U.S. Securities Markets Regulation: Regulatory Structure

Robert A. Schwartz

Professor of Finance and Economics, and Yamaichi Faculty Fellow Stern School of Business, New York University.

Kenneth Lehn

Professor of Business Administration, University of Pittsburgh.

Corinne Bronfman

Assistant Professor of Finance, University of Arizona.

Ⅰ. Introduction

The industrial organization of U.S. equity markets has changed remarkably in recent years. The New York Stock Exchange (NYSE) remains the dominant marketplace for trading U.S. equity securities[1), but it faces stiff competition from a variety of other market centers, including regional exchanges[2) the American Stock Exchange[3) the over-the-counter market[4) proprietary trading systems[5) non-intermediated markets[6) and overseas markets[7) The proportion of total trading volume in U.S. equities accounted for by the NYSE has declined substantially during the past decade.[8) Blume, Siegel, and Rottenberg (1993) point out, the erosion of the NYSE's dominant market position in recent years parallels that of other large

1) The NYSE provides continuous trading in which a specialist firm is required to maintain "fair and orderly" markets in listed stocks. It is structured as an agency auction in which specialists act as both brokers (i.e., agents for other traders) and dealers (i.e., principals who trade in and out of their inventories of stocks). More than 2,000 companies, including most large U.S. companies, have their stock listed on the NYSE.

2) The five principal regional stock exchanges in the U.S. are the Boston, Chicago (formerly the Midwest), Cincinnati, Pacific, and Philadelphia Stock Exchanges. Except for the Cincinnati Stock Exchange, all of the regional exchanges provide continuous auction markets and employ the specialist system. Since 1978, the Cincinnati Stock Exchange has provided a computerized trading system in which orders can be entered, matched, and executed. Most of the trading volume in stocks on regional exchanges is accounted for by stocks that are listed on both the regional exchanges and the NYSE. Relatively few stocks are listed exclusively on regional exchanges.

3) The American Stock Exchange (AMEX) also provides continuous market trading and employs a specialist system. More than 1,000 stocks or stock related securities are traded on the AMEX. In recent years, trading of derivative products has accounted for most of the AMEX'S revenues.

U.S. business enterprises, such as General Motors and IBM.[9)]

It is generally agreed that several factors account for the change in market structure, including the increased importance of institutional investors, the development of new trading strategies, and technological innovations in the trading of financial assets. These factors have affected both the demand and supply sides of the market for trading services in ways that have encouraged the entry and growth of enterprises which compete with the NYSE.

For example, it is likely that the growth of institutional investors has altered the demand for trading services. If some large institutional investors (e.g., index or pension funds) use portfolio strategies that require less immediacy than that demanded by other investors, they will be reluctant to pay for the high degree of immediacy provided in continuous markets such as that provided by the NYSE. Instead, they may find it more appealing to trade in electronic call markets (e.g., the Arizona Stock Exchange) which provides less immediacy but have lower trading costs. Some of the increase in the trading of NYSE-listed stocks off the NYSE undoubtedly reflects product differentiation that meets the changing demands of investors.

---

4) In contrast to the exchanges, the over-the-counter (OTC) market is a dealer maket. For each stock traded in the OTC market, dealers continuously quote prices at which they are willing to buy and sell a certain amount of stock. They act as principals, trading in and out of their inventory. In contrast to the specialist system, there must be at least two and are as many as 40-50 dealers who choose to make markets in OTC stocks. whereas exchanges (except for Cincinnati) have floors where centralized trading occurs, dealers in the OTC market are connected via computer terminals.

The OTC market in the U.S. consists of the National Association of Securities Deabers Automated Quotation (NASDAQ) and "pink sheets" markets. The stock issues of larger companies trade in the NASDAQ market. Within the NASDAQ market, two types of stocks trade: (i) more than 2,500 National Market System (NMS) stocks, which represent the largest NASDAQ stocks, and (ii) more than 1,500 Regular NASDAQ stocks. The stock issues of more than 45,000 smaller companies trade in the less liquid pink sheets market, named after the daily publication, **Pink Sheets**, which contains the nonbinding price indications of dealers. Within the pink sheets market, more than 4,000 stocks trade in the OTC Bulletin Board, which is an automated market in which dealers list firm quotations.

5) Proprietary trading systems are electronic trading systems that are operated for a profit as opposed to the nonprofit structure of exchange markets like the NYSE. The major proprietary trading systems are Instinet and POSIT, which are owned by broker-dealers, and the Arizona Stock Exchange, which is owned by Steven Wunsch.

6) Nonintermediated markets refer to direct trades between two traders.

