executing the order. It also requires special order routing and tracking procedures for orders covered by Section 11(a) to ensure compliance with those requirements.

Whether use of an independent floor broker adds substantial protection to managed orders or public orders on the floor is questionable. Proprietary orders handled by independent floor brokers do not have to yield to other public orders on the floor, as they would if executed pursuant to Rule 11a1-1(T). In addition, the potential conflict of interests between a member executing its own order and a public customer's order is only somewhat reduced by routing the proprietary order through an independent floor broker, because the member still can delay executing a customer order until it learns that the independent floor broker has executed its proprietary order. Moreover, independent floor brokers often handle Section 11(a) orders on a regular basis for particular exchange members and thus have a financial incentive to give those orders special treatment to strengthen this business relationship.

It has been suggested that executing proprietary and managed orders through an independent floor broker results in a specific execution price being attributed to each order, thus reducing so-called "cherrypicking," where trades at advantageous execution prices are allocated after the trade to favored accounts. This justification does not appear sufficient to retain an otherwise burdensome requirement. Reallocation of execution prices is still possible in these trades because the independent floor broker is not told the name of the ultimate account for whom the order is executed. Moreover, cherrypicking concerns are not limited to accounts managed by or belonging to exchange members. Because similar problems can arise with non-broker-dealer investment advisers, they would best be addressed by rules applying to money managers generally.

For these reasons, the Division will reexamine the Section 11(a) restrictions on exchange member off-floor trading in general, and the operation of the effect-versus-execute rule in particular. The Division will explore whether Section 11(a) provisions regarding off-floor trading should be modified. Possible alternative approaches would be to strengthen these provisions by requiring that all proprietary orders yield to public customers, eliminating requirements deemed unnecessary, or retaining requirements in their current form.

1. *See* Exchange Act Section 11(a), 15 U.S.C. § 78k(a) (1988).

2. Senator Fletcher stated that: "The bill seeks to protect the American people by requiring brokers on these exchanges . . . to be wholly disinterested in performing their services for their clients and for the American people trading on the exchanges." 78 Cong. Rec. 2270-71 (1934).

3. *See generally* S. REP. NO. 1455, 73rd Cong., 2d Sess. (1934) (Stock Exchange Practices); *Hearings on Stock Exchange Regulation Before the House Comm. on Interstate & Foreign Commerce*, 73d Cong., 2d Sess. (1934) ("House Hearings").

4. H.R. 7852, 73d Cong., 2d Sess., 78 Cong. Rec. 2378 (1934). The bill, introduced by Congressman Rayburn on February 10, 1934, provided in Section 10 that: "It shall be unlawful for any member of a national securities exchange or any person who as a broker transacts a business in securities through the medium of any such member to act as a dealer in or underwriter of securities whether or not registered on any national securities exchange."

5. H.R. 8720, 73d Cong., 2d Sess., 78 Cong. Rec. 4876 (1934). While this version of the bill, introduced by Congressman Rayburn on March 19, 1934, permitted members to register as combined broker-dealers, it provided that these functions could never be combined by members "while on the trading premises" of an exchange, nor could a broker effect any transaction for his own account while on the exchange premises. Members could register as odd-lot dealers or specialists, but each specialist could only act as a broker or a dealer, not both.

6. *See* House Hearings, *supra* note 3, at 725 (Statement of Richard Whitney, President, NYSE).

7. Exchange Act § 11(e), repealed by Pub. L. No. 94-29 (June 4, 1975).

8. SEC, REPORT ON THE FEASIBILITY AND ADVISABILITY OF THE COMPLETE SEGREGATION OF THE FUNCTIONS OF BROKER AND DEALER 90 (June 1936).

9. *Id.* at 20-22.

10. *See* Securities Exchange Act Release No. 1074 (Feb. 24, 1937); Securities Exchange Act Release No. 1117 (Mar. 30, 1937).

11. After the Segregation Report, there were numerous other studies on floor trading on the exchanges during what can be characterized as Commission acquiescence to exchange self-regulation. *See* SEC, REPORT TO THE COMMISSION BY THE TRADING & EXCHANGES DIVISION ON FLOOR TRADING (1945); SEC, REPORT TO THE COMMISSION BY THE TRADING & EXCHANGES DIVISION ON FLOOR TRADING ON THE NEW YORK EXCHANGES: A TEN YEAR RECORD (1945); SEC, REPORT TO THE COMMISSION ON FLOOR TRADING UNDER THE RULES OF THE NEW YORK EXCHANGES (1946); SEC, TRADING BY SPECIALISTS AND FLOOR TRADERS (1948); SEC, FLOOR TRADING UNDER REVISED RULES (1948); SEC, MEMBERS TRADING FOR THEIR OWN ACCOUNTS ON THE FLOOR OF THE NEW YORK STOCK EXCHANGE (1952); SEC, REPORT ON FLOOR TRADING ON THE NEW YORK STOCK EXCHANGE (1959); SEC, REPORT ON FLOOR TRADING ON THE NEW YORK STOCK EXCHANGE (1959); SEC, REPORT ON FLOOR TRADING ON THE AMERICAN STOCK EXCHANGE (1964).

12. SEC, REPORT OF SPECIAL STUDY OF SECURITIES MARKETS, H.R. DOC. NO. 95, 88th Cong., 1st Sess. (1963) ("Special Study").

13. SEC, REPORT TO THE COMMISSION BY THE TRADING AND EXCHANGES DIVISION ON FLOOR TRADING (1945).

14. *Id.* at 42-44.

15. NYSE Rule 108, 2 NYSE Guide (CCH) ¶ 2108, was designed to moderate one element of floor traders' on-floor advantages and dealt with precedence, a technique employed to determine which of two or more parties is entitled to the first transaction when such parties have placed bids (or offers) in a security at the same price. Deadlocks are broken by the application of rules of "priority," "precedence," and "parity." Generally, orders which are first in time have "priority," while the largest bid (or offer) receives "precedence." "Parity" is broken by the flipping of a coin. Rule 108 provided that a member acquiring or increasing a position on the floor was not entitled to parity with a bid or offer originating off the floor. The NYSE then extended this prohibition to precedence. *See* Special Study, *supra* note 11, at 232-33.

16. "Stopping" stock is a guarantee by a specialist that an order placed by, in this case, a floor trader will be executed at the best bid or offer price then in the specialist's book unless it can be executed at a better price within a specified period of time. NYSE Rule 109 was rescinded on June 2, 1983. *See also* SEC, STUDIES AND STATEMENTS ON FLOOR TRADING (1934-1961) (1962).

17. Special Study, *supra* note 12, at 241-42.

18. *Id.*

19. *Id.* at 224-42.

20. *Id.* at 240. The Special Study concluded that "[f]loor trader contributions to liquidity and continuity, in short, are not of sufficient magnitude or importance to warrant the retention of this vestigial 'private club' aspect of the exchanges." *Id.*

21. Securities Exchange Act Release No. 7290 (Apr. 9, 1964) (proposing Rule 11a-1); Securities Exchange Act Release No. 7330 (June 2, 1964) (adopting Rule 11a-1); Exchange Act Rule 11a-1, 17 C.F.R. § 240.11a-1.

22. Securities Exchange Act Release No. 7290, *supra* note 21, at 10.

23. In view of the regulatory history, which had seen cycles of regulation followed by erosion of exchange rules, it was deemed essential that any plan be subject to control by the Commission. The NYSE initially refused to accept these principles, contending that they would be tantamount to abolition of floor trading, though eventually NYSE representatives acquiesced to the plan. *See* Letter from G. Keith Funston, President, NYSE, to Exchange members (Mar. 14, 1964) (regarding discussions with the SEC on floor trading).

24. *See* NYSE Rule 110, 2 NYSE Guide (CCH) ¶ 2110 (amended pursuant to the NYSE's plan); *see also* NYSE Rule 111, 2 NYSE Guide (CCH) ¶ 2111 (creating a category of registered traders, now called "competitive traders"); NYSE Rule 112, NYSE Guide (CCH) ¶ 2112 (imposing restrictions on competitive traders).

25. *See* Securities Exchange Act Release No. 7330 (June 2, 1964). The Commission approved a number of amendments to the plan before it went into effect. Specifically, bond trading was exempted from all prohibitions in Rule 11a-1 (without change to the rule itself) and any plans adopted under the rule. Further, an exemption was created for specialists desiring to effect a bona fide hedge of their positions by buying underlying securities. Finally, the rule, as construed by the Commission, covered transactions by members participating as principals in block transactions initiated off the floor, but consummated on the floor, because the exact price and amount of the securities bought or sold could not be finally set until the transactions were consummated. Because transactions of this sort did not involve the problems inherent in floor trading, an appropriate exemption was added. *See* Securities Exchange Act Release No. 7375 (July 23, 1964).

26. *See* Securities Exchange Act Release No. 7359 (June 30, 1964); Securities Exchange Act Release No. 7374 (July 23, 1964). The Amex plan was subject to the same amendments as the NYSE plan. *See supra* note 25.

27. *See* Securities Exchange Act Release No. 7359 (June 30, 1964)

28. *Id.* Floor trading was reduced from 2.48 percent of the total transactions on the NYSE for the year ending July 31, 1964 to 0.66 percent for the following year.

29. Securities Exchange Act Release No. 7359 (June 30, 1964).

30. *See* SEC, REPORT ON FLOOR TRADING AT THE NEW YORK STOCK EXCHANGE, AUGUST 1964-JANUARY 1965 (1965); SEC, REPORT ON FLOOR TRADING ON THE AMERICAN STOCK EXCHANGE, AUGUST 1964-JANUARY 1965 (1965).

31. CRESAP, MCCORMICK & PAGET, NEW YORK STOCK EXCHANGE STUDY OF FLOOR TRADING V-8 (1964) ("Cresap Report").

32. *See* SEC, OFF-FLOOR TRADING PRACTICES OF MEMBERS OF THE NEW YORK STOCK EXCHANGE 1 (1968) ("1968 Report").

33. *See* S. REP. NO. 1455, 73rd Cong., 2d Sess. 30-45 (1934) (Stock Exchange Practices).

34. By 1967, on-floor trading had declined to 0.5 percent of total volume from 2.7 percent in 1963, while member off-floor trading had increased to 7.3 percent of total volume from 5.2 percent in 1963. *See* July 30, 1968 Memorandum from the Division of Trading and Markets to the Commission re: 1968 Report, *supra*, note 32.

35. SEC, TRADING ON THE NEW YORK STOCK EXCHANGE BY OFF-FLOOR MEMBERS (1967) ("1967 Report").

36. As a result of the 1967 Report, NYSE Rule 112.10 was promulgated. 2 NYSE Guide (CCH) ¶ 2112. This rule prevented off-floor members from taking advantage of lower prices prevailing immediately preceding or following a block sale by sending orders directly to the exchange floor rather than through the order room in the same manner as customers' orders. *See* 1968 Report, *supra* note 32, at 23.

37. 1968 Report, *supra* note 32. Because Rule 11a-1 had limited members' on-floor trading, thus limiting their ability to take advantage of short-term swings in the market, there had been a corresponding increase in members' off-floor trading. Short-term trading thus became the focus of the 1968 Report. *Id.*

38. 1968 Report, *supra* note 32, at 25-26.

39. Pub. L. No. 94-29, 89 Stat. 97 (1975).

40. Securities Exchange Act Release No. 12055 (Jan. 27, 1976), 41 FR 8075.

41. H.R. REP. NO. 123, 94th Cong., 1st Sess. 55-57 (1975) (report to accompany H.R. 4111). Specifically, this report noted:

> [A]s the national market system expands and greater numbers of brokers and dealers are permitted direct and free access to the system, the relative trading advantage can be expected to dissipate. It nonetheless remains imperative that the Commission be given full authority to prevent or regulate transactions by members of exchanges and brokers and dealers alike from effecting transactions for their own account or for the account of persons who are affiliated or associated with them or for accounts which they manage. Only through the exercise of this power can we be assured that trading by professional participants in the market is fair and without preference or advantage, and that public investors will be assured of their ability to trade

on an equitable basis. The proper and diligent exercise of this authority will serve as an important foundation for the restoration of investor confidence in our securities markets.

Id. at 55

42. Exchange Act Rule 11a-1, 17 C.F.R. §§ 204.11a-1, 240.19b-2 (1993); Exchange Act Rule 19b-2 (rescinded). *See infra* text accompanying notes 58-65 for discussion of Rule 19b-2.

43. Moreover, the exchange rules that constituted the approved exchange plan under Rule 11a-1 continued to apply after the 1975 Amendments.

44. Securities Exchange Act Release No. 13388 (Mar. 18, 1977), 42 FR 16745.

45. Securities Exchange Act Release No. 16781 (May 5, 1980), 19 SEC Doc. 1372; Securities Exchange Act Release No. 14719 (May 1, 1978), 43 FR 19738. For further discussion of RCMMs and REMMs, *see infra* text accompanying notes 80-85 discussing Rule 11a1-5.

46. S. Rep. No. 75, 94th Cong., 1st Sess. 64 (1975) ("1975 Senate Report"). In the 1975 Senate Report, best execution was described as "the best price [for a security] net of all commissions and other transaction costs." *Id.*

47. Prior to 1975, the regional exchanges accepted institutions and their affiliates as members, while the NYSE and the Amex prohibited institutions and their brokerage affiliates from becoming members.

48. 1975 Senate Report, *supra* note 46, at 61-62; *see also* H.R. DOC. NO. 519, 92nd Cong., 2d Sess. 133 (1972).

49. A "give-up" occurs when a money manager directs its broker to give a portion of its commissions for a transaction to another broker that, while uninvolved in the transaction, had supplied unrelated services to the money manager.

50. The term "third market" refers to broker-dealers that trade exchange-listed securities in the over-the-counter market. Institutions would trade in the third market on a competitive net price basis, thus circumventing the exchange's fixed commissions.

51. The term "soft dollars" refers to the practice of institutions obtaining research services and other non-brokerage services that were effectively paid for by the commission.

52. Generally, money managers charge their accounts a management fee designed to cover the cost of administrating the account. Commission charges on securities transactions are not included in the management fee but are paid separately by the account out of its assets. Thus a money manager can improve the performance of an account either by lowering the management fee, which lowers the manager's profits, or by negotiating for lower commissions, which lowers the broker's profits.

53. *See, e.g.*, S. REP. NO. 13, 93d Cong., 1st Sess. (1973) (finding that the combination of brokerage and money management impeded fair competition between money managers, distorted the evolving central market, and provided a breeding ground for numerous conflicts of interest); SUBCOMM. ON COMMERCE AND FINANCE OF THE HOUSE COMM. ON INTERSTATE AND FOREIGN COMMERCE, H.R. DOC. NO. 92-1519, 92D CONG., 2D SESS., SECURITIES INDUSTRY STUDY (Comm. Print 1972) (finding that institutional money managers often routed orders for NYSE- or Amex-listed stocks to regional exchanges through their affiliated regional exchange-member broker-dealers); SEC, INSTITUTIONAL INVESTOR STUDY, H.R. DOC. NO. 92-64, 92d Cong., 1st Sess. (1971) (noting that, by routing orders through their broker-dealer affiliates to regional exchanges, institutional investors had derived greater benefits for their shareholders than they had using unaffiliated broker-dealers on the NYSE or the Amex); SEC, STUDY OF UNSAFE AND UNSOUND PRACTICES OF BROKERS AND DEALERS, H.R. DOC. NO. 231, 92d Cong., 1st Sess. (1971) (finding that the "back office crisis" resulted from basic

structural weaknesses in the systems for clearing and settling securities transactions and from insufficient net capital maintenance requirements).

But see SEC, STATEMENT ON THE FUTURE STRUCTURE OF THE SECURITIES MARKETS (Mar. 14, 1972), 37 FR 5286, in which the Commission altered its earlier position and stated that, while institutional investors should be permitted to invest in broker-dealers doing a general public brokerage business on exchanges, such institutions should not be permitted to obtain exchange memberships solely for the purpose of recapturing brokerage commissions through reciprocity with exchange members. Further, advancing its position that exchange memberships should be available only to those with a predominant "public purpose" (*i.e.*, either to effect brokerage transactions for unaffiliated customers, or to perform a useful market function, such as market making), the Commission stated that institutions should not be permitted to join exchanges merely to transact business for their in-house accounts.

54. *See, e.g.*, H.R. REP. NO. 123, 94th Cong., 1st Sess. (1975) (report to accompany H.R. 4111); S. REP. No. 187, 93d Cong., 1st Sess. (1973) (report to accompany S. 470).

55. *See* 1975 Senate Report, *supra* note 46, at 63-65. Examples of advantages accruing to a broker-dealer would be the completion of another customer's block transaction or the closing of the underwriting of a new issue. *Id.*

56. *Id.* Such favoritism could be evidenced, for example, by a broker-dealer providing research information to its managed accounts before disseminating the information to its other customers, or by a broker-dealer executing transactions for its managed accounts ahead of transactions in the same securities for its public customers. *Id.*

57. *Id.*

58. Securities Exchange Act Release No. 9950 (Jan. 16, 1973), 38 FR 3928 ("Rule 19b-2 Release").

59. This was known as the "80-20 test."

60. As discussed below, Rule 19b-2 was rescinded on January 27, 1976. *See* Securities Exchange Act Release No. 12055 (Jan. 27, 1976), 41 FR 8075.

61. Exchange Act Rule 19b-3, 17 C.F.R. § 240.19b-3, was adopted in Securities Exchange Act Release No. 11203 (Jan. 23, 1975), 40 FR 7403 (Feb. 20, 1975) ("Rule 19b-3 Adopting Release").

62. Just prior to the passage of the 1975 Amendments, the Commission testified before the Subcommittee on Securities of the Senate Committee on Banking, Housing and Urban Affairs that:

> [D]evelopments not present when we first adopted Rule 19b-2, and when S. 470 [the precursor to S. 249, which was the basis for the 1975 Amendments] was passed - such as the elimination of fixed commission rates, and creditable progress toward the development of a national market system - call into serious question the need for a legislative formulation to deal with this issue, and particularly a legislative formulation too rigid to permit the Commission to adjust its rules to changing conditions and circumstances.

Securities Acts Amendments of 1975: Hearings before the Subcomm. on Securities of the Senate Comm. on Banking, Housing and Urban Affairs, 94th Cong., 1st Sess. 256 (1975).

63. *Id.*

64. S. Rep. No. 75, *supra* note 46, at 65-67. The 1975 Senate Report quoted former NYSE chairman Gustave Levy as stating: "Our Achilles' heel has always been that we have been in the money managing business and the money managers could not get into ours." *Id.* at 66.

65. *Id.* at 67. The Senate Committee went on to state:

> Rule 19b-2 represents a regretful chapter in the Commission's generally distinguished history. The bill is designed to eliminate all traces of this inappropriate regulatory interference with legitimate competitive forces. It is designed accordingly to assure that the power to control trading on exchanges is never again used to establish de facto membership requirements.

Id.

66. Section 11(a)(1)(E), 15 U.S.C. § 78k(a)(1)(E).

67. Securities Exchange Act Release No. 12055 (Jan. 27, 1976), 41 FR 8075.

68. Rule 11a1-1(T), 17 C.F.R. § 240.11a1-1(T); *see supra* note 15 (discussing priority, parity, and precedence).

69. Proprietary orders must yield to non-proprietary orders at the same price, regardless of the size of the orders or the time at which they are entered. Rule 11a1-1(T)(a)(3).

70. Securities Exchange Act Release No. 12055 (Jan. 27, 1976), 41 FR 8075. *See infra* discussion of Rule 11a1-2 (the "look-through rule") for application of exemptions for the account of an associated person of a member, or for members' own managed accounts.

71. A member is deemed to meet the "business mix test" of Section 11(a)(1)(G)(i) if it derives at least 50% of its gross revenues from the sources listed in the section. Rule 11a1-1(T)(b).

72. *See, e.g.*, NYSE Rule 410(b), 2 NYSE Guide (CCH) ¶ 2410 (providing that certain orders to be executed pursuant to the provisions of Section 11(a)(1)(G) and Rule 11a1-1(T) must be identified so that the executing member can disclose the type of order being executed).

73. Essentially, a transaction effected under the effect-versus-execute rule must be: (a) executed by a member that is not an associated person of the member transmitting the order; (b) transmitted to the executing member from off the floor (*i.e.*, not initiated on the floor); and (c) handled independently of the initiating member once it has been transmitted to the floor. Rule 11a2-2(T)(a)(2); *see also* Securities Exchange Act Release No. 14563 (Mar. 14, 1978), 43 FR 11554 (orders that are cancelled or changed under this rule are treated as new orders; such instructions must also be transmitted to the executing broker from off the floor); Securities Exchange Act Release No. 14713 (Apr. 28, 1978), 43 FR 18562 (orders must be transmitted directly to the executing broker from off the floor; they can not be sent through the initiating member's floor employees).

74. Rule 11a2-2(T) prohibits the receipt of such compensation unless: (a) the managed account specifically authorizes the compensation in writing; and (b) the affiliated broker provides an annual statement of the amount of compensation retained for execution of orders for each managed account. Known as the "contract-out clause," this provision gives the account manager an opportunity to review commission costs and determine whether the account's interests are properly served.

75. *See* Securities Exchange Act Release No. 15533 (Jan. 29, 1979), 44 FR 6093.

76. *See* Securities Exchange Act Release No. 14713 (Apr. 27, 1978), 43 FR 18562.

77. Securities Exchange Act Release No. 12055 (Jan. 27, 1976), 41 FR 8075.

> Thus, a member firm effecting transactions for an omnibus account carried in the name of its parent or subsidiary (or any other associated person) would be deemed, for purposes of Section 11(a)(1), to be effecting transactions for the parent or subsidiary (or other associated person) regardless of whether the transactions were

> in fact effected for the public customers of the parent or subsidiary (or other associated person).

Id.

78. *Id.* (citing H.R. REP. NO. 229, 94th Cong., 1st Sess. 105-06 (1975)).

79. Securities Exchange Act Release No. 12055 (Jan. 27, 1976), 41 FR 8075.

80. As provided in NYSE Rule 107B(3):

> All purchases and sales of any stock on the [NYSE] by [a RCMM] for his own account or the account of his member organization shall constitute a course of dealings reasonably calculated to contribute to the maintenance of price continuity with reasonable depth and to the minimizing of the effects of any temporary disparity between supply and demand, whether immediate or reasonably to be anticipated. Transactions not part of such a course of dealings shall not be effected by [RCMMs].

2 NYSE Guide (CCH) ¶ 2107B.

81. NYSE Rule 107B(2), 2 NYSE Guide (CCH) ¶ 2107B.

82. The exchange rules governing RCMMs and REMMs are virtually identical. For brevity's sake, only the NYSE rules relating to RCMMs will be discussed.

83. Presently, and with certain exceptions, this requirement is $25,000 over and above any other capital requirement to which the RCMM may be subject. NYSE Rule 107A(2)(a), 2 NYSE Guide (CCH) ¶ 2107A.

84. NYSE Rule 107A(2)(b), 2 NYSE Guide (CCH) ¶ 2107A.

85. For example, a RCMM has an affirmative obligation to respond when "called-in" by a floor official with respect to any stock traded on the exchange floor, to make a bid or an offer that is "reasonably calculated to contribute to the maintenance of a fair and orderly market in such stock." NYSE Rule 107B(4), 2 NYSE Guide (CCH) ¶ 2107B.

86. *See* Letter From Robert C. Pozen, Senior Vice President and General Counsel, FMR Corp., to Rep. Edward J. Markey, Chairman, House Subcomm. on Telecommunications and Finance (Oct. 14, 1987) ("Fidelity Proposal").

87. *See Managed Accounts/Section 11(a): Hearing Before the Subcomm. on Telecommunications and Finance of the Comm. on Energy and Commerce*, 102d Cong., 1st Sess. (1991) (Testimony of Coleman A. Nutter, General Counsel, First Manhattan Co., testifying on behalf of the Securities Industry Association).

88. *See* Letter from John J. Phelan, Jr., Chairman and Chief Executive Officer, New York Stock Exchange, to Rep. John D. Dingell, Chairman, Comm. on Energy and Commerce, U.S. House of Representatives.

89. *See* SEC, DIVISION OF MARKET REGULATION, REPORT ON A PROPOSED INDUSTRY AMENDMENT TO SECTION 11(A) OF THE SECURITIES EXCHANGE ACT OF 1934 (Sept. 10, 1990).