7) The principal overseas markets in which U.S. stocks trade are the Tokyo and London Stock Exchanges.

8) For example, by one estimate the proportion of the dollar value of trading volume accounted for by the NYSE fell from 72.3oo in 1982 to 57.9% in 1992 (see Shapiro (1993), p.1). The data probably understate the decline in the NYSE's market share since they only include trading volume on the NYSE, regional exchanges, and the OTC market. The data exclude trading volume in overseas markets, proprietary trading systems, the "pink sheets" market, and the so-called fourth market (i.e., the nonintermediated market in which institutions trade with each other).

9) Blume, Siegel, and Rottenberg (1993), p.253.

Concurrent with demand changes, advances in communications technology have substantially reduced the cost of producing trading services and facilitated the entry of new enterprises into the market. Many of the new entrants employ electronic-based trading systems that have become possible in recent years because of advances in interactive communications technology. For example, the proprietary trading systems allow subscribers to anonymously submit bids and offers for individual stocks electronically, and they provide trade execution services as well. As former SEC Chairman Breeden wrote in a letter to Congressman Markey in 1991, "markets no longer are, or need be, only physical places.[10]

The change in market structure and the factors behind this change have rekindled some old debates, and triggered some new ones, about the regulatory environment in which U.S. equity markets operate. In July 1992, the U.S. Securities and Exchange Commission's Division of Market Regulation, which oversees the trading environment for securities in the U.S., issued a "concept release"[11] that surveys the major regulatory issues relating to the industrial structure of U.S. equities markets. Most prominently, the SEC release stimulates the following questions:

> 1. Does the growth in trading on markets other than primary markets represent healthy competition? Or is it fragmenting order flow and impairing liquidity and price discovery?
>
> 2. Is it in the "public interest" for regulators to promote greater dissemination of real time trade and quote information (i.e., greater "transparency") in equity markets? Or, should market centers have private property rights to this information and be allowed to contract freely with those who want to buy it?
>
> 3. Does the payment for order flow (by dealers or specialists to brokers) enhance competition and serve the interests of investors? Or does the practice represent free -riding (by dealers or specialists off the NYSE's price quotations) which diminishes liquidity and price discovery, while providing customers with poor trade execution?
>
> 4. Does the present regulatory structure put exchanges at a competitive disadvantage vis-a-vis new marketplaces that are regulated as broker-dealers? If so, should

---

10) Letter from Richard C. Breeden to Edward J.Markey, July 11, 1991.

11) **Securities and Exchange commission Release No. 34-30920** (July 18, 1992). The Administrative Procedures Act requires independent regulatory agencies to publish rule proposals in the **Federal Register** and allow a period for public comments before the rules can be adopted. After collecting and examining the public comments, regulatory agencies are then allowed to adopt, modify, or rescind proposed rules. The SEC's July 1992 release dose not contain rule proposals. Instead, it is a "concept" release, which alerts the public that the Commission is "undertaking a study of the structure of the U.S. equity markets and of the regulatory environment in which these markets operate (p. 1)." This release dose not contain rule proposals but instead invites the public to provide "any viewpoints and information on the structural issues that face the U.S. equity markets today, as well as data supporting the viewpoints expressed (p.1)."

regulation of exchanges be reduced? Or should regulation of the new marketplaces be increased? Should neither be done? Or both?

In short, when should the decisions of regulators replace the decisions of firms in the industry? How is the public interest best served? Simply stated, should the SEC play a larger or a smaller role in shaping market structure?

In January 1994, the SEC issued the **Market 2000 Report**, which contains the Division of Market Regulation's policy responses to these and other questions. In a letter transmitting the **Report** to the Commission, Brandon Becker, Director of the Division, claims that although "radical reform of how equity trading is conducted or regulated is not necessary ... regulation has not kept pace with changes in the existing market structure."[12] The **Report** makes several recommendations for SEC action in order to "ensure fair treatment of investors, increase market transparency, foster competition, and expand market access." [13] The recommendations include a mix of (i) increased disclosure and reporting requirements, (ii) suggested changes in rules and procedures of self-regulatory organizations, and (iii) enhanced intermarket linkages.

Although the immediate proposals in the **Market 2000 Report** do not appear to be dramatic, the **Report** envisions that the Commission will continue to play a prominent role in regulating both the rules and procedures of market centers as well as competition between market centers. This regulatory response is not surprising, given the statutory constraints imposed on the SEC by the **1934 Act** and the **1975 National Market System Amendments**, as well as an institutional bias of regulators to regulate. However, it is hard to justify a large role for the SEC in regulating market structure at a time when technological change and competitive forces are increasing the contestability of the "market for equity markets."