90. H.R. 3047 (the bill to amend Section 11(a)) passed the House on September 22, 1992 as Title III of H.R. 5726 (The Securities Investor Protection Amendments of 1992). However, it was not enacted due to substantive differences between the House and Senate investment adviser bills (Title I of H.R. 5726), the addition of accounting provisions with no Senate counterpart (Title II of H.R.

5726), end of session timing constraints, and various procedural issues. H.R. REP. NO. 76, 103d Cong., 1st Sess. (1993) (report regarding amending the Securities Exchange Act of 1934 to Permit Members of National Securities Exchanges to Effect Certain Transactions with Respect to Accounts for Which Such Members Exercise Investment Discretion) ("H.R. Rep. No. 76").

91. In particular, the Subcommittee cited the repeal of fixed commission rates, the broadening of access to exchange membership, increased access to current quote and trade information, and the evolution of electronic order routing systems. H.R. Rep. No. 76, *supra* note 90.

92. *Id.* (*citing Managed Accounts/Section 11(a): Hearing Before the Subcomm. on Telecommunications and Finance of the Comm. on Energy and Commerce*, 102d Cong., 1st Sess. (1991) (statement of the Honorable Richard Y. Roberts, Commissioner, SEC)).

93. The Subcommittee noted that industry estimates indicated that the cost of compliance with the managed account provision of Section 11(a) was between $200 and $400 million annually. *Id.* at n.20.

94. Pub. L. 103-68, 107 Stat. 691 (1993).

95. In light of the historical problems observed with floor trading and the effectiveness of the regulatory system in operation, the Division does not believe that the Section 11(a) limitations on floor trading need to be reexamined at this time.

Appendix VI

Summary of Comments

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LIST OF COMMENTATORS

(Total: 59 commentators; 60 letters)

A. INDIVIDUALS

1. Tom Byrne ("Byrne")
2. Antonio Concepcion ("Concepcion")
3. Stanley L. Kleinberg ("Kleinberg")
4. Russell Maik ("Maik")
5. Jeffrey P. Ricker ("Ricker")
6. Ralph S. Saul ("Saul")

B. ASSOCIATIONS

1. Alliance of Floor Brokers ("Alliance FB")
2. Alliance in Support of Independent Research ("Alliance Ind. Research")
3. Association of Publicly Traded Companies ("APTC")
4. British Merchant Banking and Securities Houses Association ("BMBA")
5. Investment Company Institute ("ICI")
6. National Specialist Association ("Specialist Assoc.")
7. Organization of Independent Floor Brokers ("Ind. Floor Brokers")
8. Securities Industry Association ("SIA")
9. Securities Traders Association ("STA")
10. Securities Traders Association of New York ("STANY")

C. SROS and EXCHANGES

1. American Stock Exchange, Inc. ("Amex")
2. AZX, Inc. ("AZX")
3. Cincinnati Stock Exchange, Inc. ("CSE")
4. London Stock Exchange ("LSE")
5. National Association of Securities Dealers, Inc. ("NASD")
6. New York Stock Exchange, Inc. ("NYSE")
7. Regional Exchanges (Boston, Midwest, Pacific, and Philadelphia Stock Exchanges) ("Regional Exchanges")
8. Securities and Futures Authority ("SFA")
9. Securities and Investments Board ("SIB")
10. Toronto Stock Exchange ("TSE")

D. ACADEMICS

1. Corinne M. Bronfman, College of Business and Public Administration, University of Arizona ("Bronfman")
2. Lawrence E. Harris, School of Business Administration, University of Southern California ("Harris")
3. Institute for the Study of Securities Markets ("ISSM")
4. D. Bruce Johnsen, Wharton School, University of Pennsylvania ("Johnsen")

5. Ruben Lee, Oxford Finance Group ("Lee")
6. Therese H. Maynard, Loyola Law School ("Maynard")
7. Thomas H. McInish and Robert Wood, Fogelman College of Business and Economics, Memphis State University ("McInish and Wood")
8. Junius W. Peake, College of Business Administration, University of Northern Colorado, and Morris Mendelson, Wharton School, University of Pennsylvania ("Peake and Mendelson")
9. Robert A. Schwartz, Stern School of Business, New York University ("Schwartz")
10. Hans Stoll, Owen Graduate School of Management, Vanderbilt University ("Stoll")

E. MARKET PARTICIPANTS

1. All-Tech Investment Group, Inc. ("All-Tech")
2. ASB Capital Management ("ASB Capital")
3. Arnold Securities ("Arnold")
4. Robert Brandt & Co. ("Brandt")
5. California Public Employees Retirement System ("CalPERS")
6. Fidelity Investments ("Fidelity")
7. Goldman, Sachs & Co. ("Goldman Sachs")
8. Hull Trading Company ("Hull Trading")
9. IDS Financial Services, Inc. ("IDS Fin.")
10. Instinet Corporation ("Instinet")
11. Investors Research Corporation ("Investors Research")
12. Jefferies Group, Inc. ("Jefferies")
13. Lattice Trading ("Lattice")
14. Bernard L. Madoff Investment Securities ("Madoff")
15. Marquette de Bary Co., Inc. ("Marquette")
16. James Meketa Associates, Inc. ("Meketa")
17. Merrill Lynch, Pierce, Fenner & Smith ("Merrill Lynch")
18. Penn Mont Securities ("Penn Mont")
19. Regents of the University of California ("Regents UCal.")
20. State Street Bank & Trust Co., Inc. ("State Street")
21. Teachers Insurance and Annuity Association - College Retirement Equities Fund ("CREF")
22. Weeden & Co. ("Weeden")
23. Wilson-Davis & Company ("Wilson-Davis")

I. Introduction

On July 14, 1992, the Commission announced that the Division of Market Regulation would undertake a study of the structure of the U.S. equity markets and of the regulatory environment in which those markets operate. The Study Release solicited information and comment regarding the functioning of the U.S. equity markets, as well as the regulatory issues arising from the present structure of such markets. The Study Release noted that the last thorough examination of the equity markets and their regulatory structure was completed over 20 years ago. Institutional Investor Study Report of the Securities and Exchange Commission, H.R. Doc. No. 64, 92nd Cong., 1st Sess. (1971). That process culminated with the 1975 amendments to the Securities Exchange Act of 1934 ("Exchange Act") that included a Congressional mandate to establish the national market system ("NMS" or "National Market System") for securities. Pub. L. No. 94-29 (June 4, 1975)("1975 Amendments"). Since that time, the growth of the U.S. equity markets, the changing nature of its participants, and the continuing evolution of trading mechanisms have raised questions about the regulatory environment in which these developments have occurred. Issues relating to the proper allocation of regulatory responsibilities, the need for enhanced transparency, transaction costs, and market fragmentation have posed continuing challenges to regulators and market participants alike.

II. Market Competition

The Study Release indicated that the U.S. equity markets are highly competitive. Currently, the most intense competition occurs for listed stocks between primary and regional exchanges and between all exchanges and the over-the-counter ("OTC") market. In addition, recent Commission action has now made it possible for more competition to develop between the OTC market and the exchanges for OTC stocks. The Study Release also noted that competition from proprietary trading systems, third market makers, and the fourth market must be included to understand how the existing level of competition was reached.

The Study Release requested comment on the different aspects of the competition between primary and regional exchanges and between exchanges and the OTC market. Specific comment was sought on the issues posed by the development of increased competition, and also any impediments to competition, market efficiency, stability, or fairness. Finally, comment also was requested on any regulatory anachronisms, lingering inefficiencies, rules, or requirements where the costs exceed the benefits.

A. Market Study Scope

Five commentators offered views on the scope of the Market 2000 Study. Merrill Lynch suggested that the U.S. markets must be analyzed in the context of a global marketplace. In its opinion, the limited scope of the study may overlook the dynamics of the global markets. Merrill Lynch believes the study will not contemplate the powerful forces shaping international economies, businesses, and securities markets nor will it provide the empirical basis for further development of a highly competitive National Market System. Merrill Lynch is concerned that the review will not provide the necessary regulatory framework to guarantee that the U.S. markets will continue to offer superior means to raise capital, invest, and save.

Merrill Lynch further believes that two principles should govern the study: competition and the protection of investors' interests. Merrill Lynch believes it is important that regulators stay abreast of technological evolution in order to enhance the training of its personnel in anticipating and understanding market changes. It also believes that markets will evolve to meet the needs of investors. Merrill Lynch urges the Commission to be reluctant to propose regulatory initiatives that have the effects of increasing costs to investors and reducing market efficiencies. Merrill Lynch suggests that the Commission study carefully and systematically the impact of its regulations and the rules of self-regulatory organizations in order to remove anti-competitive barriers no longer needed for investor protection. In addition, Merrill Lynch states that it is necessary to remove regulations that will place the United States at a competitive disadvantage.

Ricker recommends that the study focus its recommendations on minimizing the cost of trading. In his opinion, low transaction costs are a necessary condition for market efficiency. Ricker explains that there are two components in the cost of trading a stock: brokerage commissions and "friction" (*i.e.*, slippage, market impact, liquidity cost, and dealer spread). He asserts that friction results from the current market structure and averages about ten cents per share for a basket of stocks contained in the S&P 500. Ricker believes there is room for improvement that would allow reducing friction to a few cents per share with no negative effect on trading volume. He suggests that the single most beneficial market reform would be to move to decimal pricing. Ricker believes that decimal pricing coupled with one cent price increments or ticks would resolve many of the issues being discussed. In his opinion, the current one-eighth point pricing is the single largest source of friction in the market. Ricker points out that the price of obtaining precedence in the limit order book, twelve and one half cents, is relatively expensive when measuring performance. He also believes that market orders are impaired because they usually are executed at the prevailing bid or offer, and never receive the benefit of bids and offers that would narrow the spread. He rejects the argument that systems conversions would be too expensive, and contends that the Intermarket Trading System has now become a cartel. He stresses that Proprietary Trading Systems permit pricing in increments finer than eighths, but such systems cannot compete because they are not linked to the Intermarket Trading System. In addition, Ricker believes that decimal pricing would alleviate problems associated with payment for order flow, internalization, fragmentation, clean crosses, order matching, and quote matching. Most importantly, in his view, decimalization would improve liquidity.

Saul recommends that the study address diversion of trading away from the primary market. In particular, it should examine principal activity by NYSE member firms. Saul also recommends reviewing the allocation of securities between the exchanges and the OTC market, and the listing of foreign securities in the United States. Regents UCal. suggest that the study address conflicts of interest that, in its belief, have formed over the years and are a burden to the pure function of raising capital. SIA believes that the study should be the first phase of a continuing process. It suggests a series of roundtables on topics including: limitations on market risk; transparency and pricing; payment for order flow; regulation (e.g., role of the Commission, elimination of duplicative examinations, customer protection rules); market structure and competition; and derivatives.

B. Competition in General

Twelve commentators offered their general views on the role of competition in the U.S. equity markets and the circumstances under which it exists. For the most part, these commentators stress the benefits of competition, including market efficiency, lower costs, and trading flexibility. They urge the Commission to maintain an environment that promotes competition.

CSE states that Section 11A of the Exchange Act continues to offer useful guiding principles for any effort to improve the fairness, efficiency, and competitiveness of the U.S. equity markets. In its opinion, market accomplishments since the 1975 Amendments evidence the influence for positive change that these principles exerted in the past, and should continue to exert. Jefferies strongly asserts that liquidity is the most important factor in achieving the goals of fair, efficient, and orderly markets. Jefferies states that liquidity is maximized when buyers and sellers can find each other, and are comfortable opening up to each other. Jefferies notes that the exchange market satisfied that requirement when the market was dominated by many small investors. However, Jefferies maintains that as orders become larger, the necessary conditions for liquidity may not be satisfied.

Amex believes that competition among orders executed within a fair system is necessary to assure efficient price discovery. According to Amex, it is important to evaluate the way in which different markets compete for order flow with a view toward ensuring fair competition. This should contribute to, rather than detract from, efficient pricing in the primary markets, and best execution for the investing public. In Amex's opinion, market fragmentation that is inconsistent with the needs of the investing public should be eliminated.

Wilson-Davis believes that it is detrimental to retail customers to have the primary markets as the only option for the execution of listed orders. In its view, competition in general fosters a more advantageous environment for the average consumer. One reason Wilson-Davis cites is pricing efficiency. It believes that in many cases, the NYSE may be unable to compete with the improved quotes generated by third market makers due to its own rules and limitations. In Wilson-Davis' opinion, the needs of customers are in direct conflict with the primary markets' need to protect their franchise. If competition is eliminated, Wilson-Davis notes, the checks and balances that maintain the integrity of the marketplace also will disappear. According to Wilson-Davis, competition also is needed to reduce execution costs. In addition, it believes that customers will receive a faster execution in a competitive environment.

Fidelity believes that the structure and function of the equity markets must reflect two basic economic realities. First, that economies of scale cause incremental costs to decrease as order size and volume increase. Second, that trading costs, including commission and pricing costs, are properly lower for high volume traders of securities than for infrequent or small traders. In Fidelity's opinion, competition among securities markets for order flow produces significant benefits for most investors. It points to reduced commission rates, narrowing of spreads, and advances in automated order-processing systems as deriving from a market structure that allows traders to seek methods of execution that produce the best balance between cost and efficiency. According to Fidelity, the Commission should not adopt rules that reduce or eliminate competition among securities markets unless there is a compelling regulatory purpose.

ICI notes that while investment companies may be characterized as institutional investors, they represent millions of individual investors and, more particularly, allow smaller investors to benefit from the economies of scale that accrue to large volume traders. In ICI's opinion, investors should be able to effect transactions in the manner most efficient for them. ICI suggests that the appropriate means for determining within which market trading ought to occur is through competition, rather than regulatory impetus. Such competition among marketplaces will benefit investors, in ICI's view, by reducing transaction costs and furthering efficiency in other ways. According to ICI, it is essential that there be adequate mechanisms to route orders to the market that best meets the priorities of the buyer or seller for that transaction. ICI concludes that access to competitive markets may reduce costs by allowing for intermarket arbitrage.

APTC also believes that equity markets should rely on competition to ensure efficient, low cost markets. It urges the Commission to evaluate the comments of market intermediaries in light of the broader and crucial needs of investors and issuers. Brandt also believes in unobstructed competition. Schwartz states that the Commission should ensure that proper and adequate competition exists in the industry so that innovations that may increase the efficiency of the markets can be made. In his view, the most effective form of competition is intermarket competition, not interdealer competition. Lattice believes that there are significant barriers in place that impose significant harm on the economy. In its view, the solution is to make access to markets easier. This, suggests Lattice, can be accomplished by exploiting readily available technology and reviewing regulations and rules of self-regulatory organizations and the Commission.

SIA states that competition has led to a cost efficient and open market system that fulfills a variety of investment objectives for a diverse body of investors. The interests of investors are best served when regulatory and execution costs are kept at a minimum. In SIA's opinion, the Commission should ensure investor protection and competition and should not concern itself with market structure. The latter should develop through competition and the introduction of new technology. SIA believes that there should be open and healthy competition among all who offer execution services, whether in the form of traditional exchanges, private systems, or otherwise. It notes that Congress intended that competition be the driving force to develop the National Market System.

AZX asserts that market studies overlook what it believes is the central issue; elimination of the specialist's role as the main focal point for order interaction and price negotiation. AZX claims that the NYSE has lost its ability to compete as a cohesive centralizing business unit. AZX notes that block trades are negotiated upstairs, and the small orders left on the floor do not allow the specialist to perform its centralization function. According to AZX, the real market share of the central market, excluding blocks, is below 50%. Once internalization is factored in, concludes AZX, a public auction no longer exists. In AZX's opinion, the NYSE is now functionally equivalent to the OTC market in that the NYSE is only a part of the fragmented dealer market. AZX argues that while competition among brokers and dealers has served the U.S. capital raising needs in the past, technology now makes it possible for new capital raising mechanisms.

AZX further asserts that only free competition will result in the best U.S. markets possible. AZX believes that meaningful competition is blocked by arguments over the 1975 Amendments. In its opinion, continuing government intervention in the market is dangerous. AZX believes that the markets are now more fragmented and less liquid. AZX suggests that the markets are also more likely to require the intervention of a dealer. These results, AZX contends, are contrary to the goals of the National Market System. Furthermore, AZX indicates that investors voluntarily choose markets based on criteria of centralization, good price discovery, fairness, and safety. They make all the correct choices and should be permitted to choose. Attempts to redress perceived inequities, warns AZX, would lead to genuine inequities, and may restrain needed competition.

C. Competition among Exchanges

Amex believes that market makers use the primary markets in ways that cause the primary markets to subsidize the non-primary markets. As an example, Amex cites the execution of a customer order with an offsetting transaction on a primary exchange (*i.e.*, "laying off risk"). Amex believes that such a practice is reconcilable with the National Market System objectives of efficient price and fair competition. However, market makers must contribute to price improvement for customer orders. In its opinion, in the absence of price improvement, market makers should be required to yield priority and parity to customer orders. It further believes that its specialists should be on parity with such orders from other markets makers.

The Regional Exchanges believe that the National Market System has failed to provide any real incentives for market makers to compete on the basis of their displayed quotations. According to the Regional Exchanges, orders are rarely routed on the basis of quotations. Instead, order routing decisions are made on the basis of preexisting arrangements where service and costs are paramount and execution quality is eliminated as a factor because all markets guarantee executions at the best bid or offer. Thus, market makers have little incentive to compete based on quotes. It is more effective to compete by marketing quicker and cheaper executions than attempting to attract orders through displayed quotations. The Regional Exchanges point out that they can assure nearly instantaneous executions which they claim the NYSE is unable to do in active markets. In addition, the Regional Exchanges emphasize that the NYSE and Amex specialists charge for limit orders and stopped market orders routed through DOT, whereas regional specialists do not generally charge for limit orders received through their order routing and execution systems.

The Regional Exchanges believe that this environment creates an anomaly for the industry and the Commission because market makers and brokers have little incentive to compete on the basis of displayed quotations. Therefore, they conceal their best markets when they are able to do so. Retail orders are executed based on the displayed quotations, which do not always represent the best market. The Regional Exchanges believe that this is the type of situation that requires Commission action, and therefore suggest: (1) amending Rule 11Ac1-1 under the Exchange Act to require specialists to display all orders, including their full size, and to require display of stopped market orders at a price between the spread when the spread is one-fourth point or more, as well as requiring CQS dissemination of OTC quotes, regardless of whether they form part of the dealer's quote; (2) disapproval of currently pending proposed amendments to SelectNet unless it is amended to require display of broadcast orders through CQS; and (3) adoption of a rule to require public limit orders in any market to be satisfied whenever executions occur in any other linked market at the limit price.

Fidelity believes that the regional exchanges provide additional benefits to investors, and that competition with the primary exchanges encourages the primary exchanges to improve their pricing structures and processing capabilities. In Fidelity's opinion, the regional exchanges add liquidity by committing capital and offering price improvement, which encourages the narrowing of spreads. Fidelity notes that the regional exchanges have developed capabilities for automated execution and improved confirmation of transactions, which force the primary exchanges to be equally innovative. Fidelity points out that the integration of these systems into the Intermarket Trading System ensures that investors receive the benefit of incremental price improvement without regard to where the order was placed. Fidelity disagrees with the notion that upstairs broker-dealers and regional specialists distort competition or are used to internalize order flow. It notes that specialist pricing must be competitive. Fidelity also indicates that specialists are subject to market volatility, and have an obligation to maintain fair and orderly markets. While they may receive order flow from their affiliates, they also stand ready to transact any business directed to them. Fidelity opposes a consolidated limit order book because it would diminish the benefits of the interaction among specialists and floor brokers who work orders to obtain better prices for their customers. According to Fidelity, institutions would be unable to manage the market impact of large orders by dispersing portions of the order.

D. Exchange Act Rule 19c-3; NYSE Rules 390 and 500

1. Off-board Trading Restrictions

NYSE Rule 390 prohibits NYSE members from effecting any transaction in certain NYSE-listed securities off an exchange. The prohibition does not affect the NYSE members' ability to effect transactions on any of the regional exchanges. NYSE Rule 390 also allows NYSE members to trade as principal or agent in any listed stock on any organized exchange in any foreign country at any time, and in a foreign OTC market after NYSE trading hours in the U.S. In 1977, the Commission promulgated Rule 19c-1, which prohibits the application of off-board trading restrictions to trades effected by exchange members as agent. The rule permits exchanges to prohibit in-house agency crosses. In 1980, the Commission promulgated Rule 19c-3, which prohibits the application of any off-board trading restrictions to securities first listed on an exchange after April 26, 1979. As a result of these two Exchange Act rules, the practical effect of NYSE Rule 390 is to prevent NYSE member firms from directly internalizing order flow during exchange hours in stocks listed before April 26, 1979, and to force such members to effect transactions overseas in these stocks after the NYSE is closed ("after-hours trading").

Thirteen commentators discussed these rules. Eight commentators recommend that NYSE Rule 390 be abolished. Three commentators recommend that Exchange Act Rule 19c-3 be abolished.

The NYSE characterizes its Rule 390 as a pro-customer rule intended to ensure that investors have the benefits of agency-auction trading in exchange-listed stocks. In the NYSE's view, the rule, by requiring centralization of order flow, places the interests of the investors ahead of the interests of dealers. The NYSE further argues that, because the rule prevents internalization of customer orders, which in turn leads to fragmentation of the markets, the rule promotes pricing efficiency and customer protection. The NYSE believes that further removal of off-board trading restrictions will only exacerbate fragmentation and recommends that Rule 19c-3 be rescinded.

Specialist Assoc. believes it is premature to consider removal of off-board trading limitations. In its opinion, removal of off-board limitations would weaken the opportunities for best execution, further diluting the practicability of investors' orders achieving executions without dealer intervention, and exposing exchange markets to even more virulent forms of unfair competition. Instead, it recommends that the Commission rescind Rule 19c-3 under the Exchange Act. The Regional Exchanges also recommend eliminating Rule 19c-3. They view Rule 19c-3 as pernicious. The Regional Exchanges also suggest abrogating CSE preferencing rules for similar reasons. They argue that the continuous affirmative obligations imposed on exchange specialists and auction type trading process ameliorate the degree to which internalization can occur. Thus, they reject the comparison between internalization in the OTC market and the CSE, and the fact that integrated firms act as specialists on certain exchanges. ASB Capital also believes that if NYSE member firms were allowed to compete as dealers, the off-floor market would draw liquidity away from other markets and further fragment the overall market; spreads would widen and capital would be more selective.

All-Tech, APTC, Goldman Sachs, Instinet, NASD, STA, STANY, and Weeden all recommend elimination of NYSE Rule 390. NASD states that Rule 19c-3 has not caused a radical restructuring of the markets for exchange-listed securities, and any restructuring will be a natural outgrowth of competitive demands and efficiencies in the marketplace. Years of experience, argues NASD, demonstrate that concerns over internalization were misplaced. NASD points out that the NYSE still accounts for a substantial majority of trading in Rule 19c-3 stocks. Member firms, states NASD, have become market makers only where they can positively contribute to the liquidity or quality of the market. It also notes that competition has resulted in narrower spreads and in competitive responses from exchanges in the form of automated order routing systems and reduced transaction fees. In addition, NASD notes that the Intermarket Trading System links all markets, eliminates trade-throughs, and enhances the opportunity for best execution. Thus, concludes NASD, remaining off-board trading restrictions should be eliminated. Instinet believes that the 1975 Amendments mandated the elimination of NYSE Rule 390. In its opinion, the rule reduces a broker's ability to obtain best execution. STANY believes that the rule hampers the performance of a free market by eliminating potential transactions in an alternative forum.

STA states that competition has been and should continue to be the guiding principle for the economic well-being of the United States. In STA's view, the NYSE has no need to perpetuate artificial barriers to competition.

The LSE believes NYSE Rule 390 drives transactions overseas to London markets. In this respect, NASD recommends that the Commission eliminate off-board after-hours restrictions. NASD argues that it is illogical to maintain off-board trading restrictions during periods when those markets are closed and an auction environment is unavailable. This, NASD indicates, forces investors to go overseas to trade with the U.S. brokers. The restrictions that NYSE Rule 390 impose on after-hours trading penalizes investors and broker-dealers. NASD notes that trades taking place overseas do not receive the benefit of transparency or market surveillance mechanisms.

2. NYSE Rule 500

NYSE Rule 500 requires an issuer wishing to delist from the NYSE to submit the proposal to its shareholders. The rule requires that the proposal be approved by two-thirds (66 2/3%) of the outstanding shares of the particular security, together with a failure of ten percent (10%) of the individual shareholders to object. Six commentators offered views on the rule; four recommend that the rule be eliminated.

The NYSE believes that Rule 500 is an investor protection rule, and that shareholders take comfort in purchasing securities of a listed company knowing that the issuer cannot delist the securities without overwhelming support from shareholders. The NYSE contends that the rule's requirements ensure the continued availability of the auction market for the securities and limit the issuer's ability to take corporate action not allowed under the exchange's listing agreement. Specialists Assoc. believes that elimination of NYSE Rule 500 would frustrate the expectations of investors in listed stocks.

APTC, NASD, STA, and STANY recommend that NYSE Rule 500 be eliminated. NASD has long questioned the validity of NYSE Rule 500 and suggest the rule is no longer justified in light of both Commission and self-regulatory organization protections currently afforded to shareholders. NASD believes the rule should be eliminated because it is an anti-competitive burden in that it prevents companies from leaving the NYSE to move to NASDAQ. In connection with the NYSE's proposed rule change to modify its listing standards in 1984, NASD noted that a restrictive provision such as Rule 500, together with the lower listing standards, would perpetuate and exacerbate the existing anti-competitive anomaly of the exchange listing process.

STA also believes that NYSE Rule 500 prevents issuers listed on that exchange from withdrawing. STA argues that this is inconsistent with the fair competition that Congress had envisioned. STA suggests that Rule 19c-3 should now be complemented by a companion rule freeing the NYSE member firms from these restrictions. STANY believes that NYSE Rule 500 hinders an issuer's decision-making process by imposing specific, stringent requirements that must be met before a company can delist from the NYSE. It concludes that the rule is anti-competitive, and that the decision to delist a security should be decided by a company's management rather than the exchange.

E. Competition between Exchanges and OTC Market

Nine commentators offered views on the nature of the competition between the exchanges and the OTC market. The commentators representing the exchanges urge that agency-auction principles be extended to trading in listed stocks in the OTC market. The commentators who represent the OTC markets assert that competition is healthy and contributes to market efficiency.

NASD believes that the Exchange Act is premised upon a presumption in favor of competition, and that the burden is on opponents of competition to prove the case against multiple market competition. NASD discussed competition in the context of competition for order flow. In NASD's opinion, the issue is not whether this competition is good or not, but whether there is something unique about the competition for order flow in listed stocks that suggests that an exception from the presumption in favor of competition is warranted. NASD asserts that opponents of competition for order flow in listed stocks must demonstrate that competition has led to palpable harm and that a monopolistic approach would lead to palpable improvement. NASD believes neither is possible.

NASD asserts that competition has improved markets. It cites as proof the innovations made by markets and dealers and the steady improvement in market quality measures. Among innovations by the exchanges, NASD lists: (1) reductions in transaction fees; (2) elimination of odd-lot differentials; (3) automation of small-order executions (in regional exchanges only); (4) enhancements to automated execution algorithms that provide for price improvement for customer orders (MSE); (5) automation of order routing, and continuous enhancements to these processes, including automation of program trade order routing; (6) expansion of order routing and execution capacity; (7) establishment of locked-in trade comparison; (8) automation of limit order storage and processing, including limit order alerts that advise the specialist when a resident limit order price has been reached; and (9) automation of pre-opening order processing. NASD notes as its own innovations for trading exchange-listed stocks: (1) the Third Market Trade Reporting system that interfaces with the consolidated trade reporting system to establish an audit trail; (2) an automated execution system for listed stocks (CAES) that also serves as the NASD link to the Intermarket Trading System; and (3) routing of transactions in listed stocks through

ACT for locked-in trade comparison and risk management functions. A third market innovation identified by NASD is the enhancement of automated execution systems for market and limit orders to provide guaranteed executions at the best intermarket price, with the possibility of price improvement and potential order exposure to all markets in the security. If competition for order flow in listed securities is limited, argues NASD, innovations also will be limited.

With respect to market quality measures, NASD argues, there are no credible statistics that show market quality has been adversely affected by competition. According to NASD, recent studies show that market quality has improved: spreads in NYSE-listed stocks have narrowed; execution costs have consistently declined; and competition is not affected to a statistically significant degree by multiple market competition.

NASD rejects the "cherry-picking" argument that selective trading of easier orders leaves the primary market to handle the tougher, riskier orders so that the quality of the primary markets decreases. It believes this argument presumes that orders being diverted normally subsidize the trading activity of orders not being diverted. NASD points out that this argument suggests that a certain group of less costly users should be required to subsidize the transaction costs of more costly users. Furthermore, competition should be prohibited to this end. NASD believes that, in the context of securities markets, this argument means that smaller users choosing the third market have overall costs that are lower in the third market. In NASD's opinion, forcing small orders back to the primary market is contrary to the federal securities laws. NASD believes that the overall premise of the "cherry-picking" argument, a reduced quality of the market, is not present at all. Another flaw, suggests NASD, is that this argument assumes that the prosperity and health of the primary market is the ultimate concern of the federal securities laws. NASD believes that the overall health of the securities markets, not the well being of a particular market center, is the primary concern. In NASD's view, the current empirical evidence suggests that the health of the securities markets is improving, not declining. NASD also believes that the dispersal of order flow in listed stocks is a natural result of the diverse execution needs of customers who have different types and sizes of orders. NASD asserts that it is in the interest of investors to permit the U.S. markets to provide the benefits that competition for order flow in listed stocks brings, rather than forcing U.S. investors to seek innovation and diversity abroad.

On the other hand, NYSE believes that the Commission should require all regulated entities that offer trading services for listed stocks to operate consistent with the National Market System requirements. NYSE states that the essential feature of an agency-auction market is that it protects investors. NYSE indicates that the advantages of agency-auction markets include: investors supply their own liquidity and do not pay dealer spread; order exposure results in better prices; public orders have priority; and last sale reporting and overall transparency benefit the public. NYSE offers a list of issues to be addressed involving the OTC market: (1) Section 31 regulatory fees (should be abolished or extended across the board); (2) trade reporting (states that there has never been a study to determine the accuracy of OTC reporting practices); (3) short sale rule (claims NASD's proposal does not preclude short sales at successively lower prices, and the exemption of market makers gives them a competitive advantage over exchange specialists who do not enjoy such an exemption); (4) SelectNet (recommends a critical examination); and (5) OTC spreads (suggests an examination to determine if there are ways to narrow such spreads).

Furthermore, NYSE rejects arguments that best execution is no more important than execution at a price equal to the best bid or offer, or a speedy execution. It argues that only the agency-auction market offers regular opportunities to receive execution inside the spread and allows orders to be represented as part of the current quotation. In its opinion, an important reason for the diversion of small trades away from the exchange is that most investors do not choose the market in which they trade. NYSE points to empirical evidence indicating that small trades away from the NYSE receive inferior executions on average than those done on board. In the NYSE's view, investors should not have the responsibility to police the activity of their brokers to ensure that orders are routed to a market with agency-auction protections. NYSE believes that a public policy is necessary to ensure that the trend toward "dealerization" does not simply result in gains for intermediaries at the expense of the public. NYSE notes, however, that it finds it difficult to provide for order exposure where the National Market System includes a dealer market that does not provide for such exposure. NYSE believes that a universal order exposure requirement would level the playing field. In this respect, NYSE recommends that the Commission issue a concept release exploring how such a requirement could be adapted to today's market.

Specialist Assoc. points out that not all competitive behavior constitutes the kind of fair competition that Congress intended the Commission to secure. According to Specialist Assoc., fair competition can be achieved only when all markets and market professionals are required to conduct themselves in accordance with a common set of basic trading principles. Specialist Assoc. is of the opinion that the Commission has focused disproportionately on the removal of purported barriers to competition in the markets and has not directed enough attention to what it believes is necessary to assure fair competition and equal regulation. Specialist Assoc. believes that the Commission's pursuit of economically efficient execution and market transparency has overshadowed the pursuit of best execution and execution without dealer participation. The result, indicates Specialist Assoc., is the development of ways of transacting business in listed securities in the OTC market that are competitively unfair, because OTC regulation is varied or limited. Specialist Assoc. concludes that this encourages market fragmentation, dealer internalization, and loss of order interaction.

Specialist Assoc. asserts that the objectives of fair competition and equal regulation were never intended to expose agency-auction trading to unfettered competition from OTC dealing conducted in accordance with different principles and rules. OTC trading, argues Specialist Assoc., does not contribute to the trading of listed securities in a manner commensurate with the costs to investors and exchange markets. The resulting competition has not been fair competition, concludes Specialist Assoc., and public investors in listed stocks are losing the benefits and protections of auction-type trading. Also, the exchange markets are being weakened.

Specialist Assoc. recommends that the Commission propose rules to extend agency-auction principles to OTC trading in listed stocks including: (1) a public preference rule; (2) crossing of customer orders; (3) mandatory handling of limit orders and execution at prices equal to or better than a principal trade; (4) a trade-through rule; (5) mandatory execution of transactions based on firm quotes, both price and size, in any interdealer system with mandatory access to OTC market makers; (6) fixed order queuing priorities among customer orders to ensure fair, equitable, and predictable treatment with rule published for comment; (7) a proprietary trading system access rule for registered broker-dealers; and (7) equal regulation and surveillance. Specialist Assoc. acknowledges the difficulties associated with developing rules for the OTC market raised by its suggestions.

Amex also suggests that the Commission ensure that investors on NASDAQ enjoy the same benefits and protections afforded to investors on the exchanges. Amex notes that investors with limit orders do not have a real opportunity for price improvement and can never be assured of receiving the best execution available due to the lack of NASDAQ rules prescribing priority of customer orders. Amex recommends that, at a minimum, public limit orders that improve the market should be displayed. Further, Amex rejects the argument that competition between multiple dealers in the NASDAQ market will narrow spreads and provide investors with options to redirect their order flow to the extent they are dissatisfied with their executions. Amex points to the fact that quote spreads almost never vary despite the presence of multiple dealers presumably competing for order flow. In Amex's view, given the growth of NASDAQ, there is no longer any justification for the disparity between customers and dealers, and customers and specialists. Amex believes that customer orders should have priority over dealer orders. Amex also recommends that the coordination of proprietary and retail trading desks for NASDAQ trading be examined, because similar coordination is not permitted between specialists and upstairs affiliates. Finally, Amex believes that any informational advantage enjoyed by exchange specialists in listed stocks differs little, if any, from the advantages enjoyed by NASDAQ market makers. Despite this, only specialists are subject to specific rules addressing the potential conflicts of interest that exist within a multi-service firm. Amex also recommends that the Commission put the exchanges and the OTC on equal footing with respect to transaction fees.

The Regional Exchanges welcome competition with the OTC market. They do not believe that additional competition between wholesale markets, whether exchange or OTC will result in increased fragmentation given the degree of transparency during regular trading hours.

Investors Research believes that the NASDAQ market exhibits flaws. In its opinion, the absence of a true short-sale rule allows aggressive traders to short stocks ahead of an offering and buy them back on the day of issue. Investors Research believes that the absence of conclusive proof via an audit trail and the semi-transparent dealer market do little to discourage the practice. The result, it argues, is that issuers generate less working capital than could be reasonably expected. This handicaps the legitimate short-term investors who pay inflated prices for share ownership because of these practices. Investors Research cites other structural flaws that, in its view, discourage investment in the new companies that trade on NASDAQ: dealer spreads in small emerging stocks may be 2% to 15% of the stock's price; sporadic volume and trading in new issues; and the failure to provide a consolidated limit order book. Investors Research asserts that transparency in the National Market System is elusive. Maik also raised questions about the relatively large spreads for NASDAQ securities. Ricker also is concerned about the handling of customer limit orders in the OTC markets.

Madoff, a major third market maker, attributes its success to market making, trading, and capital commitment. Madoff states that it is not a passive system. It explains that 90% of its order flow is interactive and not "laid off" in other markets. Madoff asserts that it only makes markets in securities where it is prepared to offer significant liquidity at all times. According to Madoff, its position in the marketplace is a direct result of the application of data processing and communications technology to its market making and capital commitment. This has allowed it to offer many cost efficiencies to clients. Many of the services Madoff offers have arisen as a result of competition for order flow among market centers. Madoff states that one of the most effective means of competing with monopolistic situations is payment for order flow.

F. Overseas Trading

Three foreign commentators offered their views. The SIB disagrees with the notion that overseas trading is driven by trade reporting and publication considerations. It believes that there are many reasons for such trading. SIB has no evidence suggesting that trading U.S. stocks in the U.K. is undertaken for anything but legitimate commercial reasons. SIB would challenge the suggestion that U.K. regulation is inferior to that of the United States. SIB notes that both on and off exchange trades in U.S. securities must be reported to the LSE and the SFA. SFA states that it would be concerned with any proposal that would restrict the ability for U.S. firms to trade in the U.K., and believes the SEC should not have the role of prohibiting opportunities for global trading. It also contends that U.K. regulation is less than that in the U.S., indicating that it is comparable. SFA believes that U.S. firms do not have an opportunity for "regulatory arbitrage" in the U.K. market. It further suggests that conflicts caused by market competition should not be solved by regulators; commercial pressures would eliminate any anomalies.

TSE opposes regulatory "forum shopping." In its view, this could lead to pressure to reduce standards of disclosure and regulation to avoid loss of order flow. TSE is of the opinion that international competition is not something that is inherently dangerous to investors. TSE believes that fair and open international competition should be encouraged and based on principles of reciprocity. According to TSE, the Commission should not attempt to address practices that it considers harmful by simply attempting to extend domestic rules to activity outside the United States, or by adopting a rule that would apply to all trading by American market participants in all foreign markets. Any rules, suggests TSE, should address whether the other jurisdiction has in place complementary regulations that address the harmful activity.

III. Market Fragmentation

Market fragmentation refers to the trading of securities in multiple locations. The concept also involves the degree to which the marketplace has separated into tiers of investors. The Study Release noted that technological innovations have made it possible for alternative market systems to develop at the periphery of the current market structure. These technological developments appear to have benefitted investors by reducing transaction costs. At the same time, concerns have been raised that fragmentation could adversely affect the liquidity and price discovery process of the equity markets.

The Study Release solicited comment on the extent of existing fragmentation and the development of future trends. Specific comment was sought on: the causes and effects of fragmentation; suggested approaches to eliminate harmful fragmentation; recommendations on how to reconcile the goals of reducing harmful fragmentation and promoting fair competition; and how the use of derivatives has facilitated fragmentation. In addition, commentators were encouraged to discuss the degree of marketplace tiering of investors or "balkanization" of the markets.

The Study Release suggested that an alternative perspective on fragmentation was possible by examining "passive market pricing." As explained in the Study Release, U.S. equity markets can be characterized as either price discovery markets or passive markets. The former involve the interaction of buyers and sellers to negotiate prices based on supply and demand or competition among market makers. The latter base executions on the prices discovered in other markets. Passive markets offer benefits such as efficient executions at reduced costs when other markets may not be open. In this context, a question arises as to whether the benefits offered by passive markets are subsidized by the price discovery markets. The Study Release also solicited comment on what effect a growing passive market would have on liquidity. Views also were solicited on the fair allocation of regulatory burdens among markets. Furthermore, the Study Release asked commentators to consider the costs and benefits of integrating individual and institutional traders in a single system, in light of the possibility that the markets would continue the trend toward the tiering of investors or separation into price discovery and passive markets.

Finally, the Study Release noted that a variety of opinions exist with respect to how the interaction between market competition and market fragmentation affects market liquidity. Some believe that multiple markets disperse order flow and impair market liquidity. Others believe that diverse markets enhance liquidity by providing price and service competition. Comment was requested on how market liquidity has been affected by the different types of fragmentation discussed in the Study Release.

A. Fragmentation Issues

1. General Views

Thirteen commentators offered their views on fragmentation (some commentators used the term "segmentation"). Some view fragmentation as a positive development while some view it negatively. Others are of the opinion that there has been no harmful fragmentation. Commentators with a negative view toward fragmentation voiced concern with its effect on: the efficiency of the capital-raising process; competition among market participants; market transparency; market liquidity; and price discovery. Commentators who view fragmentation positively point to the benefits of having different markets serving different investors' needs. They emphasize that competition is generally healthy for the securities markets.

Two commentators believe that harmful fragmentation has not occurred. Merrill Lynch believes that market fragmentation would be a negative development, but it has not observed deleterious fragmentation of the markets. Furthermore, Merrill Lynch does not anticipate that fragmentation detrimental to the markets will occur given the improvements in communications and technology. These improvements allow greater information dissemination to all interested market participants. Merrill Lynch observes that, currently, investors have myriad alternatives as well as equally valid reasons for making investment decisions, including those that are not based upon price discovery. It strongly supports the ability of customers to make informed decisions based upon the maximum information available. Merrill Lynch states that it is critical for individual investors to have the same access to information as institutional investors. It supports increased transparency through consolidated reporting and believes further study is necessary to identify the information that will assist investors.

STANY believes that the trend toward segmentation is due to factors including: the tendency of individuals to invest through mutual funds and other intermediaries; the growth of sophisticated dealer networks that permit institutions to trade blocks directly with each other; the legal differentiation between institutional and individual investors; and increased international participation in the markets. In its opinion, the possibility that price discovery may be affected grows with increased segmentation. STANY does not believe that this has occurred thus far.

A negative perspective on fragmentation was expressed by three commentators. For example, ASB Capital considers that the major influence on the current trend toward fragmentation is the increased involvement of plan sponsors into investment activities. According to ASB Capital, the emphasis on short-term performance of money managers affects market fragmentation and decreases liquidity. ASB Capital also believes that fragmentation is another word for order flow and commission competition. In its opinion, fragmentation removes access to information and thus decreases price discovery competition and execution service. ASB Capital believes that fragmented markets provide greater liquidity only to users such as very large institutional investors, who have access to all the alternative markets. It also notes, with respect to the effect of fragmentation on best execution, that it may be impossible to determine whether transactions effected in another market would have resulted in a better price.

Another commentator, Regents UCal., believes that current fragmentation is a deterrent to the efficient capital-raising function of the markets. It recommends that the study address the conflicts of interest that have built up over the years, which result in a burden to the pure function of raising capital. In its opinion, deregulation pursuant to the 1975 Amendments caused brokers to lose revenue, and forced them to resort to proprietary trading strategies that put them in direct competition with their clients. It believes that the existing situation is sustained by inefficient markets, and views information-based trading as necessary to maintain wide spreads. Regents UCal. believes that global fragmentation, and the use of arbitrage as a revenue source instead of a means of diverting risk, are extremely dangerous to all.

The NYSE discussed fragmentation in light of internalization practices, such as directing order flow to specialist affiliates and entering into reciprocal order flow swapping arrangements with other broker-dealers. It believes these practices have not benefited investors. The NYSE suggests that the concerns they raise can be mitigated if the market to which order flow is directed provides customers with a reasonable ability to have orders executed without dealer intervention. In its view, it is not enough for the market receiving the order flow to have rules that offer theoretical order interaction and price improvement.

Eight commentators have a positive view of fragmentation. A common theme among these commentators is that different markets serve the needs of different investors. This diversity is viewed generally as beneficial. Jefferies offers a detailed description of this view explaining that markets segment because traders and the trading problems that the segmented markets solve differ. Different market structures serve some participants better than others. When the benefits from differentiation to some participants exceed the benefits from consolidation, markets tend to segment. Jefferies indicates that some traders are small and unconcerned about the price impacts of their trades while others are large and seriously concerned about front-running. Small traders prefer market structures that widely expose their orders so that everyone can see and react to them. Large traders prefer market structures that allow them to control how and to whom their orders are exposed. Some traders are well informed and concerned about revealing their information, while others are relatively uninformed and concerned more about minimizing transaction costs. The former prefer to trade in individual stocks, the latter often prefer to trade index portfolios. Jefferies further notes that some traders are impatient to trade and are willing to pay for liquidity, while others are patient and willing to wait for their price. The impatient traders prefer quote-driven markets while the patient traders prefer order-driven markets. Some traders are trustworthy and creditworthy while others are less so. The former prefer to trade only with each other, but the latter would like to do so as well.

In Jefferies' opinion, the benefits of diversification are apparent to all users. Traders often trade in a market that would not seem best for them simply because that market has already attracted liquidity. Conversely, no market will attract and keep liquidity if it does not serve a sizable clientele. Competition among market structures reveals which market structures best serve the various traders in our economy. Segmented markets tend to consolidate when information about market conditions within each segment is widely available to all traders. Traders then use this information to adjust or reroute their orders. As a result, concludes Jefferies, prices and liquidity in each segment reflect information from all other segments. Furthermore, Jefferies recommends that the Commission be careful when considering fragmentation. In its opinion, with current communication and computing capabilities there is only one national or perhaps global market. Because liquidity is obtained in different forms, Jefferies believes some market participants like to promote the idea that the market itself is fragmented. Jefferies urges the regulators to have more faith in the investor, and in corporations.

STA distills the debate over fragmentation and liquidity to the question of who should subsidize the cost of price discovery in a central auction market. STA believes strongly that today's market presents a myriad of different trading problems and customer needs that can no longer be satisfied with yesterday's trading systems. According to STA, traders should be allowed to decide which market structure best satisfies their needs. Competition, STA suggests, requires that markets be free to innovate in ways that may cause further diversification because no single trading system can solve all trading needs of today's investors. In its opinion, price formation and discovery no longer takes place in a single market center. Investors Research, another commentator with a positive view on fragmentation, believes that the term "market differentiation" better describes the process where investors decide which market structure best serves their investment needs. In its opinion, if the transparency requirements the Commission imposes on traditional markets are extended to non-exchanges, then barriers to competition (from those who traditionally control the market structure) and access fall, and segmentation ceases to be an issue. In Investor Research's view, the competition that would result is necessary for finding a better way to trade and is far more in keeping with the National Market System. Lattice is of the opinion that as long as there is transparency and the ability to move among markets, competition will deepen markets and increase liquidity. Lattice notes that retail clients are serviced at or within the bid/ask by specialists and those who buy order flow. These market makers in turn look to the book in the primary market or institutions to adjust their inventories. Lattice believes that competition will insure that technology is applied efficiently to this function.

Madoff does not believe that fragmentation is a problem, and does not view it as the important issue. Madoff points out that Section 11A of the Exchange Act encourages participation by many, if not all, market centers regardless of structure. It asserts that electronic information systems have totally integrated geographically dispersed markets. According to Madoff, it is important to the National Market System and continuous markets to permit specialists and dealers to compete for all types of orders. Madoff believes that increased competition and capital are necessary to provide the requisite liquidity to assure orderly markets. Liquidity providers, asserts Madoff, need to trade and interact with all kinds of orders; they cannot be restricted to a segmented market of last resort. Madoff also notes that, without total market access, it would be at a significant disadvantage in achieving efficient price discovery and defining its own risk.

Madoff further states that markets are now larger than any one marketplace, exchange, or country. Moreover, it suggests that derivative markets often reflect activity and interest sooner and more efficiently than the primary equity markets. Madoff asserts that systems and communications technology link information from all markets. In Madoff's view, there is no fragmentation of information except for those who choose not to avail themselves of the informational benefits of a technological marketplace. Madoff further contends that the U.S. needs broader, innovative, and competitive market participants to fend off global competition. It notes that no one participant is capable of providing enough liquidity to support trading interest in today's global financial markets.

Three institutional investors and one broker commented on the benefits derived from fragmentation. CalPERS states that increased segmentation has increased the efficiency and reduced the cost of portfolio trading. It notes that trades may be crossed at the midpoint of the bid-ask spread. In its opinion, the current exchange pricing structure is antiquated because investors cannot trade at one-sixteenth on an exchange spread of one-eighth. As a large passive investor, CalPERS notes that it is interested in the best price obtainable given its liquidity constraints. CREF does not believe that the interests of small investors are negatively affected by the fact that more trading options are available to large institutional investors. In this regard, Instinet recommends that the study dispel the notion that bifurcation of the market represents anything more than beneficial competition. In its opinion, small investors benefit to the extent that institutions achieve economies of scale by virtue of their research capabilities, bargaining power, and diversification. Fidelity notes that the perceived tiering of retail and institutional investors results from an oversimplified dichotomy between "retail" and "institutional." According to Fidelity, high volume traders may be individuals as well as institutions. The size of an order does not necessarily correspond to the size of the investor on whose behalf the order is effected.

2. Passive Pricing

Seventeen commentators addressed market fragmentation from the perspective of price discovery/passive markets. Most of these commentators believe that the passive markets are responding to very specific needs of a special class of investors and are contributing to price discovery.

Investors Research and Jefferies indicate that price discovery takes place any time a buyer and a seller agree to trade. Investors Research, Jefferies, and STA do not believe that centralized price discovery is now taking place. STA views price discovery as dispersed across an integrated and transparent electronic network. Wherever they are, Jefferies believes that traders are well informed about what is happening elsewhere. In this respect, Investors Research warns that approaches to competition that take away incentives to advertise trading interest run the risk of further balkanization of markets into separate public and non-public tiers.

Instinet explains that passive pricing systems have developed for a variety of economic reasons. Among them, that institutions may not want the opportunity for price discovery because they may want to avoid costs and market impact on price. Instinet notes that small orders may serve a price discovery function that may be disproportionate to their size. Nonetheless, it believes that removing large orders from the auction market reduces the excessive volatility that might otherwise result in price discovery. In its view, this volatility would drive small investors away, which would adversely affect the efficiency of the auction market's price discovery mechanism. In addition, Instinet asserts that routing large orders to the auction market imposes unnecessary transaction costs on institutional investors. CalPERS believes that alternative trading systems arose out of the needs of passive investors not fulfilled by the traditional market. CalPERS believes that markets will continue to evolve toward an increased efficiency level by offering alternative market structures without affecting the price discovery function. In its opinion, the NYSE places passive investors at a disadvantage relative to information traders. CalPERS does not believe that easy trades are diverted from market to market as often assumed; it often diverts difficult trades from specialists to alternative systems.

A similar view regarding large trades was expressed by Lattice. It believes that institutional trades are not easy for the auction market to digest. As a result, Lattice claims that new alternatives systems were developed to offer liquidity without disturbing the price discovery process. Lattice points out that their design and low execution rate do not meet the needs of investors who want to exploit information. Lattice also notes that there are many orders that never reach the market. Institutional holds are in this category because of execution costs.

CREF is another commentator that does not believe that institutional use of alternative trading systems causes the price that is discovered in the primary market to be less "right" than it otherwise would have been if all trades had been forced into that market. In its opinion, the use of alternative systems serves the marketplace better by lessening interference with price discovery in the primary market. CREF notes that institutional investors can disrupt the process because their orders are large and often motivated not by information but by a desire for liquidity. CREF considers the use of passive pricing systems to be a development in a series that deals with the impact of institutional trading on the market. It observed that the development of the upstairs markets ameliorated the effect of institutional trading when it evolved. Even this development, however, does not prevent all impact, it believes, because upstairs market makers have difficulties distinguishing liquidity-based trades from information-based trades. Because market makers must protect themselves, CREF believes that most such trades cost the same in terms of commission and market impact. As a result, CREF believes large institutional traders seek a forum where liquidity-based trades would have no market impact, and thus use crossing networks. It does not believe that utilizing prices discovered in one trading forum for use in another forum is unusual.

State Street is another commentator that points out that the current market environment has been developed through the preference of institutional investors. State Street notes that they have fragmented the markets in a constructive fashion for years. State Street indicates that since institutional trading began to exceed the available capital of the specialist systems, the upstairs, or block trading market, has flourished. The upstairs market has used the floor market for pricing information, and has reduced market impact for participants. State Street views the crossing networks as a technological evolution, rather than a revolution, in block trading. In its opinion, market price quotations belong to all market participants, and the alternative markets are no more free-riding on market prices than are the participants in the upstairs block market. Jefferies agrees that the prices set in one format belong to investors rather than the format, making the term "free-riding" meaningless. State Street views the fragmentation created by passive markets as constructive, because it reduces volatility in stock prices. It further argues that, were it not for the alternative markets, the traditional markets might find their systems under great pressure. One reason for constant pressure on liquidity, State Street cites, is the ratio of the size of the market's capitalization to the capital of the market making system.

Fidelity explained that the choice investors make between price discovery and passive markets is based on differing priorities. In its opinion, the ability to consummate transactions outside the price discovery process is not detrimental fragmentation, but represents an alternative available to market participants based upon differing needs or priorities. Investors using active markets choose the price discovery process because their priority is to obtain a price which reflects the interaction among supply, demand, and other market conditions at the time of execution. Investors who agree on a transaction price outside of the price discovery markets give priority to other factors such as the costs or timing of the transaction. Because these trades are effected without regard to active market price competition, concludes Fidelity, their exclusion from the price discovery process does not impair the integrity or effectiveness of that process. Investors Research expresses a contrary view. It believes that when systems begin to differentiate between customers, price discovery becomes a function of who is involved rather than the rationing of supply and demand. In its opinion, systems developed in response to flawed markets designed to expose or hide the identity of investors perpetuate an inefficient pricing structure.

Another commentator, Madoff, takes issue with the assumption that price is discovered only in the primary markets. In Madoff's opinion, to assert that primary exchanges are the exclusive vehicle for price discovery ignores the reality of markets around the world. It points to the fact that 90% of the price discovery for blocks (50% of the exchange volume) takes place upstairs in an off-exchange, dealer environment. The Regional Exchanges point out that for securities with high trading volume and significant brokered trades, there is meaningful price discovery outside the NYSE. STANY also disagrees that price discovery is limited to the NYSE and Amex. It points out that for block transactions on NASDAQ, traders consider information from proprietary trading systems, institutional customers, other dealers, and the primary exchanges. When the transaction occurs and is reported, STANY asserts, price discovery occurs for the entire market. Madoff also notes that the primary markets have 85% of the volume, yet there are many wide spreads and illiquid markets in the primary markets. Madoff claims there is no evidence to show that order flow in a good security encourages specialists to improve the quality of the market in a less liquid stock, as is often argued.

AZX is of the opinion that existing markets do not now provide a centralized price discovery function; instead they obscure it. AZX explains that continuous trading maximizes uncertainty as to what the price should be and a given order's impact on price. According to AZX, stratification results because investors want to avoid deception from bad prices of continuous trading. AZX suggests that order matching or crossing on ITS or NASDAQ does not detract from price discovery, but improves it. Investors, AZX points out, favor non-continuous systems because they reduce the tendency for bad prices. This, concludes AZX, is stabilizing and validating. AZX believes that continuous price discovery will improve as more orders are matched in these crossing systems. In AZX's view, price discovery comes from investors not dealers, and the electronic systems simply permit the progress of natural price discovery. According to AZX, price discovery will occur more quickly if regulations do not block customers to protect dealer price discovery monopolies.

Schwartz believes that price discovery is one of the most critical functions of a securities market. In his opinion, price discovery is more important than immediacy. Schwartz believes that emphasis on immediacy can damage the accuracy of the price discovery function and drive up the costs of trading. He states that the demand for immediacy derives from the dynamics of a continuous market, and that investors must be given a choice between continuous and non-continuous markets.

The NYSE offered the contrary view to all the above, arguing that primary markets contribute a "public good" by providing the pricing mechanism for listed securities and regulating a fair and orderly market. In its opinion, it is inconsistent with the National Market System principles to allow other markets to free-ride off of this public good, because the costs and resulting market fragmentation outweigh any benefits to investors. NYSE suggests that, at a minimum, all transactions based on primary market prices should be considered and reported as primary market transactions.

3. Single Trading System

Peake and Mendelson argue that most of the issues raised in the Study Release -- best execution, payment for order flow, trade-throughs, alternative market systems, reporting, transparency, market linkages -- have developed as a result of the Commission's policies, which promote fragmentation in the name of competition. Peake and Mendelson maintain that all these problems will disappear when the current system is replaced with properly designed centralized trading systems. They note that fragmented markets favor intermediaries; centralized markets favor investors and issuers. Peake and Mendelson also argue that fragmentation results in social costs (e.g., intermarket arbitrage and unnecessary dealer intervention) and direct costs to firms (e.g., information and market selection systems, lobbying, advertising, and regulatory expenses).

Goldman Sachs recommends further study on the creation of a single, unified trading market design to address fragmentation. Regents UCal. believes that one electronic network for all participants, both domestic and foreign, is necessary to unify our fragmented markets and promote true liquidity. Investors Research suggests the idea of a national exchange co-op comprised of members whose transactions fund regulatory overview and system enhancements and development, and whose profits are repatriated to members, thereby attracting and maintaining the widest constituent base. It justifies this recommendation in light of intense efforts by large brokers to develop and maintain proprietary systems. Investors Research suggests that a pooling of efforts would create a truly efficient equity market structure. Lattice believes that a single central market suggests a monopoly.

4. Intermarket Trading System

The Study Release indicated that the Intermarket Trading System ("ITS") was the market mechanism put in place by the Commission and SROs to address fragmentation concerns at the time of the 1975 Amendments. ITS has been the subject of criticism throughout the years both on procedural matters and the adequacy of the system. Because it was deemed appropriate to reexamine ITS in the context of the study, commentators were asked: whether any changes were needed to improve its operation; whether ITS serves its original purposes; whether these purposes have changed; and whether an enhanced linkage should be considered. A related issue, whether the development of alternative trading mechanisms both on and off-exchange require a reconsideration of the scope of ITS, was also raised. Furthermore, commentators were asked whether SRO concerns regarding two previously proposed initiatives, a consolidated limit order book and a price protection rule, are still valid in light of technological advances and market developments since their proposal.

Twelve commentators discussed ITS. Their views ranged from the opinion that the system is functioning as intended, to the view that it has failed as an intermarket linkage. Commentators' opinion also vary widely on what, if anything, needs to be done.

The two primary exchanges, the NYSE and the Amex, believe ITS is performing its intended function. The NYSE, however, disagrees with the characterization of ITS in the Study Release. It points out that only ITS members have the right to access an ITS participant's trading facility and to enter orders. The NYSE notes that ITS commitments to trade do not have standing in exchange auctions. To provide otherwise, it asserts, would seriously undermine ITS membership and access rules, and would misconstrue the purpose of the ITS. In the NYSE's opinion, ITS has greatly benefitted competitors in the National Market System by providing them with low cost access to the primary market to "lay off" proprietary trading positions. The Amex also believes that ITS generally has served its intended purposes, and in particular, that the ITS trade-through rule and block trade policy have worked to benefit public orders.

Nonetheless, the Amex is of the opinion that it is necessary to address certain practices that do not foster price improvement or investor protection and impede fair competition. It recommends that the regional exchanges should be required to quote true prices with representative size. In addition, it suggests that the regional exchanges should be restricted, along with OTC market makers, in their ability to use ITS. The Amex further proposes that all third market makers should be required to become part of the ITS/CAES link in order to facilitate the National Market System.

With respect to the regional exchanges, the Amex specifically objects to non-competitive pricing or auto-quoting. It claims that the regional exchanges play a passive role in the price discovery process, that fails to enhance competition or provide price improvement. In its view, auto-quoting impedes price discovery or improvement because it displays false interest. The Amex recommends that the Commission review the regulation of quotations, and consider ways in which the quotations of regional exchanges can be made more competitive. The Amex also notes with respect to automated execution systems that guarantee the best bid or offer, that orders can be hidden because the regional exchanges typically do not reflect the guaranteed size in their published quotations. According to the Amex, this is contrary to the National Market System goal of matching public orders and ITS's function of achieving best execution for public customers. The regional exchanges, argues the Amex, misrepresent public interest because they are not required to display representative size in their quotes. Thus, the failure to display representative size inhibits price discovery and limits competition. Furthermore, contends the Amex, unnecessary dealer intervention occurs when regional specialists trade as principals in the primary market and print customer orders at the same price on their own exchange. Such double-printing results in a misleading display of interest and artificially created volume, which impedes price discovery and disadvantages the public customers of both markets. The Amex believes this conduct should be restricted. In addition, the Amex believes that practices regarding stopping orders are another method through which the matching of public orders is impeded. This is so, states the Amex, because the customer order could be routed to the primary exchange and executed against another public order.

The Amex also argues that the benefits of ITS are undermined because not all OTC market makers are required to register as CAES market makers. According to the Amex, a significant amount of third market trading in ITS securities occurs outside the ITS/CAES link. Given this situation, best execution cannot be assured and trade-through rules cannot be enforced. In the Amex's opinion, the ITS/CAES link cannot facilitate the National Market System goals unless all third market makers are required to register and use it.

The Amex generally discussed a separate concern regarding ITS reporting requirements. It believes that speedy reports are essential to prevent the appearance of trade-throughs and the burdens associated with investigating such an event. The Amex urges the Commission to review current trade reporting requirements and practices to alleviate this problem.

Other commentators do not believe ITS has been successful. AZX, for example, believes the linkage experiments have failed. In its opinion, the ITS is an unsuccessful effort of the original idea of a consolidated limit order book. AZX notes that ITS is not an execution system and thus, does not guarantee price and time priority, the main goals of a consolidated limit order book. AZX argues that ITS, along with the Consolidated Tape Association and Consolidated Quotation System, facilitates fragmentation within the exchanges by melding them all into the functional equivalent of a single OTC dealing system for exchange-listed stocks. AZX claims that ITS members can internalize orders at the spread (which are wide because ITS offers no incentive to quote aggressively) and print trades in a manner that avoids being broken up by the central auction. AZX states that those paying for order flow are using ITS in this manner.

Furthermore, AZX believes that ITS blocks traditional exchanges from centralizing and has forced nontraditional exchanges to the fringes of competition. It notes that proprietary systems cannot be registered under current ITS regulations because these systems are not owned, controlled, or operated by intermediaries. AZX suggests that the Commission could remove on its own authority many barriers by clarifying that ITS and the National Market System are not synonymous and that an exchange or trading system discovering price independent of ITS does not constitute a violation of best execution. Peake and Mendelson claim that ITS always has been technologically obsolescent. In their opinion, it is merely a message transmittal system that requires human intervention to respond. They believe it is primarily used by dealers to match prices. Peake and Mendelson also believe that the consolidated quotation system and the consolidated tape association are inefficient.

Another commentator that does not believe ITS has served its purpose is CSE. In its opinion, the industry must face current challenges by modifying traditional market structures that impede technical innovation, competition, and efficient, and fair executions. The most important focus, argues CSE, should be upon ITS. CSE believes the inefficient meshing of automated and manual systems appears to inhibit effective interaction between market centers and to delay electronic enhancements. CSE suggests: automating processing of ITS commitments to trade by all participants; improving the speed of dissemination of the exchanges' best quotations; expanding use of system identifiers for trade dispute resolution; and eliminating the formula that restricts the amount of ITS activity that CSE can direct to other ITS market centers. CSE believes these improvements will ensure that: public orders are protected; market makers will not be penalized for innovations; the marketplace will handle increased volume; and ITS can facilitate further development of the National Market System that provides for price improvement and best execution in an efficient manner.

CSE argues that automatic executions would enforce the firm quote rule by ensuring that an inbound ITS commitment actually receives the market price disseminated at the time the commitment is received. This also would significantly improve the practicability of brokers executing investors' orders in the best market with minimal delay or risk of cancellation. According to CSE, the technology is available and fairness dictates equal response time for all market centers. The NYSE expresses the opposite opinion with respect to automated executions. It notes that the majority of ITS participants have repeatedly rejected such executions as being inconsistent with the purpose and operation of the ITS.

CSE notes that it is the only exchange subject to a restriction on ITS outbound activity. CSE states that it has had to revert to manual processing on occasion to avoid violating the formula it must follow to calculate the amount of outbound business. It believes removing the formula is a necessary step in reestablishing a climate that discourages unnecessary regulatory burdens, and encourages technical innovation, efficient executions, and fair competition. Finally, CSE believes that the Commission must take a more active role in directing efforts of the ITS operating committee. CSE notes that it is difficult for nine competitors to be in agreement.

Instinet questions whether ITS has added value to the markets as an intermarket link. Instinet states that the ability of brokered and non-intermediated customer orders to gain access to the best quoted market is key to effective competition for order flow. In this respect, Instinet believes that ITS appears to have had little beneficial impact on market efficiency. In its opinion, ITS mainly provides a mechanism for market makers and specialists on regional exchanges to lay off market making risk. Instinet further believes that real-time dissemination of consolidated quote and last sale information obviates the need for the expansion of ITS to include automatic execution capabilities, a consolidated limit order book, or price protection rules. It argues against expansion. In its opinion, the Commission should not design structure or mechanics; it is best to leave those to private initiative.

Madoff believes ITS has been a valuable method of competition. Nonetheless, in Madoff's opinion, ITS is imperfect because: it is not fully automated for market orders between all participants; there are no mandatory trade-through rules; and there are no requirements for all markets to reflect the actual price at which interest exists. While Madoff does not suggest that it is necessary to reveal the entire interest, it believes that, at a minimum, a representative interest would help define price discovery and ensure that the best price is always reflected in the market.

Madoff asserts that ITS does not allow for equal participation for all marketplaces. It points to NYSE Rule 390 as precluding Madoff from having fully competitive access to other market centers. Madoff notes that no evidence has been found of deterioration to the liquidity and viability of the ITS system due to NASD market maker participation.

Madoff does not believe a consolidated limit order book is needed for ITS limit orders. In its opinion, it would expose market makers to greater risk without ensuring additional liquidity. Madoff maintains that specialists and market makers need to have control and use of limit orders to help define liquidity and assess risk. Madoff asserts that market and limit orders are inter-dependent and contribute to the efficient pricing of each other. It argues that competition to provide limit order services together with inventory pressures should ensure the accurate reflection of buy and sell interest in the quotes from all marketplaces. In Madoff's view, this competition with mandatory trade reporting and trade-through rules in a truly automated ITS can assure best execution for all participants in the National Market System. Two commentators expressed a contrary view. Weeden recommends modifying ITS to allow for a central display of public limit orders. In its opinion, this allows for price discovery and fair access; addresses payment for order flow and best execution issues; and improves liquidity. Ricker suggests upgrading ITS to gather all limit orders in a consolidated limit order book. He suggests limit orders in the consolidated limit order book should have system-wide price and time precedence.

With respect to price protection, NYSE notes that ITS price protection rules do not protect limit orders not included in the quotation. The NYSE does not suggest there are reasons to believe a problem exists in this area. It sees no need to address this issue again. With the exception of the order exposure rule, the Regional Exchanges do not believe that the Commission should revisit any of the rules previously proposed to extend auction/agency principles.

NASD states that the failure to extend the ITS/CAES link is contrary to the objectives of the National Market System. NASD points out that ITS provides an automated means for executing customers' orders with the possibility of improving price. It argues that extension of the ITS/CAES link would heighten competition by offering to third market makers the opportunity to attract orders via superior quotations. Lastly, indicates NASD, the prohibition against third market maker access to ITS reduces the overall efficiency of multiple trading for non-Rule 19c-3 securities.

SIA notes that volume traded through ITS is modest compared to larger exchanges. SIA claims that enlargement and improvements to ITS would result in greater transparency and liquidity for securities in the system. STA favors the establishment of a more comprehensive market linkage through greater use of a consolidated tape to create a more competitive National Market System. Ricker recommends that all markets, including proprietary trading systems, be linked through ITS so that nationwide price discovery can take place.

B. Proprietary Trading Systems

Proprietary Trading Systems ("PTSs") are electronic trading networks operated as private businesses rather than as SROs. They operate by collecting indications of interest and rebroadcasting such indications to system participants through a single broker-dealer or several designated broker-dealers. PTSs also may provide for the execution and settlement of transactions. The Study Release identified six such systems currently operating for equities. The Commission has addressed these systems by categorizing them as either non-exchanges or exchanges. The non-exchange systems have been treated as broker-dealers.

The Commission attempted to formulate a conceptual approach to PTSs when it solicited comment on proposed Rule 15c2-10. Securities Exchange Act Release No. 26708 (Apr. 11, 1989), 54 FR 15429 (Apr. 18, 1989). The proposed rule would impose on non-exchange systems a degree of oversight representing a compromise between the full regulatory regime imposed on SROs and the less restrictive regulatory regime applicable to broker-dealers. A covered system would be required to register a plan with the Commission describing its operation, make records available to the Commission on a regular basis, permit its system to be examined upon request, and supervise the system to ensure compliance with its operating plan and federal securities laws. Substantial comment on the issues raised in this proposal was received, but the Commission has not acted on the proposed rule.

The Study Release solicited further comment on the issues raised in connection with proposed Rule 15c2-10. In addition, commentators were asked to address other specific questions including: the costs and benefits of PTSs to the equity markets; the appropriate regulatory treatment of PTSs; the applicability of transparency principles to these systems, and the degree to which transaction and quotation information should be subject to transparency; the potential effect of PTSs on the fragmentation of the market for listed securities, and any offsetting benefits; how to ensure the capacity and adequacy of PTSs; and the need to redefine the term "exchange," and whether the exchange/non-exchange distinction is still valid in determining regulatory treatment.

1. General Views

Eight commentators discussed the development of PTSs. The commentators generally favor allowing their continued development. Some commentators assert that PTSs are servicing very specific needs of a group of investors, with the search for lower costs being a prime force behind their development. The commentators also believe that the competition PTSs promote is healthy for the markets. Opinions differ widely on the appropriate degree of regulation that should be imposed on these systems.

Some commentators believe that a combination of unsatisfied market needs (e.g., lower transactions costs) and available technology provided a major impetus for PTSs. Peake and Mendelson indicate that the off-exchange systems have developed because the exchanges have not met the economic needs of their users. Jefferies explains that new computing technologies allow brokers and exchanges to implement trading systems that provide better service at lower cost. It notes that prior to the development of PTSs, all traders were willing to use a single central exchange because that was where trading information could be found. Now that such information is more widely disseminated, states Jefferies, traders no longer need to go to the central exchange. They may go to the system that best serves their specific needs. Jefferies believes electronic systems serve three functions: order routing; order crossing; and price discovery. All three functions lower costs for those who use them simply by automating existing activities.

Jefferies mostly views the implications for the NMS in terms of costs. Jefferies believes that the use of advanced technology to lower the costs of trading by these systems has caused transaction costs to drop over 80% during the last 20 years. Investors Research underscores this point by stating that the average commission rate per share over the last 12 months (as of November 1992) was 5.64 cents. Without the low cost trading systems, the average rate would have been 14.4% higher at 6.46 cents per share. The family of funds that Investors Research advises would have paid an additional $4.4 million in commissions were it not for these systems. Investors Research presented cost data for six-month periods, beginning with the first half of 1990 through the first half of 1992. It concludes that, in all cases, trading costs on non-traditional transaction systems were at or below the average costs for all dollars traded by brokers for these mutual funds.

Commentators also emphasized the many advantages PTSs offer to their users, including increased competition. Jefferies cites one advantage as fairness, because the systems treat all users equally and accessibility is not arbitrarily prohibited. Jefferies also indicates that, by virtue of their mechanical nature, PTSs ensure that rules are enforced and provide a perfect audit trail. Furthermore, Jefferies notes that PTSs distribute quotes and last sale information to anyone who subscribes, and most PTSs execute and report trades virtually instantaneously. According to Jefferies, PTSs allow brokers to search for and capture the best trading opportunities wherever they occur. In its opinion, institutions support them because PTSs provide direct access to the trading process. In addition to lower trading costs, PTSs allow traders to maintain confidentiality of order flow, which prevents front-running. Similarly, STA believes that a technological revolution in conjunction with a demand for fiercely competitive requirements for low costs and efficient execution have advanced the development of PTSs to satisfy different trading needs and problems. STA believes that PTSs provide healthy competition to securities markets, and exist because market forces created the demand for their services and functionality. In STA's view, PTSs have recognized correctly that there are many different trading strategies and that all investors do not have the same priorities. Another commentator, STANY, also favors the use and expansion of PTSs. In STANY's opinion they increase competition by offering additional and alternative venues to trade. Different investors' needs regarding volume and timing have given rise to different technological responses and innovations. Furthermore, states STANY, PTSs offer anonymity, control of proprietary information in effecting trades, assurances of financial integrity, savings on commissions, and electronic verification. The fact that investors' orders move to different markets, argues STANY, indicates that various needs are being serviced in a more superior fashion than they would be in a single market. CREF attributes the crossing networks' success to the fact that they attract traders who are patient, have low expectations with respect to order fulfillment, and want lower trading costs by eliminating market intermediaries. Thus, in the opinion of CREF, the crossing networks meet one of the goals of the 1975 Amendments: execution without dealer intervention.

Some commentators believe that the potential for further fragmentation of the equity markets as a result of increasing PTS use should not be a concern. For instance, Jefferies notes that PTSs serve specific participants who have special trading problems. According to Jefferies, segmentation occurs because traders are not identical; their needs differ. As a result, they choose to use those systems that best serve their needs. In Jefferies' view, segmentation would be troubling only if it discriminated without cause against some set of traders. In addition, Jefferies believes that segmentation would lead to problems only when arbitrageurs are not freely able to trade. Arbitrage, indicates Jefferies, is the glue that holds fragmented markets together. Arbitrageurs move liquidity from one market to another, ensuring uniform prices and trading opportunities across all market structures. In Jefferies' opinion, "balkanization" only will happen if traders cannot freely participate in any market for which they qualify to trade, and if arbitrageurs are not allowed to provide their services. Jefferies believes that no electronic system currently presents this problem. Fidelity also believes that the development of PTSs does not necessarily contribute to a tiered market.

STA also believes that the markets are sufficiently transparent to counter the effects of any market fragmentation. In STA's view, competition from PTSs is healthy, and consistent with the 1975 Amendments. STA states that PTSs satisfy legitimate needs and do not balkanize the markets. Instead, they promote free and open competition. It believes balkanization of the markets could only occur if information is restricted in any way for traders who desire to deal in a market and are qualified to do so. STA also views arbitrage as playing a vital role in policing the values in different markets to ensure that all traders receive approximately the same price regardless of where they trade. STA claims that although markets may be physically fragmented, they are nevertheless integrated by high speed communication links. It is of the opinion that what some call fragmentation has increased precisely because its adverse effects have decreased. STA asserts that full transparency during normal trading hours significantly reduces the concerns that PTSs reduce pricing efficiency. Another commentator, STANY, indicates that presently, PTSs are sufficiently transparent to dampen the tendency toward fragmentation. STANY suggests that fragmentation only will exist when traders are deprived of full information, and not because there is too much competition to attract orders.

Finally, AZX indicates that the efficient matching of orders in PTSs reduces the fragmentation inherent in the continuous dealer market. In AZX's opinion, fragmentation should be addressed by encouraging such matches. AZX further argues that the benefits of lower costs with PTSs are available because they are designed to centralize trading. AZX objects to the notion that PTSs only can be justified or explained by their offsetting benefits, because this notion assumes incorrectly that PTSs are responsible for harmful fragmentation. If the term "fragmentation" is substituted with "competition," AZX states, the seemingly intractable issues will become clear.

2. PTS Regulation

Nineteen commentators expressed their views on the appropriate regulatory approach toward PTSs. Those in favor of allowing PTS development to continue warn against overregulation. Those who are concerned with PTSs' effect on the current market structure recommend regulation beyond the current no-action approach.

The NASD notes that these systems have been developed for specialized customers and in response to specialized needs. In light of this fact, NASD urges the Commission to fashion an equitable approach to PTSs that does not stifle the innovative developers of such systems, yet also does not unduly burden the SROs charged with surveilling those systems or that may be interested in developing competitive systems. The NASD believes that PTSs are responding to legitimate needs of institutional investors, and that there is no evidence PTSs have had an adverse impact on market quality. The NASD identifies the germane issue as the appropriate allocation of regulatory burdens among SRO and PTS operators. While sponsors maintain accurate audit trails, states NASD, they generally conduct no surveillance reviews to detect violative conduct. In addition, argues NASD, the present no-action process does not permit public scrutiny of changes made by sponsors in the rules relating to various aspects of their operation. This, concludes NASD, permits sponsors to make changes far more quickly and with less regulatory oversight than would be the case for an SRO.

STANY recommends that any proposed regulation should balance the goals of competitive and alternative trading markets with those of full and fair disclosure, where the needs of investors are met and their investments protected. In STANY's opinion, the continued existence of PTSs must be recognized so that competition is not stifled. Another commentator, STA, points out that PTSs will continue to exist, and thus the regulatory task should not be to exclude them, but to help them co-exist with organized markets in a manner that avoids regulatory gaps. STA notes that, given the specialized needs served by PTSs and the relatively limited volume that has migrated to them, there is no need to stifle their development. The regulatory approach should preserve the valuable contributions of these alternate systems while taking into account their overall effect on the fairness and efficiency of the market as a whole. According to STA, it is critical that all market segments and interested participants are not so distracted by their own self interest that they lose sight of the fact that investors are the driving force of the securities industry. In a market economy, concludes STA, service providers must provide their customers with what they want or go out of business. CalPERS recommends that any new regulations take into account the passive nature of trading in PTSs. Investors Research, which strongly advocates and utilizes many of the non-traditional trading systems, would like the Commission to affirm the shift to markets where investors have instant access to low cost and transparent transaction systems.

CREF states that the Commission must recognize that in a free market, capital inevitably flows to investments where the risk/return tradeoffs are most favorable. To keep capital in the U.S. and to attract it from overseas, alternative trading mechanisms that hold the promise of lowering both trading costs and volatility should be allowed to prosper. Schwartz points out that alternative trading systems offer participants alternative ways of submitting and translating orders into trades. Schwartz suggests that while the consolidation of order flow is desirable because it strengthens competition between public orders and facilitates price discovery, competition between very similar markets may decrease overall efficiency. In his opinion, competition between truly different trading systems should be encouraged to counter technological inertia. Schwartz believes that PTSs should be allowed to compete for order flow, and competition will continue to intensify between international centers. With electronic technology, argues Schwartz, orders will flow to those centers that provide investors with the environment they most desire, regardless of where the centers are located.

Two foreign commentators recommend a cautious approach, but for different reasons. SFA does not believe that the role of an SRO is to restrict the development of PTSs. Instead, it would seek to recognize their existence somehow if they were to operate as exchanges rather than as order routing or execution systems. On the other hand, LSE notes, there is a need to preserve the balance between the exchange as the central market and the development of PTSs. LSE states that the absence of a central market could lead to fragmentation, impairing price discovery, raising costs, and affecting liquidity. In its view, PTSs gain price advantages by avoiding regulatory costs, and may pose a threat if they avoid regulations altogether. LSE suggests that some obligations should be imposed, but should not be a barrier to entry for PTSs.

Two commentators suggest that little regulation is needed at all, and one questions the applicability of the current regulatory system. Jefferies is of the view that order routing and crossing networks need little, if any, regulation because they do not expose order flow. Without order exposure, argues Jefferies, it is unlikely these systems will give rise to manipulative trading problems. The need for regulation, in Jefferies' view, is simply to assure the public that the system does what it claims to do and that it has the capacity to handle extraordinary service demands. At least one commentator suggests a "hands-off" approach for the immediate future. Meketa views the existence of PTSs as a testament to the weaknesses of the exchanges and NASDAQ. In its opinion, PTSs are more efficient and provide liquidity without adding intermediary costs. It suggests that the Commission should allow these systems to develop several more years before there is further intervention. AZX questions the applicability of the current regulatory systems to PTSs. AZX contends that only PTSs have financial incentives consistent with the public interest. This is so, states AZX, because they serve investors rather than intermediaries. AZX believes that the current regulatory system is designed to handle huge, fraud-prone intermediation networks. According to AZX, PTSs are inherently safe, and application of the existing regulatory system hinders the evolution of safer, more efficient markets. AZX recommends that the Commission allow PTSs to develop so they may become the proprietary exchanges of the future. Section 6 of the Exchange Act, asserts AZX, is inapplicable to PTSs.

Several commentators believe that PTSs are performing broker-dealer type functions and any regulatory approach should reflect this. For instance, Lattice believes PTSs are no more than the application of technology to the traditional activities of a broker. In its view, if the systems act like brokers, they should be treated accordingly. Lattice urges the Commission to encourage innovation and competition and to enhance both promptly by the regulatory process. Lattice is concerned about regulatory delay and encourages the Commission not to restrict or retard the development of new systems. Lattice views this approach as consistent with the mandate of the National Market System. Fidelity is another commentator that suggests that regulation of PTSs should reflect the configuration of such systems. Fidelity believes that it is unlikely that many systems will constitute exchanges. In its opinion, the analysis should focus on whether the system provides services or performs functions beyond those already regulated as broker-dealer services or functions. Instinet believes that purely competitive concerns voiced by SROs or competing broker-dealers do not provide an adequate basis to impose an additional layer of regulatory costs on PTSs. Instinet notes that the majority of trading in listed stocks still takes place on exchanges. It believes that claims of unfair competition are overstated. In its opinion, fair competition does not call for brokers and dealers to be treated as exchanges.

Four commentators representing the auction markets have a different perspective on the appropriate regulatory approach. Specialist Assoc. believes that the Commission's failure to assure that these systems comply with basic marketplace governance principles has contributed to their development. It is of the opinion that PTSs currently compete unfairly with exchanges. Specialist Assoc. believes that PTSs also contribute to fragmentation. It also does not believe that the OTC market will be able to continue functioning if it subdivides endlessly as is the case with PTSs. The NYSE recommends that PTSs be given an initial grace period of one year before being subjected to the same functional regulation as SROs. The Regional Exchanges recommend that the Commission assert oversight of PTSs and create a more equal competitive environment.

Amex believes that the current no-action approach fails to pursue the goal of investor protection. It is critical, in Amex's opinion, that potential future benefits be balanced against the market fragmentation that these systems cause and threaten to cause and may affect the liquidity of the primary agency-auction market. Amex argues that primary exchanges are just as important as a source of innovation, yet must comply with regulations. Amex believes that PTSs should not be permitted to participate in ITS until they have full regulatory responsibilities imposed by exchange registration. Amex cautions that unpoliced markets should not be allowed to interact with policed markets. Admission to ITS would undermine the regulatory efforts exerted by ITS and unfairly disadvantage the primary markets vis-a-vis the PTSs. SIA believes that the Commission should have jurisdiction over all equity markets including PTSs.

3. Proposed Rule 15c2-10 and "Exchange" Definition

Two commentators recommend that the Commission adopt proposed Rule 15c2-10. The NASD recommends adoption of the proposed rule as valuable in providing more effective oversight of PTSs and a more equitable balance of regulatory costs between PTSs and SROs. The Regional Exchanges also recommend adoption of Rule 15c2-10, and suggest subjecting third market makers to the rule.

One commentator, Jefferies, believes the proposed rule would not impose an undue burden on competition. Nonetheless, Jefferies is concerned about the regulatory power to approve or disapprove the PTS design. In its opinion, PTS design is an entrepreneurial activity the product of which should be judged in the marketplace and not by government regulators.

Three commentators oppose adoption of proposed Rule 15c2-10. STA believes that the rule would be overly burdensome and unnecessary. It also suggests that the Commission lacks the authority to adopt it. In its view, as long as PTSs are subject to oversight, their products should be judged in the marketplace, and not by government regulators. Fidelity believes the proposed rule is overinclusive because it would apply to systems that facilitate basic broker-dealer activities. Instinet believes that purely competitive concerns voiced by SROs or competing broker-dealers do not provide an adequate basis to impose an additional layer of regulatory costs. In its opinion, the Commission should refrain from regulating more innovative forms of technology offered by broker-dealers. Instinet states that Section 15(c)(5) of the Exchange Act does not provide authority to regulate such technology.

Two of three commentators discussing the definition of "exchange" conclude that redefining the term is not necessary. Instinet believes that there is no need to redefine the term, and that the current approach of no-action letters is the proper one. Instinet also notes that attempts to classify the systems on the basis of price discovery versus passive price concepts would be too subjective. AZX shares the view that a new definition is not needed. It suggests that what is necessary is a new understanding that the centralizing function can now be filled by PTSs as well as membership exchanges given advances in telecommunications and automation. Once this is understood, AZX states, this would lead to a more consistent conceptual framework for regulation. AZX further recommends that the Commission continue to use the Delta definition and also provide a mechanism for registering PTSs as such, instead of using something such as proposed Rule 15c2-10. Alternatively, AZX suggests using the low volume exception in Section 5 of the Exchange Act. In its opinion, this would permit a PTS with limited volume to remain exempt even if it were to have a higher share volume than a membership exchange. One commentator, Investors Research, questions whether the concept of exchange must be broadened dramatically.

4. Disclosure

Eight commentators discussed various aspects of the disclosure issues presented by PTSs. Some commentators recommend that real-time disclosure requirements be imposed on all PTSs. For example, STANY believes that PTSs should be subject to similar disclosure requirements like other markets to ensure that transactions are reported on a real-time basis and that sufficient reporting exists to create an electronic audit trail. STA and ASB Capital state that PTSs should provide real-time reporting. Lattice recommends that all PTS transactions be made transparent.

Two commentators offered other specific recommendations about the types of information PTSs should be required to keep. Jefferies believes that all PTSs should be required to maintain machine readable records of all significant events that take place within their systems, and should be required to assist with any investigations of suspected violations that might involve their use. Order execution systems should be required to report trades immediately to the consolidated tape. Quotes and other market indications should be universally reported to the extent that the system is designed to reveal them. In Jefferies' view, PTSs should not be compelled to reveal all trading information because many traders do not wish to expose orders fully. A system designed to satisfy that need should be able to do so without government interference. STA recommends that PTSs should be able to provide an electronic audit trail, satisfy best execution requirements, and have an obligation to respond to Commission requests for information. Specialist Assoc. states that, with the exception of last-sale reporting, PTSs are not linked to the OTC or exchange markets. In its view, this is a problem warranting prompt attention.

On the other hand, NASD believes that no further action is needed to require public dissemination of order information from PTSs, because PTSs accept orders and not quotations from participants. At least one commentator, AZX, questions the benefits to be obtained by imposing a real-time disclosure requirement on PTSs. AZX asserts that transparency in continuous trading systems produces fewer benefits than is believed. Consequently, states AZX, there is less value given in reporting trades on the tape. AZX suggests that the Commission may find that forcing PTSs trades into the tape would not lead to any significant improvement in transparency.

Two commentators made some additional observations on PTSs in general. Lattice indicates that the security of PTS systems may present a problem, and that poor security would open the door to fraud or executions in bad faith. AZX suggests that commercial incentives could assure adequate capacity and security more effectively than regulatory initiatives. AZX cautions however, that PTSs would not be overburdened if requirements such as the Automation Review Policy are imposed as long as such oversight does not require capacity and security measures that are inappropriate to their particular methods of operation.

C. Fourth Market

The term "fourth market" was used in the Study Release to mean a market where institutions deal directly with each other without the intermediation of a broker-dealer. Given the potential growth of this market, comment was solicited on how the Commission should respond to the expansion of the fourth market. Specific comment was requested on the size of this market; the costs and efficiencies associated with this type of trading; and whether the Commission should consider non-intermediated access to the National Market System, and the costs and benefits of such approach.

Fidelity does not believe that the volume in after-hours trading, overseas trading, and the fourth market is sufficient to affect price discovery or liquidity. In its opinion, fourth-market trading provides beneficial pricing and timing alternatives to institutions that do not require a broker-dealer to access market liquidity. Exclusion of these trades from the auction markets, states Fidelity, does not represent a detrimental loss to the price discovery process. Peake and Mendelson believe that the Commission should not prohibit fourth market trading and suggest that institutions trading therein should be required to substantiate best execution.

NYSE states that fourth market access to the markets is not appropriate. In its opinion, such access would increase, not decrease, current problems.

IV. Best Execution and Payment for Order Flow

The Study Release indicated that best execution involves the duty of a broker-dealer to seek to obtain for a customer's order an execution such that the total cost or proceeds are the most favorable under the circumstances. Three factors affecting best execution were identified and comment requested thereon. The first factor concerns technological developments that have resulted in increased speed and certainty of execution through automated execution systems. Because these systems are mostly based on passive pricing of primary market quotes however, this improvement has been at the expense of improvement in the potential price for a customer's order. Comment was requested on the degree to which best execution opportunities have been affected due to technological changes in the marketplace and the implications for investor protection and competition between markets.

The second factor discussed in the Study Release is payment for order flow ("POF"). This practice involves the payment by market makers or exchange specialists to brokerage firms for directing customer orders to the entities making the payment. The use of automated execution systems allows the paying market maker or exchange specialist to offer quick, efficient, and inexpensive executions at the best displayed quotation for small orders. The broker-dealers receiving payment, in turn, are able to reduce their transaction costs. Comment was solicited on the effect of POF on the equity markets; the extent to which it occurs; how it affects obtaining best execution; whether it is consistent with a broker's fiduciary duties; whether the benefits outweigh its costs; and whether a disclosure requirement is necessary. With respect to the effect of POF on market structure, comment was requested on how POF influences order routing away from auction markets; the costs and benefits of such routing practices;

the consistency of POF with the goal of fair competition contained in Section 11A; and its effect on quote competition for orders. In this context, it should be noted that the Commission recently has issued a proposal to increase disclosure of POF practices. Securities Exchange Act Release No. 33026 (October 6, 1993), 58 FR 52934 (October 13, 1993).

A third factor identified in the Study Release as affecting best execution is the development of competitive responses by SROs that raise best execution concerns. Included in this category are such initiatives as the NYSE's clean-cross proposal and the Amex's competing dealer proposal. Comment was solicited on the degree to which SRO rules promote or hinder the fair handling of orders, and on the proper balance between SRO competitive initiatives and order execution rules.

A. General Comments

Several commentators described the circumstances under which they believe best execution is currently sought for customer orders. A detailed description was offered by the Regional Exchanges, which contend that substantial progress has been achieved for economical and efficient executions (*i.e.*, service competition), but virtually none for best available prices (*i.e.*, price competition). They note that institutional sized trades are priced off-floor, and often executed over-the-counter or abroad, while middle sized orders are brokered on exchange floors, and worked by brokers to obtain best execution. In their opinion, because institutional and middle sized orders traditionally have been handled by brokers, they have been afforded special treatment which translates into best execution. The prices are either negotiated upstairs or are held on the floor by brokers who will attempt to better the displayed quotation. The Regional Exchanges observe that retail orders do not generally receive this kind of treatment. Such orders are routed automatically to a single market without the intervention of a broker. On the NYSE, they are routed to the specialist where they are executed at the best bid or offer. Otherwise, they are routed to automated execution systems and filled in accordance with a predetermined algorithm at a price at least as favorable as the consolidated best bid or offer in the regional exchanges or with third market makers. Thus, the Regional Exchanges explain, retail orders are executed on the basis of the displayed quotations, specifically, the consolidated best bid and offer ("BBO").

The Regional Exchanges assert that the failure of intermarket price competition to thrive is directly related to the failure of the NMS to provide any real incentives to market makers to compete on the basis of their displayed quotations. Orders are very rarely routed on the basis of quotations. Instead, order routing decisions are made on the basis of preexisting arrangements where service and costs are paramount and execution quality is eliminated as a factor because all markets guarantee execution at the BBO. Once the order is routed this way, it is rare that it will be sent to another market because the best quote will be matched instead of rerouting the order via ITS. Thus, market makers have little incentive to compete based on quotes. According to the Regional Exchanges, it is more effective to compete by marketing quicker and cheaper executions than by attempting to attract orders through displayed quotations.

All-Tech believes that market maker preferencing arrangements, payment for order flow, and the inability of public customers to have orders displayed in the OTC dealer environment have adverse effects on the public's net execution costs. It views the Commission as being ambivalent regarding best execution. All-Tech believes the Commission has been remiss in creating an environment favorable to the small investor. All-Tech also suggests that the CTA and CQS enhance competition between dealers and market centers, and help to obtain best execution.

NASD believes that best execution is facilitated in competitive markets where quotation and transaction information is widely and publicly disseminated; automated execution systems operated by market centers or broker-dealers execute transactions based on the BBO; and the SROs monitor trading to detect aberrational activity occurring outside accepted norms. On the other hand, NYSE believes that the primary method to foster best execution is to encourage order interaction in the agency auction market. In this regard, NYSE is of the opinion that a neutral order switch should not be considered. NYSE believes that the use of such a switch would legitimize the mistaken belief that the execution of an order at the disseminated quotation represents best execution.

Instinet notes that a key element in best execution is securing the best price for the transaction. In its opinion, low commission rates are also part of best execution. Instinet states that on the primary stock exchanges, when the spread is a quarter point or more, buy orders will be frequently "stopped" by specialists. The stopped order will then be crossed with a sell order so that both orders get the advantage of prices between the quotes. Instinet also notes that on NASDAQ, it is rare for an order to be executed without the participation of a dealer. Dealer intervention results in an additional spread between the prices at which investors can buy and sell, causing investors to obtain less favorable prices than if they traded directly with other investors. Instinet states that its regular trading system is frequently used to obtain price improvement via the entry of orders priced between the consolidated bid and ask displayed.

A foreign commentator, SFA, indicates that it views best execution in terms of price, rather than overall cost to investor. In certain circumstances it may take other factors into account, but in connection with execution systems, the SFA will look at price as the overriding factor. SFA advocates focusing on price because, from a regulatory view, it can be easily monitored.

B. Payment for Order Flow

Twenty-eight commentators discussed the practice of POF. Most commentators agree that POF raises different issues, but disagree on the proper regulatory approach.

1. Commentators Recommending Further Examination

Four commentators called for further examination of the issues raised by the practice. For example, Concepcion states that POF is anti-competitive. In his opinion the paying brokers have grown at the expense of non-paying brokers. Concepcion urges the Commission to study POF because many in the industry believe it is illegal and represents an unfair business practice, even among those who pay for order flow. He also believes that the industry has a conflict of interest in dealing with this issue. He points out that both the NASD and STANY have members who engage in this practice. These organizations, he believes, turn their heads the other way when confronted with POF issues.

Merrill Lynch believes that POF raises serious questions about the ability of a broker to fulfill its fiduciary responsibilities to its customers to achieve best execution. Merrill Lynch called for a full, impartial, and thorough analysis by the Commission. The Regional Exchanges note that, while they have been critical of the practice, it was adopted to avoid losing business. The Regional Exchanges continue to have reservations, but recognize that diverse opinions on the subject exist, and recommend that the Commission commence a proceeding to reach a final determination on the issues raised by POF. Goldman Sachs also recommends further study, including the possibility of disclosure.

2. Commentators Against POF

Seven commentators oppose POF and recommend that it be prohibited. Of these commentators, Specialist Assoc. discussed several reasons why POF should be prohibited under Section 15(c)(1) of the Exchange Act and Rule 10b-5 thereunder. It views POF as having an adverse effect on the brokers' responsibility to seek out best execution. In its opinion, the self-interest in obtaining an order flow payment clouds a broker's professional judgment. Because it is impossible to show objectively whether best execution has been achieved, Specialist Assoc. believes a broker must be required to exercise that professional judgment solely in the interest of its customer, both at the time the broker selects a market to attempt execution of a customer's order, and subsequently when the broker accepts a particular price on the customer's behalf. Specialist Assoc. cites to a recent study to support the notion that orders directed to OTC market makers as a consequence of order flow payments, are not only at risk of receiving inferior executions, but are actually being executed at inferior prices. Similarly, Instinet is of the opinion that POF prevents a broker from making a trade-by-trade assessment of execution quality and costs.

NYSE and Amex oppose POF because it represents a serious conflict of interest by undermining the broker's obligation to seek best execution of customer orders. NYSE believes the practice is inconsistent with sound market structure policy and the NMS principles. With respect to exchange-listed securities, Amex believes POF is a clear breach of a broker's fiduciary duty to its customers, because the customer is denied the opportunity for price improvement offered by the exchange. Finally, Amex believes POF causes fragmentation which reduces liquidity and undermines effective price discovery.

Specialist Assoc. further believes that POF is inconsistent with basic agency law and the fiduciary duty of a broker-dealer. All-Tech, Concepcion, and Instinet share this view. Specialist Assoc. notes that, absent informed consent, payments to a principal's agent conflict with fundamental precepts of agency and trust common law. It further argues that disclosure printed on a confirmation slip cannot be relied upon to permit an inference of consent by the customer to such payments. Even with informed consent, the Specialist Assoc. questions the practice under certain state commercial bribery statutes. The Org. Ind. Floor Brokers agrees that POF could be viewed as commercial bribery.

Specialist Assoc. also points out that, in its view, POF is in conflict with SRO rules such as Section 1, Article III of the NASD's Rules of Fair Practice. It views POF as an unfair business practice that tends to bring the securities industry into disrepute and increases public cynicism concerning the honesty and integrity of the markets.

In addition, Specialist Assoc. argues that fair competition is distorted by POF practices. If both specialists and OTC market makers paid for order flow, it argues, they would still not be competing fairly because specialists are bound by auction market rules while OTC market makers are not. In other words, a specialist would pay for all orders but would not effect all transactions for its own account as a dealer could. It also notes that market makers who do not pay for order flow (for legal concerns) are at a disadvantage against those who do. All-Tech, Concepcion, and Instinet also believe POF is anti-competitive and inconsistent with fair competition. Concepcion states that POF affects market making by non-paying brokers, because the non-paying brokers may be offering the highest bid or lowest offer, yet may not trade at all because the orders are going to paying brokers.

Specialist Assoc. would distinguish between POF and lowering an exchange fee. In its opinion, by imposing transaction fees, an exchange does no more than discourage brokers from taking orders to the exchange. Specialist Assoc. believes that this has no other effect on the broker's selection of a market. On the other hand, it views POF as a positive incentive to take orders to the paying market. The payment can only be obtained by choosing that market. Thus, concludes Specialist Assoc., POF has a direct and improper impact on the broker's choice of market.

Specialist Assoc. also believes that when POF is permitted, it is impossible to determine the prices at which bids and offers are being made. This is so because the bids and offers shown in the quote system will virtually always be different than the actual prices paid. It argues that this result is incompatible with the purposes of Section 11A(c)(1)(B). Other commentators share the view that POF is inconsistent with the NMS principles. The NYSE notes that auction markets should encourage order interaction, which does not occur with POF. The Ind. Floor Brokers also points out that POF denies the public the benefits of trading in an auction market, and notes that orders do not have the opportunity for price improvement at the point of sale. In its view, POF skews the intention of the 1975 Amendments and prevents the development of the NMS because orders do not flow to the best market. Alliance FB states that, because POF does not meet the stated goals of the NMS, investor protection and confidence suffer accordingly.

Alliance FB challenges the notion that customers benefit from the practice. It argues that there is no evidence that POF results in lower transaction costs for customers. It believes that brokers who sell their order flow have not reduced their commission rates, and that dealers who buy have not shown a willingness to offer anything other than the quoted spread. The Alliance FB also notes that, given the lack of an opportunity for price improvement, continuous trades at the bid or offer do not represent a satisfactory pursuit of best execution. The Alliance FB emphasizes that institutional trading is handled order by order in search of best execution. In its opinion, the same principle should apply for retail orders.

3. Commentators Supporting POF

Three commentators support POF. According to Madoff, POF is only one of many environmental factors impacting market structure. Madoff maintains that POF has no bearing on best execution. He notes that orders in his system receive identical handling regardless of whether the order was paid for or not. The Madoff system will not execute an order at a price inferior to the BBO in ITS up to 5,000 shares regardless of the size appended to the best quote.

With respect to the issue of fiduciary duties, Madoff points out that, assuming best execution, brokers availing themselves of the benefits of a competitive market offering reduced execution cost, price certainty, guaranteed liquidity, and a fast execution would appear to be in far superior compliance with such duties than brokers who do not explore the advantages of a competitive NMS.

Madoff notes that the diversion of order flow caused by POF may be detrimental to the losing market center, but not the customer who reaps the benefits of competition. Madoff points out that there is significant order interaction in its system. Fifty percent of its volume is limit orders, for which no payment is made. Market orders are priced on the BBO and go directly to the benefit of any eligible limit order resident in the system. The firm does not trade ahead of a customer's order at the same price.

Madoff asserts that POF has allowed third market makers to compete with the primary markets, which, in its opinion, have the vast majority of the volume. Because of POF, it has been possible to achieve a critical mass of orders. Consequently, it has been possible to achieve enhanced liquidity, tighter spreads, efficiency and speed of execution, and lower execution costs. In this regard, Marquette, a discount broker, notes that it has not increased commissions since 1975 because POF has enabled it to maintain the same rates for 17 years. Marquette stresses that unfavorable regulations affecting its ability to receive such compensation would result in increased commissions. Arnold, another discount broker, also claims that POF has enabled it to maintain its commissions at 1976 levels. Without POF, asserts Arnold, it will have to pass on to customers the added cost of doing business.

The NASD also supports POF. In its view, POF increases competition and encourages innovations. The NASD notes that long before POF began, brokers determined that immediacy of executions, price guarantees, and reduced back-office and comparison costs provided by small order automatic execution systems were extremely valuable. It believes that POF does not interfere with best execution or with a broker's fiduciary duties. It suggests that the focus should be on how inducements for order flow, in general, have affected quote competition or development of innovative pricing systems, and how they have affected total transaction costs paid by customers. The NASD suggests that POF may reduce customer costs because brokers may charge lower commission rates. It notes that automated execution also saves time and money.

The NASD explained that the importance of POF as a competitive tool is underlined by the absence of the ability of secondary markets to compete through quotations. The NASD does not know of any retail firm that is willing to assume the cost and administrative complexity involved in routing each order to the best displayed quotation. The firms simply assure that the BBO is matched in the market to which they routinely route order flow. The NASD also notes that exchange floor participants are not required to redirect orders through ITS to a superior quotation.

The NASD believes that the concern that POF leads to increased use of automated execution systems that do not provide for price improvement is unfounded. POF also has not reduced incentives to compete and provide innovations to the marketplace. The NASD identified at least two systems offering an opportunity for price improvement: MSE and Madoff. The NASD also indicates that Madoff has responded to competitive pressures by implementing a fully redundant back-up facility that, combined with NASDAQ's, offers its customers greater assurance of continuous service than any other competitor in the listed markets.

IDS Fin. believes POF raises best execution issues, but its affiliate broker-dealer participates in such arrangements. Clients are notified in general terms. IDS Fin. does not believe POF should be prohibited.

4. General Comments

Seven commentators expressed general views on POF. In this group, Fidelity states that it does not believe the practice has a substantial beneficial or detrimental effect on the markets. In its opinion, transparency is sufficient to permit investors to readily determine whether best execution is being achieved. Fidelity notes that most orders paid for are processed through ITS and eligible for the consolidated BBO regardless of where placed. If POF were prohibited, Fidelity believes the price of execution and other services would simply adjust accordingly, and other incentives would be devised to attract business.

Investors Research states that POF clearly illustrates the structural failings of the U.S. equity pricing structure. It believes the practice exists because large dealers with electronic access to a variety of markets make it economically foolish for smaller firms to seek best price and sacrifice profitability. Small orders gain immediate execution and smaller dealers gain access to some economies of scale. Investors Research notes, however, that in low priced stocks, small investors will never gain price improvement. In this regard, Lattice believes that it would be better if the price improvement offered by those who pay for order flow accrued directly to the client. While this may not be the case currently, Lattice hopes that competition among brokerage houses will cause the bulk of this payment to eventually benefit the retail client.

Another commentator in this group, STA, believes that regulators have been unable to develop any strong, probative facts that suggest that POF violates the federal securities laws or SROs' regulations. STA believes that the practice is widespread and is used, in one form or another, by virtually every market participant. It also believes that there has been no meaningful evidence that customers have not received best execution as a result of POF. In STA's view, the impact of POF on fragmentation and transparency depends upon the nature of the order flow, including factors such as size of orders, size of the market, and timing of execution. It is unaware of facts that would support a belief that POF has had any serious effect on either, though, it believes it is possible. STA believes that POF does affect competition among retail and wholesale firms and that it can affect spreads by removing the necessity to compete by narrowing the spreads. In addition, STA believes that POF can limit the discretion of order entry firms at all levels, but it has no evidence that this limitation is injurious.

STA indicates that a more serious issue is whether fragmentation as a result of POF will be sufficient to impact price discovery and transparency. In the STA's view, depending on the volume of the POF orders, volatility and decreased liquidity could result. The dealer buying order flow does benefit by the volume and market making activities. STA does not believe there is any evidence that POF prevents brokers from complying with fiduciary duties to clients. It is of the view that the paying brokers assume the responsibility of obtaining best execution, particularly with respect to securities not traded on organized markets. STA recommends that there be a basic regulatory approach to POF, and that the Commission continue to monitor the situation. STANY also believes POF raises issues involving increased fragmentation and decreasing transparency in addition to best execution concerns. It declares itself neutral, however, absent clear evidence that these potential adverse effects exist.

Peake and Mendelson attribute POF to market fragmentation. They believe that POF is relevant to investors because dispersion of trading affects the efficiency of price discovery and adds to investors' costs. In their opinion, all stock exchanges, including the NYSE, pay for order flow by their advertising practices and lobbying efforts.

AZX believes that POF presents the best evidence of the inadequacy of the paternalistic approach to protecting investors. In its view, POF is one aspect of the much larger problem of excessive reliance upon dealers. According to AZX, the solution is to address the problem of lack of customer choice, not choice of broker. AZX suggests that the natural and perhaps only effective solution to these problems is to permit the development of new exchanges. AZX concludes that competition is needed in the dealing structure.

LSE believes that the practice raises questions with respect to the definition of what best execution is and full disclosure of how best execution has been achieved.

5. Disclosure of POF Practices

Thirteen commentators, representing the entire spectrum of opinions regarding POF, commented on the possibility of a disclosure requirement by brokers receiving such payments. SFA, a regulatory entity in the United Kingdom, indicates that it has chosen to rely on adequate disclosure and the fact that customers' interests would not be affected by the inducement given. SFA recognizes that an issue of distortion of competition arises, but doubts regulators should be involved in solving it. SFA believes that principles of best execution should be upheld, and suggests more monitoring of execution by the broker receiving payment.

One of the commentators recommending further study of the issue, Concepcion, states that disclosure does not address whether the practice is legal. A commentator opposing POF, the NYSE, believes that disclosure is insufficient to address the issues created by the practice. Another commentator opposing POF, Alliance FB, however, recommends, at a minimum, full disclosure regarding sold orders; and where cash is paid, that payment be returned to the customer as a credit or reduction in commission rates.

Three commentators supporting POF believe that disclosure is appropriate for POF and similar practices; one does not. Madoff believes that disclosure of all inducements for order flow is warranted and appropriate. It notes that other forms of non-cash payments are almost indistinguishable from cash payments, but are not required to be disclosed. IDS Fin. supports proposals for clear disclosure. The NASD also believes that disclosure is appropriate for all types of inducements for order flow. It recommends that the Commission require enhanced disclosure so investors can make informed decisions. In this regard, the NASD suggests that the definition of remuneration for purposes of Rule 10b-10 be amended to encompass more than simple cash payments. The NASD notes it has filed with the Commission a rule proposal to require disclosure of such additional remuneration. SR-NASD 90-22, Securities Exchange Act Release No. 34-28020 (May 15, 1990), 55 FR 21284 (May 23, 1990); subsequently amended, Securities Exchange Act Release No. 34-28774 (January 14, 1991), 56 FR 2573 (January 23, 1991).

Another commentator that supports POF, however, disagrees that disclosure is appropriate. Marquette believes that such disclosure undermines the validity of its competitive commission rates. Regarding the NASD's proposal on increased disclosure, Marquette was concerned that singling out one aspect of a business practice is confusing, and implies that investors are being taken advantage of. It calls for a level playing field in terms of disclosure, pointing to the NYSE's announcement regarding cost reduction on trades of fewer than 2,100 shares. Marquette believes that the NYSE is aware that the savings will not accrue to investors, and questions whether NYSE members would be required to disclose the favorable treatment they are receiving. Marquette requests that POF be permitted and that no disclosure be required in confirmations.

Five commentators discussed disclosure. Fidelity would not object to a reasonable disclosure requirement when payments are received in connection with a customer's order, but believes that the ultimate price, regardless of how derived, is more important to the customer than the existence of compensation for the order. Investors Research believes that the Commission should require disclosure to all parties. SIA believes disclosure is appropriate for POF as well as soft dollars and swapping of order flows.

STA suggests that disclosure in confirmations or another form of disclosure, and possibly the identity of the paying dealer, should be required. STANY favors greater disclosure, particularly where soft dollars are concerned.

6. POF and Soft Dollars

Some commentators discussed POF in light of soft dollar practices. STA believes that consideration of POF must encompass soft dollars. Limiting the coverage of any regulation to hard payments would lead to the subterfuge of substituting soft payments for hard. STA suggests that soft dollars be defined as the delivery to the order entry firm of something of value in exchange for the delivery to the paying firm of orders for execution, excepting, however, any goods or services that are directly related to the particular order.

Alliance Ind. Research indicates that brokers furnishing services consistent with Section 28(e) of the Exchange Act provide quality executions to meet their fiduciary duties. Among the reasons cited were that: these brokers do not trade as principals and thus, do not compete with their own clients; the rates they charge are competitive with full-service firms; and that additional competition has contributed to lowering the commissions paid by money managers. They stress that soft dollar practices should not be confused with payment for order flow. It recommends that the Commission not interfere with soft dollar practices in light of benefits to the investment community. Concepcion also argues that POF differs from soft dollar arrangements because with soft dollars an entity obtains payment for services it performs, but with POF, the entity obtains payment for a service it is providing to someone else.

C. SRO Competitive Responses

Amex believes that market makers use the primary markets in a manner that causes the primary markets to subsidize the non-primary markets. It cites as an example the execution of a customer order with an offsetting transaction on a primary exchange (*i.e.*, laying off risk). Amex believes such a practice is reconcilable with the NMS objectives of efficient price and fair competition only if these market makers contribute to price improvement for customer orders. In its opinion, in the absence of price improvement, market makers should be required to yield priority and parity to customer orders. It further believes that its specialists should be on parity with such orders from other markets makers.

The NYSE believes that the Amex's competing dealer proposal to regulate access to its market is a reasonable response to competitive realities, such as derivative pricing directed order flow. The NYSE indicates that requiring these dealers to yield priority to public customers is fully consistent with the NMS principles.

Fidelity opposes the Amex's proposal because it would not accomplish its stated purpose of protecting public orders and is anti-competitive. In its opinion, the classification of "public customer order" is both over-inclusive and under-inclusive.

V. Transparency

Transparency involves the real-time dissemination of trade and quote information. The Study Release noted that the U.S. equity markets have generally achieved a high level of transparency. Nonetheless, developments such as after-hours trading, the growth of proprietary trading systems, and fourth market trading raise questions regarding the availability of real-time trade and quote information. Comment was solicited on the adequacy of current market transparency and how to ensure market participants have access to necessary information. The Study Release suggested that improvement on the level of transparency was possible with respect to after-hours trading by both exchange and off-exchange systems; quotations or priced orders in the off-exchange systems by integration into the consolidated quotation system; and the display of all market interest on exchanges or at a minimum, display of limit orders held by specialists. Commentators were asked to address these areas and any others where transparency could be improved.

The Study Release also highlighted that the development of global trading in U.S. equity securities raises transparency issues. Specific comment was requested on the extent to which order flow is routed abroad to avoid transparency requirements in the U.S. markets. In addition, views were solicited on how foreign trades in U.S. securities should be reported, and on how to categorize foreign transactions for purposes of transparency.

A. Adequacy of Current Transparency and Access to Information

Eleven commentators discussed transparency in general terms. For example, ICI believes that efficient markets require transparency. In its opinion, concerns about balkanization of the markets may be addressed by ensuring transparency in each marketplace. ICI would support reasonable steps to enhance transparency in all markets, including, transactions overseas and in the fourth market. Likewise, Merrill Lynch strongly supports the ability of customers to make informed decisions based upon the maximum information available. Merrill Lynch believes it is critical that individual investors have the same access to information that institutional investors have. Merrill Lynch supports increased transparency through consolidated reporting and believes that further study is necessary to identify the information that will assist investors. Lee believes that transparency should be viewed as a regulatory mechanism and not as an end in itself. He suggests that it should be used only when advantageous.

The NASD believes that competition does not damage liquidity or prevent best execution provided there is market information available to the public. In its view, this information significantly improves the fairness and efficiency of the markets by allowing market makers to determine the present value of a security accurately and by permitting investors to evaluate the quality of the execution they receive. It points to NASDAQ to illustrate the beneficial effects of transparency: increased liquidity, transactional volume, and institutional participation. The NASD recognizes that there may be some environments where competitive dealer risk factors dictate different levels of transparency in equity securities (e.g., cross-border trading).

One commentator, Fidelity, believes that there are few gaps in transparency. It would not oppose reasonable initiatives to enhance transparency beyond real-time reporting as long as the costs are reasonable and customer anonymity is preserved. Because transparency is high, Fidelity suggests the Study Release reflects an unnecessarily exaggerated perception of adverse market fragmentation. In its opinion, transparency can eliminate fragmentation of transaction information emanating from the markets, thus the concern about fragmentation should be limited to whether it adversely affects price discovery or liquidity.

Brandt, Instinet, and Weeden support the extension of operating hours for the consolidated tape and requiring its use to eliminate transparency issues. Weeden believes this approach will solve transparency issues and fold back fragmentation into the central reporting system. Instinet believes that the ability of customers to monitor executions on a real-time basis encourages exposure of their orders to the best market. STANY would increase the use of the consolidated tape to promote a more comprehensive inter-market linkage. In its opinion, this would result in a more competitive NMS with increased transparency because all trades would be reflected on the tape on a real-time basis.

Investors Research commented on what it perceives to be a negative development involving transparency. In its opinion, NASDAQ's SelectNet represents another move to protectionism and less efficient markets. Investors Research believes that the emergence of Instinet threatens traditional NASDAQ market makers and has prompted a response that emulates steps taken by London to restrict market transparency after U.S. trading firms began to build a market share in that market. Investors Research notes that SelectNet allows dealers to advertise trading interest at prices better than the quoted market and restricts these prices to market makers only. In its view, this system has no place in a market where centralized price discovery is a goal. According to Investors Research, if the NASDAQ quotes truly represent the best prices, then the ability to transact at prices inside the best quoted market would disappear. Investors Research believes that the existence of a broker-only screen on SelectNet undermines the price discovery process in the public market. In its opinion, "private" non-public markets like SelectNet do not give dealers an economic incentive to quote stocks in narrower spreads. In this regard, Ricker believes that SelectNet has contributed to fragmentation and done little to improve price discovery.

Investors Research also believes that exchanges no longer represent the most efficient mechanism for buyers and sellers to meet anonymously to negotiate prices. It asserts that the discovery process occurs only when the advertisers of a trading interest can be meaningfully rewarded. Investors Research views systems like AZX and Instinet as rewarding the providers of liquidity with best prices and true markets. Investors Research suggests that transparency means far more than a timely report of a trade to the tape. It implies markets with open access, clear views of indications from buyers and sellers, and a consolidated limit order book preference where aggressive pricing and order entry time may be rewarded. Investors Research also believes that trading rules in the traditional markets do not encourage price discovery.

All-Tech notes that the lack of public customer priority rules in the OTC market encourages opacity. It states that it is rare for orders to be executed without dealer intervention. Byrne also suggests there be greater transparency and access.

Two U.K. commentators offered their perspective on transparency issues. The SIB explained that the U.K. equity market structure has evolved in response to the demand to deal quickly at tight prices and in size. It argues that such structure does not ignore smaller investors. While it concedes that post-trade transparency contributes to fairness of price, it believes that the level of transparency needs to be balanced by the needs of market makers who operate as risk-bearing intermediaries. If post-trade transparency is too high, the SIB asserts, market efficiency and fairness could suffer as market markers widen their spreads and deal in smaller sizes. The SIB notes that U.K. regulators use reports to monitor compliance with dealing obligations by firms. It suggests that the U.K. transparency regime enables market makers to meet the needs of institutional investors better than the U.S. market. The SIB believes this has been achieved with no loss of fairness to private investors. It views the major question regarding overseas trading not as whether there is public reporting, but whether there is regulatory reporting. It asserts that there is no "regulatory black hole" as far as the U.K. is concerned. The SIB is also of the view that regulators need to appreciate that not all investors have the same capacity or the same needs. It notes that pre-trade transparency is enforced in the U.K. by strong regulatory reporting requirements policed by the market authorities who proactively monitor compliance with dealing rules.

Likewise, BMBA contends that the optimum level of transparency in a market is related to the structure of that market. It supports LSE attempts to strike the appropriate balance between transparency and liquidity in the belief that the liquidity in the U.K. market is based upon the commitment of risk capital to support firm continuous two-sided quotes. BMBA considers that liquidity will be impaired if the level of transparency exposes market makers to undue position risk. It argues that pre-trade transparency in the form of firm two-way prices provides an effective basis for investment decisions. In its opinion, post-trade transparency is therefore less critical to price discovery and is outweighed by institutional investors' interest in immediacy and liquidity.

SFA views transparency issues in the U.S as being caused by those capturing the data. It points out that in the U.K. prices are captured by both the SROs and the SFA (as regulator for dealers), thus in theory, all trading is captured. SFA recommends a central system to facilitate monitoring.

B. After-hours Trading

AZX asserts that investors use after-hours systems, not because they want longer hours, but because they want better trades. According to AZX, assuming no changes in the existing daytime regulatory structure, true exchange competition depends upon not applying the daytime structure to off-hours systems. AZX recommends changing the daytime regulatory structure to remove barriers to competition and access, such as the combination of ITS and registration that blocks competition in daytime price discovery.

Lattice offers a different perspective on the use of after-hours trading. In its opinion, institutional managers dominate markets; they need liquidity; and their orders contain little information relevant to the pricing of securities. To force them into the auction market, argues Lattice, would increase volatility. The markets, explains Lattice, must accommodate their need and after-hours trading is a crude attempt to do so. Lattice expects to see this type of trading fade as better tools are developed. It believes that the overriding goal is anonymity because dealers are vulnerable to market pressure. Lattice believes that transparency exposes the dealer's position and inhibits trading. It believes the answer is to pursue competition to ensure liquid markets. Thus the price impact of large orders will be reduced as well as the need for institutional managers to buy liquidity.

CalPERS is of the view that after-hours trading reported on Form T has minimal effect on price discovery because it is conducted by large institutional investors for reasons other than price (e.g., portfolio rebalancing). Nonetheless, it advocates more transparency for these trades through the Consolidated Tape Association.

All-Tech, on the other hand, believes that after-hours reporting practices are inconsistent with transparency, and should be examined for anti-competitive effects. Instinet believes that the reporting procedures adopted in connection with the NYSE's Crossing Session II are inconsistent with equal regulation, and Sections 11A(a)(1)(C)(iii) and 11A(c)(1)(B) under the Exchange Act. Investors Research believes that after-hours trades should be held to the same stringent real-time reporting requirements as during U.S. market hours. It states the Commission has an opportunity to obtain truly global transparency with appropriate regulation.

C. Quotations and Price Information on Off-Exchange Systems

Jefferies believes that all order execution systems should be required to report trades immediately to the consolidated tape. In its opinion, quotes and other market indications should be universally reported to the extent that the system is designed to reveal them. These systems should not be compelled to reveal all trading information because many traders do not wish to expose orders fully. A system designed to satisfy that particular need should be able to do so without government interference.

The NYSE argues that the NMS facilities should be accessible only to those entities that are subject to similar regulation. Thus off-exchange systems should not have access to the NMS facilities until they are subjected to the same type of regulation as exchanges. On the other hand, Lee believes that PTSs should have access to the Consolidated Quotation System and the Consolidated Tape Association.

D. Display of Market Interest on Exchanges

The NYSE believes that there has been some confusion regarding the manner in which exchange members attempt to obtain best execution of limit orders. The NYSE explains that exchange members may decide not to disclose some or all of the order. In doing so, the member is using professional judgment on how best to serve the customer. The NYSE notes that the member remains obligated to the customer if the market is missed. The NYSE claims that it is precisely the availability of these methods of trading that makes the agency-auction market superior to any other trading system yet devised.

Madoff is of the opinion that transparency should be mandatory for all market participants, and that it must also exist for quotations. It does not believe that all limit orders need to be exposed in some form of consolidated limit order book to achieve effective transparency. Madoff notes that this exposure may not be in best interest of the client and could result in an inferior execution. Madoff believes that the manner in which a fiduciary represents the interest of a client should not be mandated by regulators, but determined by competition. It asserts that all market centers have an obligation to represent in their quote actual price levels where public interest may exist. The exact size of the interest need not be shown, but a representative size should be revealed. This would, in Madoff's opinion, obviate the need for price improvement systems that are forced to guess or draw out what price interest may exist in other markets. It would also expose much of the questionable price improvement claims by some markets as nothing more than the result of concealing actual prices at which the public is interested.

ICI notes that investors need full real-time information about prices available in all markets. It recommends consideration of access to limit order books of the exchanges and NASDAQ market makers.

Investors Research notes that trading on Instinet brings priced orders together in a type of book where an investor may simultaneously access dozens of domestic and international dealers and investors who desire to trade a specific security. The user of an electronic book may probe the market for the appropriate price and quantity of even the most poorly sponsored issues. It also notes that the AZX, with its price discovery feature, limits the risk and price dislocation suffered by many investors in the OTC marketplace. In its view, Investors Research's experience illustrates the success of competing trading systems as a way to probe for trading liquidity.

Investors Research also notes that the failure of some trades to appear on the consolidated tape precludes many investors from obtaining this important economic information. In its opinion, trades are diverted from price discovery markets only by esoteric price and quantity reporting requirements that treat certain transactions as non-essential to investors. Investors Research warns that granting low volume exemptions to new systems dangerously delays a regulatory response to the appropriate integration of price and volume data into the current system.

E. Overseas Trading

Seven commentators, including five foreign commentators, addressed transparency and other issues raised by overseas trading of U.S. equities.

The SIB disagrees with the notion that overseas trading is driven by trade reporting and publication considerations. It cites other reasons for such trading such as gaining access to international financiers and expanding an international shareholder base. The

SIB also notes that international institutional investors have diversified holdings that call for international trading to adjust holdings as and when required. It points out that all such trading is monitored by the LSE and SFA, and is subject to dealing and reporting rules of these two entities. The SIB argues that the relaxation of foreign currency controls has also contributed to increased trading in its market. In its view, London's market, which is quote-driven, appeals to institutional investors who value the efficiency that comes with immediacy for large size trades with market makers ready to take on execution risk for their clients.

The SIB remarked that international securities houses service their clients by providing trading at virtually any time of the day. Round-the-clock trading in equity derivatives requires the ability to deal in the underlying stocks at all times. Institutions expect to deal as easily and as frequently in cash instruments as they do in equity derivatives. Demand for international stocks and derivatives has caused many markets to extend trading hours and expand electronic means to access other business centers.

The SIB has no evidence suggesting that trading in the U.K. of U.S. stocks is undertaken for anything but legitimate commercial reasons. It would challenge the suggestion that U.K. regulation is inferior to that of the U.S. It emphasizes that both on and off-exchange trades in U.S. securities must be reported to the LSE and SFA. Finally, the SIB believes that NYSE Rule 390 forces business away from New York to London.

The LSE believes that regulators should be concerned that trades are reported to an appropriate authority and that these authorities are prepared to co-operate to provide a picture of trading activities, risk exposure, and capital requirements. In its opinion, overseas trading does not need to be reported to a home regulator unless it is not otherwise reported because there are no information sharing arrangements, or because the existing ones are ineffective. The SFA believes the Commission should not be concerned with trades "disappearing in a black hole." It refutes the complaint that the U.K. regulatory scheme is less restrictive than the U.S. system. In its opinion, the U.K. system is at least comparable, and U.S. firms do not benefit from regulatory arbitrage. The SFA requires U.K. brokers to report trades booked overseas, and requires all London based trades to be reported. It recommends a robust attitude toward the booking of trades and application of reporting requirements.

The SFA is concerned with proposals to restrict the ability of U.S. brokers to trade in the U.K. market. It believes that orders should be routed to the most competitive and efficient exchange with no international barriers interfering with the free flow of trade. The SFA indicates that regulators should not become involved in market competition and that commercial pressures will eliminate most anomalies. In its view, business will always migrate to the most efficient markets.

BMBA echoes the comments made by other U.K. commentators. It believes that the SIB identified legitimate commercial reasons for why international investors wish to deal off-shore during domestic hours. Its experience bears these reasons out. BMBA is very surprised at the emphasis on regulatory arbitrage with respect to these transactions. It emphasizes that these transactions do not fall into a regulatory black hole; they may be reported to the SFA or LSE.

BMBA does not agree that foreign trading in U.S. equities represents a competitive burden on U.S. markets. It also points out that, to the extent these transactions are crossed in the U.K. to avoid "taking out the limit orders," the U.K. is being used the same as the U.S. regional exchanges. BMBA concedes that U.K. disclosure requirements are not similar. Nonetheless, it argues that this reflects the concern of risk bearing intermediaries not to expose their positions. This situation is accepted by institutional investors with the expectation that the quality of execution will not suffer and may well be improved. BMBA points out that the same situation arises with respect to French and Italian trading. It also notes that the U.S. equity trading is principally in large transactions, with over two-thirds being in transactions of one million shares or more.

TSE believes that the reporting of foreign trades in the United States pursuant to NYSE Rule 410(B) is an example of an attempt to solve the specific regulatory concern about U.S. market participants trading in other markets to avoid disclosure through the application of a blanket rule affecting trading in all foreign markets. The TSE is concerned that the rule will have an anti-competitive effect, particularly on trading on the TSE in Canadian-based issues interlisted with the NYSE. It suggests that a more practical approach would be to recognize that the problem is limited to certain markets that do not have comparable trade reporting rules and disclosure practices, or do not have surveillance information sharing agreements with the NYSE, and draft the rule to cover reporting of trades made in those markets.

Fidelity does not believe that the volume in after-hours trading, overseas trading, and the fourth market is sufficient to affect price discovery or liquidity. It suggests that after-hours and overseas markets are generally accessed to execute crosses or other pre-arranged trades which neither depend nor contribute to the price discovery process.

Lattice views overseas trading as a symptom of high transaction costs and poor liquidity. It believes the answer is to pursue competition to ensure liquid markets.

VI. Regulatory Oversight

The Study Release noted that there are conflicting opinions among market participants regarding the effects of regulations currently applicable to some market participants but not others. In addition, there are questions about the manner in which SROs conduct their business activities vis-a-vis their self-regulatory role. The Study Release asked commentators to discuss how Commission and SRO rules could be revised to avoid unjustified disparities between the regulatory burdens and costs of exchanges, PTSs, and off-exchange markets. The issue of whether there should be a different allocation of regulatory responsibilities among the SROs was also proposed for comment. Finally, the Study Release asked for views on the extent, if any, to which regulatory responsibilities unfairly prevent markets with self-regulatory duties from competing with other markets.

A. SEC's Regulatory Function

Some commentators offered global views on how the Commission should approach its regulatory function. Specialist Assoc. does not believe that it is necessary to produce a new framework for the Commission to address the issues identified in the Study Release. It sees no need to invent a new role for the Commission in overseeing the continuing development of the markets. It is of the view that the Commission may have misunderstood the role Congress established for the Commission. Specialist Assoc. believes that this misunderstanding may have contributed to the growth or complication of market practices that have given rise to issues to be addressed in the study. Specialist Assoc. believes that what is needed is a rediscovery of the meaning and purposes of certain basic principles inherent in the framework of the Exchange Act that have fallen into disuse: removing and avoiding burdens on competition not necessary or appropriate in furtherance of the purposes of the Exchange Act and assuring economically efficient execution of securities transactions. Specialist Assoc. views the difficulty in the Commission's approach as using only some of the NMS principles rather than all of them. In its opinion, it is necessary to reverse the unhealthy trends in the trading of listed stocks identified in the Study Release. Specialist Assoc. lists the following principles as essential: fair competition; price priority in each market; customer order priority over principal transactions; execution of customer orders without dealer intervention; best execution unimpeded by market or trading system rules or practices; immediate transaction reporting; firm dealer quotes disseminated to all markets; and similar procedural or substantive standards across all markets.

One commentator, APTC, would reduce the regulatory issues to one question: how can the Commission influence SRO rules and streamline its own regulations to make the markets more efficient, more transparent, and fairer to investors and issuing companies? APTC warns that the complexities of the controversies raised by traders, exchanges, market makers, specialists, and others should not distract the Commission from the heart of the study which is how to make the equity markets best perform their capital raising and investment functions in the 21st century. ICI believes that regulations should be tailored to the nature of the market being regulated. According to ICI, a more flexible approach that takes into account the different natures of the various markets is needed. In its opinion, the Commission should not impose identical regulatory costs and burdens on different structures simply for the purpose of achieving a level playing field. Such an approach, warns ICI, simply serves to delay the development of more efficient markets. ICI believes that the current structure arguably results in excessive regulation being applied to certain markets, while under-regulating others. This situation, notes ICI, leads to distorted incentives to trade in the less regulated markets and allows regulations to be easily evaded. ICI believes that it is short-sighted to base regulation on the size of the market being regulated, as this may encourage the less-regulated market to grow at the expense of the larger, more established market. ICI further states that the Commission should avoid conditioning regulations that are not directly concerned with market issues on the markets where securities are traded.

Lee also cautions that the Commission should continue to be reluctant to prescribe appropriate forms of market structure in the future, as it has been in the past. According to Lee, investor protection should remain a key goal, but different systems should be required to provide equal regulatory comfort, rather than paying equal amounts for regulation. In his view, some forms of trading should be allowed to function with reduced regulation. Lee further suggests that references to auction principles should be deleted from the federal securities laws; regulatory approval for new types of systems should be made easier and less uncertain; and adequate account of the international environment be taken in drawing up U.S. regulation for the secondary markets. In his opinion, a protectionist approach should not be employed.

AZX also states that the notion of a level playing field should be interpreted to mean equal safety, not equal costs. In its view, the latter would be unfair for investors whose welfare provides the justification for all regulation. According to AZX, fair competition should mean that all exchanges are held to a common minimum standard of investor safety. AZX believes that regulation must be designed to assure that each exchange meets this minimum standard. AZX points out that traditional exchanges that operate through intermediaries are naturally dangerous and require a high degree of oversight; PTSs that do not use intermediaries, and are in other ways designed to operate safely, do not require the same kind of regulation. AZX argues that it would be inappropriate to regulate PTSs under the same regime designed for membership markets. The virtual requirement of Section 6 to be owned and operated through intermediaries, AZX indicates, would in effect eliminate PTSs. Similarly, it would be imprudent to govern membership markets only by regulations such as proposed Rule 15c2-10.

This theme is echoed in the comments of Investors Research. It believes that the structure of traditional markets suggests that regulatory costs are far higher than the potential abuses on largely non-intermediated PTSs. Investors Research notes that non-traditional systems do not derive revenue from proprietary trading, market making, or misuse of customer information. According to Investors Research, their profitability derives from the volume traded. Thus, states Investors Research, they assure a minimum of customer protection far greater than now possible. Investors Research notes that computers are the marketplace in many new systems and the completeness of information available far exceeds what many brokers argue would cost them too much to provide.

State Street believes that the Commission should restructure legislation in such a manner as to ensure that the markets continue to evolve freely. In its opinion, legislation should allow for the development of exchanges that are not required to have member intermediaries. Instead, notes State Street, exchanges should be able to operate, if they wish, with participants enjoying equal access to the markets. State Street believes that new technology will allow markets to offer broad access to competing market makers through electronic links. In addition, fresh capital from new, and often non-traditional market-makers, will serve to reduce volatility if these new market makers can find an electronic path to an equal access marketplace. According to State Street, technology will continue to be the driving force behind the equity market structure. State Street indicates that new exchanges with structures that reduce the need for heavy compliance budgets should not be forced to subsidize other market structures which require those expenditures.

B. Current Regulatory Structure

Eleven commentators addressed various aspects of the current regulatory structure. One commentator, Jefferies, believes that the current system is appropriate and works well. In its opinion, cost advantages realized in areas such as surveillance, capacity, security, credit checks, and compliance control by electronic systems contribute to their value in reducing transaction costs and improving market efficiency. Jefferies believes that the current apportionment of regulatory and SRO costs treats all participants on a fair and equitable basis. NYSE notes that markets incur substantial costs of regulating trading systems and regulating members and member organizations, and that each market bears its own regulatory costs. According to NYSE, the Commission should continue with this policy because it encourages SROs to comply with their own regulatory responsibilities in a cost efficient manner. CSE believes that it is shouldering its fair share of the equity regulatory burden and that the current scheme, in addition to being efficient, is equitable. In its opinion, reallocation of regulatory expenses would be unfair and would serve no useful public purpose.

The Regional Exchanges note that SRO revenues are derived from listing fees, last-sale and quote fees, transaction and usage fees, and dues. They also note that expenses include facilities maintenance and cost of self-regulation. The Regional Exchanges do not believe that there is any disparity in the allocation of self-regulatory costs; each SRO pays for the costs of regulating its market. They note, however, that the same is not true with respect to revenues such as listing fees. The Regional Exchanges believe that listing fees are no different than quote fees because the value of listing derives in large part from the liquidity and exposure provided by the NMS. This value, they argue, does not belong exclusively to one SRO. The Regional Exchanges recommend a plan governing the listing of NMS securities under which an issuer could apply uniformly to all SROs, obviating the need for unlisted trading privileges. Under the plan, the costs would be paid to the designated SRO. Any excess fees would be allocated among the SROs that actively make markets in the security.

Lattice points out that fair and efficient markets can be achieved through goodwill, disclosure of business practices, market transparency, and competition. In its view, the Commission can assure transparency and should be vigilant and persistent in tearing down barriers to competition. Lattice is of the opinion that the Commission needs easy and timely access to a full, machine readable audit trail of all orders and executions, and that all exchanges and PTSs should provide access to their data. Other than this, Lattice states, each SRO should be able to impose its own rules, with costs borne by members. Lattice concludes that if such rules are useful, customers will be attracted; if the rules are not cost effective, participants will be driven away.

AZX indicates it is unfair to require PTSs to pay for the regulation of membership exchanges. The fees paid under Section 31 of the Exchange Act have that effect. According to AZX, relative to the dangers presented by their systems, level fees overcharge PTSs and undercharge membership exchanges. This, concludes AZX, results in an unfair marketing advantage to exchanges. In AZX's view, the fair way to allocate regulatory costs is to charge fees proportional to the actual costs incurred. Because the overwhelming majority of costs comes from watching over intermediaries, argues AZX, regulatory fees should be proportional to the amount of intermediation in a transaction.

SIA suggests that the Commission and SROs review customer protection regulations to make them more responsive to market changes that have occurred in the past ten years. It cites best execution as an example of an area where institutional investors do not need the same types of regulatory protection as do individual retail investors.

Some commentators believe there is room for improvement in the current regulatory structure. Merrill Lynch is concerned that there are redundancies and resulting costs in the regulatory infrastructure that may inhibit the opportunity for the development of a globally competitive NMS. Merrill Lynch cites as examples the market surveillance and enforcement staffs of each SRO. In Merrill Lynch's opinion, the Commission should review carefully whether there are regulatory functions or expenses that can be consolidated or reduced without any sacrifice of investor protection. This is important, Merrill Lynch states, because these costs are borne by all market participants, and will continue to impede efficient utilization of resources necessary for global competition. It also favors repeal of Section 11(a) of the Exchange Act. Merrill Lynch believes that the industry has come to the realization that it is unnecessary. In its view, the restrictions under that section have resulted in additional regulatory costs to member firms and their customers without improving the price discovery process.

SIA indicates that duplicative inspections should be avoided and a more cost-effective program implemented. SIA has two suggestions. The first, for the short term, is to designate the designated examining authority to have sole responsibility for a broker-dealer's inspection and to share its findings with all other regulators and SROs. The second, for the long term, is to create a special SRO for the sole purpose of inspecting and investigating broker-dealers while SROs retain the responsibility to regulate their own marketplace. STA observes that firms that are members of more than one SRO face the possibility of discriminatory examinations, particularly with respect to matters within the ambit of the competing SRO. According to STA, a similar situation exists with enforcement areas. STA recommends that all major and regional exchanges, the NASD, and all PTSs be responsible only for their own jurisdiction, including the activities of their members and their associates and allied members, their listing and delisting standards, and surveillance. The enforcement staffs, or at least, their functions, suggests STA, could be combined to eliminate unnecessary duplication and expense.

STANY believes that SROs' regulatory authority should be limited to their respective marketplaces. In its opinion, multiple regulation results in excessive, repetitive, and unneeded application leading to waste and inefficiency. STANY believes that greater uniformity is called for because it would lessen the compliance burdens of securities firms and lower costs. It notes that multiple enforcement efforts result in uneven penalties and standards among SROs. STANY suggests consolidating enforcement and personnel resources to lower expenses. It argues that this consolidation would still provide appropriate safeguards to protect investors. AZX suggests that self-regulation responsibilities should be taken over by a single entity such as the Intermarket Surveillance Group, overseen by the Commission, and funded by a transaction fee proportional to the amount of intermediation in a transaction.

STANY also suggests that state regulation is duplicative, burdensome, highly inconsistent, and costly. It favors preemption of the various state blue-sky laws by federal securities laws, especially where a broker-dealer has registered at the federal level, or where an issuer has registered securities under the Securities Act of 1933. In its opinion, states should focus on enforcement of anti-fraud statutes, not in creating additional and costly disclosure burdens. STA also believes that it is appropriate to address duplicative state regulation. STANY believes that if regulation is premised upon increasing investor confidence, it should be structured to enhance the goal of facilitating capital formation.

C. SROs and their Dual Roles

Some commentators see conflicts arising out of the dual role of SROs as business concerns in competition with each other and as self-regulating entities. STA believes that SROs face serious conflicts of interest because SROs are competing vendors of their own marketplaces, while also the regulators of developers and users of competing marketplaces. In addition, STA points to unnecessary expenses and wasted effort due to overregulation and duplicative trading and operating systems. In STA's view, income earned and expenses incurred through the functions of an SRO aggravate the relative differential among SROs. STA notes that expenses in fulfilling regulatory responsibilities may be less than the income received in conducting the regulation. Another commentator, Instinet, also notes that SROs subsidize commercial activities through membership fees, and do not have to pay taxes. STANY also states that resources consumed in the competitive efforts of SROs are derived from member dues from firms holding multiple memberships. STANY argues that members should not underwrite the competitive market activities of SROs.

Instinet suggests that if SROs are dissatisfied with the current allocation of regulatory costs among themselves and market professionals, SROs might create an SRO consortium to perform surveillance, enforcement, and related functions. It is of the opinion that separating regulatory functions from market functions, as in the U.K., would ensure that SROs' market functions are not offered at anti-competitive costs and would ensure fair competition between markets and broker-dealers. Lee also believes that the management function should be separated from the regulatory and listing functions.

STA asserts that eliminating wasteful competitiveness would constitute a first step toward a fair and balanced NMS. STA believes that the establishment of a genuine inter-market linkage should be the next step. According to STA, this can be accomplished by expanding the consolidated tape so that every trade in any marketplace is reflected on the tape. Each participant would be expected to assume a fair share of the regulatory burden. STANY also believes that competition results in duplication and waste. In STANY's opinion, SROs should concentrate exclusively on regulating their own marketplaces and refrain from competitive and overlapping activities.

D. Exchange vs. OTC Trading

NYSE notes that dealer activity is not regulated to the same degree as the exchange trading activity. In its opinion, regulation should be equalized to make market making functions similar on exchanges and on the third market. In addition, the NYSE believes that the process required by Rule 19b-4 under the Exchange Act imposes significant burdens on exchanges and limits their ability to respond as quickly to customer needs as off-exchange systems can. The NYSE believes that ways to equalize the burdens among all markets trading listed securities should be considered. NYSE notes, however, that it does not suggest a more stringent review on their competitors. Rather, it views the pre-effective review process as mostly unnecessary. NYSE believes that the Commission should allow administrative modifications to existing order entry and trading systems to become effective upon filing, subject to post-effective review. In its opinion, only significant new rules that raise true investor protection concerns should be subject to the pre-effective review process. In this regard, STA believes that rule changes should be prepared and submitted for approval by SROs when the changes are needed to improve the marketplace rather than for profit motives or marketing objectives. SIA also believes that modifications to exchanges' trading systems should become immediately effective subject to post-effective review. In its opinion, such modifications should only meet competition and not result in anti-competitive rules.

The Regional Exchanges believe that equal regulation has not been achieved for the exchanges and the OTC market. They point out that the OTC market makers and unregulated exchanges enjoy a significant regulatory advantage over traditional exchange markets. An example cited is that unlisted trading privileges are instantly available to OTC market makers, but not for those on the regional exchanges. As a result, the Regional Exchanges claim that they cannot compete during the critical first 20 to 45 days of trading. They recommend elimination of the prior notice requirement and comment. Another example cited involves rule filings. In their view, the OTC market enjoys an advantage because they can make changes without Commission approval. The Regional Exchanges recommend the adoption of a policy permitting rule filings that merely automate existing policies or enlarge trade size to be implemented upon filing. In their opinion, the NASD should create a committee to act in a capacity similar to that of floor governors to settle disputes between firms. With respect to trade-through rules, the Regional Exchanges would link CAES to ITS in all listed stocks; require third market makers and unregulated exchanges and institutional brokers to participate in CAES; and impose a trade-through rule on all broker-dealers participating in CAES. According to the Regional Exchanges, competition on unlisted trading privileges for OTC stocks has been impeded by the degree of internalization prevalent in these issues, the lack of transparency, the lack of trade-through rules applicable to OTC securities, and payment for order flow.

E. PTSs and Third Market Makers

NYSE notes that third market makers and PTSs are not subject to access requirements. As a result, they can be selective in servicing specific subcategories of listed stocks, customers, and limited types of orders, during a subset of primary market hours. According to NYSE, segmenting the market in these ways increases dealer profitability and market fragmentation, and hampers pricing efficiency by reducing overall market liquidity. NYSE suggests that access requirements that parallel the exchange's requirements are appropriate for all markets offering services for listed securities.

The Regional Exchanges recommend that the NASD be required to implement a surveillance program for third market makers, including compliance with advertising claims, quasi-trading rules, and other procedures governing the quality of executions.

NASD believes that PTSs and third market makers do not belong in the same category where regulatory matters are concerned. NASD points out that third market makers are not deemed to be separate market centers or separate operators of PTSs solely because they may operate internal execution systems. Because the NASD examines their activities and supports the costs of such regulation, and there is no evidence that such regulation is lacking, NASD believes that the subsidization issue should not involve third market makers. NASD notes that its oversight activities over the third market have two major components: on-site examinations and computer driven market surveillance mechanisms. For on-site reviews, NASD uses a standardized examination module and procedures. In addition, the NASD Market Surveillance Department allocates resources to monitoring and investigating third market activity, including queries from other market centers regarding ITS operational rules.

NASD also suggests that, in reviewing the allocation of regulatory costs and expenses, the Commission take into account that a major beneficiary of the expenses is the issuer listed. The fees paid by issuers, asserts NASD, are used in part to offset regulatory programs designed to monitor trading. According to NASD, these fees are a significant source of surveillance funding. NASD notes that neither the NASD nor the regional exchanges receives issuer revenue for surveillance in trading of listed stocks even though the issuer and the primary market benefit from surveillance by other SROs. NASD further notes that the Commission should be aware of the inequitable allocation of service charges relating to ITS. Third market makers, NASD asserts, pay to have access to consolidated quotation and trade information on exchange-listed securities while the same information is provided free of charge to exchange members on the trading floor. As a result, NASD states, transactional costs remain artificially high for third market makers. The fees, explains NASD, apply to both information display use and automated execution. NASD believes that applying the fee structure to information received and processed by a third market maker in its dealer capacity poses a significant financial burden to firms that offer automated execution and price improvement systems. NASD stresses that specialists do not pay the six thousand dollars per month fee imposed upon third market makers, and recommends that it be rescinded. In this regard, NASD rejects the suggestion that it operate the automated execution systems as unacceptable because it would force all dealers into a single system in contravention of Congressional intent to allow individual segments of the industry to compete.

F. Foreign Views

The view from abroad was offered by three commentators. LSE notes that the trend of increasing cross-border trading will continue. The implications, according to LSE, include that national exchanges cannot claim a natural monopoly and market users can use other capital markets if their national exchanges fail to provide a sufficiently liquid market, if costs are excessive, or if services are insufficient. LSE believes that the competitive pressures are immense. In its opinion, regulatory regimes must recognize that the type of investor protection needed for institutions is different than that required for individuals. The same principle, states LSE, applies for service requirements, notably in connection with transparency, liquidity, and immediacy. LSE believes that global regulatory advances can be made if regulators show a predisposition to recognize each others' regulatory standards to avoid duplication of effort.

A similar view is expressed by BMBA, which believes that the Commission fails to fully recognize U.K. regulation. This, BMBA contends, results in participants of both markets incurring expenses when complying with duplicative requirements. It cites as examples the large trader, risk assessment, and some corporation finance Commission initiatives. BMBA strongly endorses LSE's comment that regulators should show a growing predisposition to recognize each other's regulatory standards, thereby avoiding duplication of effort.

TSE urges the Commission to take into account the effect that future developments in the U.S. markets will have on international markets. TSE believes that, provided that comparable standards of investor protection are present, the Commission should not take actions that may, directly or indirectly, impair the efficiency of foreign markets, or of American investors' access to such markets. According to TSE, the Commission should be cognizant that foreign markets are not merely extensions of the American domestic market.

In addition, argues TSE, the foreign markets should have equal opportunity, in the application of market regulation, to compete with U.S. markets to attract American order flow. TSE notes that order entry terminals in other than a market's home jurisdiction is an efficient means of attracting order flow. If they were to be regulated as facilities of a securities exchange, or to be subject to onerous conditions under a no-action position, the regulatory and administrative burden could form a barrier to entry into the U.S. market. TSE is a proponent of the development of electronic networks for international securities trading to be governed on the basis of "home-host" regulation. The model, TSE explains, facilitates the broadest access to trading while not exposing issuers or market participants to conflicting or overlapping regulation. According to TSE, in determining whether to permit access to a particular foreign market by American market participants and intermediaries, the Commission should consider whether the applicable foreign securities market has adequate regulatory standards and capabilities. If so, no additional regulation would be necessary. TSE also notes that it would not be practical to apply U.S. rules to trading through terminals that provide access to foreign markets.

VII. Academic Commentary

A. Studies

1. McInish and Wood

McInish and Wood submitted seven papers, four of which were funded by the NASD. The studies focused on the competition between the NYSE, the regional exchanges, and the NASD. The authors found no evidence of deterioration in market performance as a result of multiple-market competition. They state that the view that market performance is enhanced by such competition was confirmed by the results of their studies. The authors assert that the discipline of competition is the most likely impetus for efficiency improvements in the markets.

The McInish and Wood studies include:

a. **Hidden Limit Orders on the NYSE:** The authors state that this study shows that NYSE specialists fail to reveal about 50% of all limit orders that improve existing quotes. According to the authors, hiding limit orders impedes strategic decisions on order placement; results in publicly submitted market orders receiving inferior prices; hampers the monitoring of order executions; reduces the probability of limit orders being executed; results in a delay in reporting limit order executions; interferes with the ability of the regional exchanges to execute public orders; and artificially improves NYSE performance relative to the regional exchanges using a common benchmark. The authors also claim that a greater incidence of hidden limit orders is shown to be significantly associated with larger spreads, and that the results demonstrate the importance of competition for order flow to specialists.

b. **The Effect of NYSE Rule 390 on Spreads, Premiums and Volatility:** This study involved the formation of two matched portfolios of NYSE common stocks, some subject to the off-board restrictions under NYSE Rule 390 and some not subject to such restrictions pursuant to Rule 19c-3 under the Exchange Act. Both groups have essentially identical attributes known to affect trading performance. According to the authors, the findings show that both spreads and premiums (*i.e.*, absolute value of the difference between spread midpoint and trade price) are lower as a result of Rule 19c-3. The authors reported that volatility also is lower, but not significantly lower. This study was funded by the NASD.

c. **Competition, Dispersion of Trading and Market Performance:** This study used five portfolios with almost identical composition with respect to attributes known to affect trading performance while their differences with respect to dispersion of order share is as great as possible. Bid/ask spreads, premiums (*i.e.*, absolute value of the difference between spread midpoint and trade price), and volatilities (*i.e.*, variance of return) were the measures of market performance examined. The first two were found to decrease as dispersion of trading increases; the third, was found not to change. The authors believe the findings support the hypothesis that competition between market centers that results in the dispersion of order flow, is beneficial for market participants. This study was funded by the NASD.

d. **Misclassification of Buy/Sell Identification: Implications for Assessing Market Center Performance**: This study examined the Lee and Ready (1991) algorithm that classifies trades as either buyer-initiated or seller-initiated. The algorithm is being widely used in research in financial economics. The authors claim they found a bias that brings the results of the Lee paper into question. This study was funded by the NASD.

e. **Price Discovery, Volume and Regional/Third Market Trading**: This study examined the best bid/offer ("BBO") time weighted performance by the NYSE, regional exchanges, and NASDAQ dealers. The authors concluded that, while the NYSE provides the BBO most often, there is evidence that regional exchanges are contributing to the price discovery process.

f. **Cointegration, Error Correction, and Price Discovery on the New York, Philadelphia and Midwest Stock Exchanges**: This study examined the effects of competition between the NYSE and the regional stock exchanges on the price discovery process. Specifically, the study looked at whether the regional exchanges are free riding on the NYSE's price discovery or whether they contribute to the process. Using IBM trading data, the authors conclude that the results imply that price discovery takes place on all three exchanges.

g. **Volatility of NASDAQ/NMS and Listed Stocks**: This study examined the volatility on dealer and auction markets by forming portfolios with identical trading attributes for each market. According to the authors, the study shows that, when based on transaction prices, the volatility of the NASDAQ/NMS portfolio is substantially higher than the listed portfolio. When quotations are used, the volatility of the NASDAQ/NMS stocks is substantially lower than listed stocks. This study was funded by the NASD.

2. Bronfman and Schwartz submitted a study on price discovery:

Price Discovery Noise: This study examined the link between investor trading decision and price discovery noise (*i.e.*, a discrepancy between a clearing price and an underlying equilibrium value) that may be a source of inflated price volatility in a broad spectrum of securities markets. The authors state that price discovery noise reflects the fact that, when risk averse public investors face transaction costs and uncertainty concerning the current price at which shares might trade, prices do not attain equilibrium values precisely. They assert that explicit recognition of price discovery noise is important for the proper interpretation of empirical findings, and for policy analyses of the structure of a securities market.

3. Bronfman submitted a study on regulation:

Regulation in the Public Interest?: This study considered the impact of regulation by analyzing regulatory actions intended to improve the fairness and efficiency of the financial markets. According to the author, the results demonstrate that fairness can sometimes decrease market efficiency and, paradoxically, make outcomes less fair. She claims that unintended effects limit the ability of regulators to fine tune the markets. She argues for a less interventionist regulatory approach that recognizes the self-interest of the markets in finding the appropriate trade-off.

B. Articles

1. Therese H. Maynard, **What is an "Exchange?" - Proprietary Electronic Securities Trading Systems and The Statutory Definition of an Exchange**, 49 WASH. & LEE L. REV. 833 (1992).

This article addresses the growth of PTSs and the question of whether they fall within the definition of "exchange" in Section 3(a)(1) of the Exchange Act. In the author's opinion, the Commission's interpretation improperly exceeds the scope of the statutory definition, and that PTSs are exchanges and should be registered as such. The author recommends that Congress mandate an in-depth study of the structure of the securities markets and determine what changes, if any, are necessary for the SEC or some other administrative agency to regulate the secondary securities trading markets effectively.

2. Hans R. Stoll, ***Principles of Trading Market Structure***, 6 J.FIN. SERVICES RES. 75-107 (1992).

The author offered a framework for analyzing issues facing world trading markets, and sought to provide guidance on market design and on public policy toward trading markets. Specifically, the article examined the industrial organization of securities markets and considered the competition/fragmentation issue. The author concludes that competition can fragment markets, but fragmentation will not take place unless investors are assured of a price in a satellite market that is no worse that the price in the market center. According to the author, with modern technology, this assurance is easier to provide so that fragmentation is more likely today, but is less harmful. He suggests that the problem for regulators is to accommodate the forces of competition while limiting the adverse effects of fragmentation and imposing fair regulatory costs on all markets.

3. HANS R. STOLL, EQUITY TRADING COSTS IN-THE-LARGE AND IN-THE-SMALL (Working Paper 91-01, 1992).

The author estimated the cost of equity trading on the basis of broker-dealer revenues as reported in FOCUS reports and compared these estimates to other estimates of trading costs. According to the author, trading costs in-the-large presented in the study provide new evidence that can be used to evaluate and can be evaluated against other studies. When compared to estimates in-the-small by other researchers, these estimates are broadly consistent, with important observable differences.

4. Robert Schwartz, ***Integrating Call and Continuous Markets***, Securities Traders' Monthly (Sept. 1991).

The author calls for the integration of call and continuous trading so that traders are free to select the environment that best fits their individual needs. He suggests an electronic call three or four times per day: to open the market, at noon, to close the market, and once overnight. The author believes that instituting four calls will give institutional and retail customers alternatives to handle orders properly. Those who do not want immediacy can avoid costs by trading in the market calls. Those who do can obtain it by paying the necessary price. He believes that more accurate and stable prices will be established for the market in general.

5. Lawrence Harris, ***Consolidation, Fragmentation, Segmentation and Regulation*** (Mar. 1992).

The author surveyed the economics of the competition for exchange services. In particular, he examined why markets consolidate or fragment, how fragmented markets are reconsolidated by individual traders, and when governmental regulation is appropriate. The author concludes that markets consolidate because trading attracts traders; fragment because traders are diverse; and consolidate when information systems allow traders to see and act upon trading opportunities in all market segments. He indicates that a segmented market is one in which information systems allow trader-coordinated price formation across various market structures, and that trading and regulatory activities in some segments may have positive and negative external effects on market quality in other segments. He suggests that public policy goals may require coordinated regulatory solutions to these externalities problems.

C. Other

1. D. Bruce Johnsen, **Report to the U.S. Securities and Exchange Commission on Soft Dollars** (Oct. 19, 1992).

The author submitted an extensive comment letter focused on the issue of soft dollars. After describing two popular explanations for soft dollars (*i.e.*, "cream skimming" and "unjust enrichment" hypotheses), he proposed a novel explanation, the "incentive alignment" hypothesis. According to the author, the proposed hypothesis accounts explicitly for agency costs across multiple dimensions and suggests that soft dollars serve to guarantee best execution of institutional trades and promote efficient portfolio management while allowing securities brokerage and investment research to be produced by entirely separate, specialized firms. The author believes that the novel insights provided by the incentive alignment hypothesis warrant a complete and careful re-analysis of the fiduciary duties of institutional brokers, fund managers, and pension sponsors. He also believes that the hypothesis supports allowing dealer trades to be covered by the safe harbor in Section 28(e) of the Exchange Act.

VIII. Other Comments

Several commentators addressed issues not raised directly in the Study Release.

Derivatives Jurisdiction

Several commentators believe that the Commission should be granted jurisdiction over all derivative markets based on equities. SIA believes that the Commission should have authority over any exchange-traded derivatives based on equities. It points out that S&P futures represent a small percentage of all futures contracts, but the daily value traded is about the same as the daily value of trading on the NYSE. STA and STANY believe that equities and equity derivatives are different aspects of the same market, and that the Commission should have exclusive authority to oversee both. NYSE believes that the regulation of derivatives should be guided by the concept of functional regulation so the Commission may regulate in a consistent manner.

Market Data

ISSM urges the Commission to encourage and facilitate the transmission of market data to the academic community to reap the benefits of academic research to support its regulatory decisions and to benefit market efficiency in general. It notes that the United States has the largest group of financial economists actively involved in research in security markets of any country in the world. ISSM identified the following data as beneficial for research: audit trail and order flow information, such as the TORQ database, for equities, futures and options, and the same plus trade and quote information for corporate and government fixed income markets.

Exchange Conduct

Penn Mont, a member of the Phlx, lists what it describes as continuing failures of the Phlx to address conflicts of interest between principals and agents in the same transactions; front-running of public orders; multiple printing of transactions; complicity and duplicity in market practices against the public's best interest; manipulative practices affecting volume and price; and lack of objective standards regarding specialist performance.

Non-professional Fees

Kleinberg raises objections to the practice by the exchanges of charging professional subscribers up to 30 times the amount charged to non-professional subscribers for last-sale, and quote information. He believes this practice is unfair and discriminatory, and urges the Commission to address it.

Anti-manipulation Rules

Merrill Lynch suggests that the effect of regulations such as Rules 10b-6, 10b-7, and 10b-8 under the Exchange Act is anti-competitive, and should be studied.

SIA suggests that the Commission should review short-sales practices in all markets; adopt trade-through rules for all markets; and should consider establishing a clearing house or coordination of existing ones to deal with counter-party risk. Ricker argues that Rule 10a-1 under the Exchange Act, the short sale rule, is unfair, impairs price discovery and arbitrage. He suggests that short-sellers should be subjected to other regulations such as Schedule 13D-type filings.

Cross-border Equity Trading

NYSE would like to continue discussing with the Commission the issue of cross-border equity trading. It notes the disadvantages of trading these world-class securities in non-U.S. markets: wider spreads, higher transaction and clearing charges, and fixed commission charges.

Appendix VII

Market 2000 Bibliography

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Securities Exchange Act Release No. 17549 (Feb. 17, 1981) 46 FR 13992 (Feb. 25, 1981) (designation of National Market System securities).

Securities Exchange Act Release No. 17516 (Feb. 5, 1981), 46 FR 12379 (Feb. 13, 1981) (request for comment on a proposed order requiring an automated interface between the ITS and NASD's NASDAQ system).

Securities Exchange Act Release No. 17258 (Oct. 30, 1980), 45 FR 73906 (Nov. 7, 1980) (amendments to the requirements applicable to the filing by SROs of proposed rule changes and certain other materials).

Securities Exchange Act Release No. 17194 (Oct. 6, 1980), 45 FR 67494 (Oct. 10, 1980) (notice of proposed rule changes filed by the BSE, MSE and NYSE concerning facilitating start-up of the limit order information system).

Securities Exchange Act Release No. 16888 (June 11, 1980), 45 FR 41125 (June 18, 1980) (Rule 19c-3 adoption release; off-board trading restrictions).

Securities Exchange Act Release No. 16781 (May 5, 1980) (order instituting proceedings to determine whether to disapprove proposed rule changes of the NYSE and the Amex).

Securities Exchange Act Release No. 16590 (Feb. 19, 1980), 45 FR 12391 (Rule 11Ac1-2; dissemination and display of transaction reports, last sale data and quotation information).

Securities Exchange Act Release No. 16589 (Feb. 19, 1980), 45 FR 12377 (Feb. 26, 1980) (final rules for the collection and dissemination of transaction reports and last sale data).

Securities Exchange Act Release No. 16518 (Jan. 22, 1980), 45 FR 6521 (In the Matter of Amex; BSE; CSE; MSE; NASD; NYSE; PSE; and Phlx: application pursuant to Section 11A(a)(3)(b)).

Securities Exchange Act Release No. 16410 (Dec. 7, 1979), 44 FR 72607 (procedures and requirements for NMS Plans).

Securities Exchange Act Release No. 15926 (June 15, 1979) 44 FR 36912 (notice of proposed rulemaking; designation of National Market System securities).

Securities Exchange Act Release No. 15770 (Apr. 26, 1979), 44 FR 26692 (proposed Rule 11Ac1-13; price protection for public limit orders).

Securities Exchange Act Release No. 15769 (Apr. 26, 1979), 44 FR 26688 (off-board trading restrictions).

Securities Exchange Act Release No. 15671 (Mar. 22, 1979), 44 FR 20360 (Apr. 4, 1979) (status report on the progress made in 1978 toward establishing of a National Market System).

Securities Exchange Act Release No. 15533 (Jan. 29, 1979), 44 FR 6093 (announcing adoption of a temporary rule, rule amendments and interpretations concerning securities transactions by members of national securities exchanges).

Securities Exchange Act Release No. 15250 (Oct. 20, 1978), 43 FR 50606 (proposed amendments to Commission rule governing the collection and dissemination of transaction reports and last sale data in listed securities).

Securities Exchange Act Release No. 15192 (Sep. 26, 1978), 43 FR 46391 (Order of Summary Abrogation concerning a fee change made by the BSE).

Securities Exchange Act Release No. 15009 (July 28, 1978), 43 FR 34851 (Commission authorization, pursuant to Section 11A(a)(3)(B) of the Act, to the Amex and NYSE to implement a national market facility consisting of a consolidated quotation system).

Securities Exchange Act Release No. 14885 (June 23, 1978), 15 S.E.C. Doc. 138 (1978) (requesting comments on a neutral order routing switch).

Securities Exchange Act Release No. 14719 (May 1, 1978), 43 FR 19738 (approving NYSE rule change broadening the scope of the prohibition under NYSE Rule 111).

Securities Exchange Act Release No. 14713 (Apr. 27, 1978), 43 FR 18562 (interpretation of Section 11(a) and temporary rule).

Securities Exchange Act Release No. 14674 (Apr. 18, 1978) (In the Matter of CSE).

Securities Exchange Act Release No. 14563 (Mar. 14, 1978), 43 FR 11554 (announcing final and temporary rules and interpretations concerning securities transactions by members of national securities exchanges).

Securities Exchange Act Release No. 14461 (Apr. 14, 1978) (temporary order authorizing the implementation of the intermarket communications linkage pursuant to the ITS Plan submitted jointly by the SROs).

Securities Exchange Act Release No. 14416 (Jan. 26, 1978), 43 FR 4358 (development of a National Market System).

Securities Exchange Act Release No. 14415 (Jan. 26, 1978), 43 FR 43431 (requiring national securities exchanges and associations to report real-time trade and quote reports).

Securities Exchange Act Release No. 14325 (Dec. 30, 1977), 43 FR 1327 (Jan. 7, 1978) (amendment of Rule 19c-1: removal of off-board agency restrictions).

Securities Exchange Act Release No. 13662 (June 23, 1977), 42 FR 33510 (Rule 19c-2 Proposal Release; Notice of proceeding and possible rulemaking relating to limiting the off-board trading restrictions of securities exchanges).

Securities Exchange Act Release No. 13626 (June 14, 1977), 42 FR 32418 (notice of proposed rulemaking: dissemination of quotations for reported securities).

Securities Exchange Act Release No. 13388 (Mar. 18, 1977), 42 FR 16745 (notice of proposed rules under Section 11(a) concerning trading by exchange members).

Securities Exchange Act Release No. 12935 (Oct. 28, 1976), 41 FR 49091 (Nov. 8, 1976) (program for allocation of regulatory responsibilities).

Securities Exchange Act Release No. 12670 (July 29, 1976), 41 FR 32856 (Aug. 5, 1976) (notice of proposed Rule 11Ac1-1: dissemination of quotations for eligible securities).

Securities Exchange Act Release No. 12251 (Mar. 24, 1976), 41 FR 13678 (interpretive release concerning the scope of Section 28(e) of the Exchange Act).

Securities Exchange Act Release No. 12205 (Mar. 27, 1976), 41 FR 8075 (notice of NYSE proposal to permit its members to share unsegregated office space with nonsecurities organizations).

Securities Exchange Act Release No. 12159 (Mar. 2, 1976) (request for public comment on issues relate to the development of a composite central limit order repository).

Securities Exchange Act Release No. 12055 (Jan. 27, 1976), 41 FR 8075 (request for public comment on Section 11(a)).

Securities Exchange Act Release No. 11942 (Dec. 19, 1975), 41 FR 4507 (adoption of Rule 19c-1 governing off-board trading by exchange members).

Securities Exchange Act Release No. 11628 (Sept. 2, 1975), 40 FR 41808 (amendment or abrogation of exchange off-board trading rules).

Securities Exchange Act Release No. 11521 (July 2, 1975), 40 FR 30332 (July 18, 1975) (notice of request for public comment on rules of national securities exchanges which limit or condition the ability of members to effect transactions in securities otherwise than on such exchanges).

Securities Exchange Act Release No. 11288 (Mar. 11, 1975), 40 FR 15015 (announcement of written request sent to registered national securities exchanges concerning availability of quotation information).

Securities Exchange Act Release No. 11203 (Jan. 23, 1975), 40 FR 7394 (Feb. 20, 1975) (adoption of Rule 19b-3 governing rates charged).

Securities Exchange Act Release No. 11093 (Nov. 8, 1974) (fixed commission rates on exchange transactions).

Securities Exchange Act Release No. 11073 (Oct. 24, 1974), 39 FR 38396 (Oct. 31, 1974) (proposal to adopt Rules 19b-3 and 10b-22).

Securities Exchange Act Release No. 11019 (Sept. 19, 1974) (requesting rule changes to un-fix commission rates).

Securities Exchange Act Release No. 10986 (Aug. 27, 1974) (procedural explanation of Commission approach to the unfixing of commission rates).

Securities Exchange Act Release No. 10969 (Aug. 14, 1974), 39 FR 31920 (Sept. 3, 1974) (renotice of proposed Rule 17a-14).

Securities Exchange Act Release No. 10787 (May 10, 1974), 39 FR 17799 (notice of Commission action declaring effective a consolidated tape plan filed pursuant to Rule 17a-15).

Securities Exchange Act Release No. 10670 (Mar. 7, 1974) (response to $2,000 breakpoint).

Securities Exchange Act Release No. 10560 (Dec. 14, 1973) (letter to NYSE regarding commission rates generally).

Securities Exchange Act Release No. 10383 (Sept. 11, 1973) (policy conclusions with respect to, among other things, termination of fixed commission rates).

Securities Exchange Act Release No. 10076 (Mar. 29, 1973) (announcing publication of the SEC's Policy Statement on the Structure of a Central Market System).

Securities Exchange Act Release No. 10026 (Mar. 5, 1973), 38 FR 6443 (Mar. 9, 1973) (notice of receipt of plan filed pursuant to Rule 17a-15).

Securities Exchange Act Release No. 9950 (Jan. 16, 1973), 38 FR 3902 (Feb. 8, 1973) (adoption of Rule 19b-2, concerning the utilization of membership on national securities exchanges for public purposes).

Securities Exchange Act Release No. 9850 (Nov. 8, 1972), 37 FR 24172 (Nov. 15, 1972) (notice of adoption of Rule 17a-15).

Securities Exchange Act Release No. 9713 (Aug. 1, 1972) (announcing changes in the organizational structure of the SEC).

Securities Exchange Act Release No. 9598 (May 9, 1972) (applicability of the Commission's policy statement on the future structure of the securities markets to selection of brokers and payment of commissions by institutional managers).

Securities Exchange Act Release No. 9530 (Mar. 8, 1972), 38 FR 5761 (Mar. 21, 1972) (notice of proposed Rule 17a-15).

Securities Exchange Act Release No. 9529 (Mar. 8, 1972), 37 FR 5760 (Mar. 21, 1972) (notice of proposed Rule 17a-14).

Securities Exchange Act Release No. 9148 (Apr. 14, 1971) (reaffirmation of $500,000 breakpoint).

Securities Exchange Act Release No. 9132 (Apr. 1, 1971) (correspondence between the Commission and the NYSE concerning implementation of competitive rate on large institutional orders).

Securities Exchange Act Release No. 9105 (Mar. 11, 1971) (correspondence between the Commission and the NYSE concerning minimum commission rates).

Securities Exchange Act Release No. 9096 (Mar. 4, 1971) (letter to NYSE regarding fixed intra-member rates).

Securities Exchange Act Release No. 9079 (Feb. 11, 1971) (announcement of unfixing rates on orders in excess of $500,000).

Securities Exchange Act Release No. 9007 (Oct. 22, 1970) (request to NYSE for new rate structure proposal).

Securities Exchange Act Release No. 8399 (Sept. 4, 1968) (letter from the Commission to the NYSE concerning certain proposed interim change to the NYSE's commission rate schedule).

Securities Exchange Act Release No. 8324 (May 28, 1968) (announcement of a Commission order to conduct an investigation and public hearing concerning registered national securities exchanges' commission rate structures).

Securities Exchange Act Release No. 8239 (Jan. 26, 1968) (NYSE proposed rate structure changes).

Securities Exchange Act Release No. 7375 (July 23, 1964) (approving Amex plan on floor trading).

Securities Exchange Act Release No. 7374 (July 23, 1964) (amendments to floor trading plans filed by the NYSE and the Amex).

Securities Exchange Act Release No. 7359 (June 30, 1964) (Amex floor trading plan).

Securities Exchange Act Release No. 7330 (June 2, 1964) (adopting Rule 11a-1).

Securities Exchange Act Release No. 7290 (Apr. 9, 1964) (proposing Rule 11a-1).

Securities Exchange Act Release No. 3033 (Oct. 6, 1941) (order under section 19(b) of the Act altering the constitution of the NYSE to clarify that the rules of the NYSE shall not prevent any member from acting as an odd-lot dealer outside the city of New York).

Securities Exchange Act Release No. 2049 (Mar. 22, 1939) (In the Matter of Dominion Stores, Ltd., common stock without par value).

Securities Exchange Act Release No. 1117 (Mar. 30, 1937) (interpretation of the uniform specialist rule).

Securities Exchange Act Release No. 1074 (Feb. 24, 1937) (recommendation to NYSE that trading by its members be fully margined at all times).

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