We view market centers such as the NYSE as business enterprises which supply securities trading services, and argue that the regulation of this industry should be guided by two principles: (i) the elimination of anticompetitive price-fixing (i.e., collusion between market centers in the pricing of their transaction services), and (ii) mitigation of externality problems. Note that, unlike the Division's **Report**, our definition of anticompetitive practices does not include **intrafirm** restrictions, such as the NYSE's off-board trading or delisting restrictions. It also does not justify subsidizing rivalry between market centers through mandated intermarket linkages or other methods of enhanced disclosure, although it should allow voluntary linkages, subject to normal antitrust constraints (similar to airline reservation systems, for example, which are not mandated by the Department of Transportation, but are the outcome of voluntary agreements between airlines and travel agents).

Without revisiting the debate over whether or not the NYSE's previous dominant market position once resulted in anticompetitive pricing, one point is clear -- as in other industries highly reliant on telecommunications technology, this industry has become quite contestable in

12) Ibid, letter from Brandon Becker to the SEC Commissioners.
13) Ibid.

recent years.[14] increase in contestability should suggest a greater reliance on competition between market centers, and a lesser role for regulation, in the securities market industry. Just as the increasing contestability of the local telephone market has prompted a policy debate about reducing regulation of the Baby Bells, one can argue that competitive developments in the securities markets should lead the SEC and Congress to rethink the basic premises of securities market regulation.[15]

Despite the special "quasi-governmental" status that Congress has bestowed on self-regulatory organizations (SROs), these institutions are, in essence, business enterprises which are now competing with less regulated entities in a market characterized by rapid technological change. We argue that these conditions suggest a smaller, not larger, role for SEC regulation of market mechanisms and market structure, in order to facilitate desirable innovation, experimentation, and adaptation to the new technology. The Commission's regulation of SROs and proprietary trading systems should be modelled after its regulation of registered corporations. The SEC does not regulate the governance structure and business decisions of registered companies; instead, its regulation of these companies is confined largely to the disclosure of information. The SEC should regulate enterprises which "produce" market centers in a similar manner.

However, focusing disproportionately on the SEC's behavior ignores the incentives created for the Commission by the **1934 Act** and the **1975 Amendments**. We further argue that it is timely for Congress to reconsider the rationale for regulating the rules, procedures, and governance structure of SROs and other "producers" of trading services. In a period of rapid technological change, Congressional and SEC control over the organizational structure and business decisions of these enterprises is likely to impede the development of lower cost ways of trading securities.

After describing the structure of securities market regulation in Section 2, we describe and critique the SEC's **Market 2000 Report** in Section 3. Section 4 provides concluding comments.

Ⅱ. U.S. Regulatory Structure

Ⅱ—1. Regulation By the SEC

Following the stock market crash of 1929, Congress passed two pieces of legislation that continue to serve as the cornerstone of U.S. securities laws. The **Securities Act of 1933** is largely a disclosure law, requiring issuers of securities to disclose information that purportedly allows investors to make informed investment decisions. In addition to its disclosure provisions, the **1933 Act** also prohibits the fraudulent sale of registered securities.

The Securities Exchange Act of 1934 (**SEA**) extends the reach of federal securities laws

---

14) For a discussion of contestable markets, see Baumol, Panzar and Willig (1988).

15) For a discussion of the regulatory implications of greater contestability in the local telephone market, see Baumol and Sidak (1993).

beyond the disclosure and antifraud provisions of the **1933 Act**. Whereas the **1933 Act** regulates the primary issuance of securities, the **1934 Act** regulates the secondary markets in which securities trade. The **SEA** also authorizes the Securities and Exchange Commission (SEC), as an independent regulatory agency; prior to this, the **1933 Act** was administered by the Federal Trade Commission. Under the **1934 Act**, the SEC has legislative authority to regulate exchanges, broker-dealers, and disclosure in secondary markets through its rule-making and enforcement powers. In 1938, Congress passed the **Maloney Act**, which extended the SEC's regulatory jurisdiction to the OTC market.

Independent regulatory agencies in the U.S. are designed to be autonomous from both the executive and legislative branches of the federal government. Like other independent regulatory agencies, the SEC is governed by five Commissioners who are nominated by the President and confirmed by the Senate. The President selects a chairman, presently Arthur Levitt, from among the five Commissioners. The selection of a chairman does not require Senate confirmation. The purported independence of the SEC from the executive branch derives largely from two institutional features -- (i) no more than three Commissioners may come from the same political party and (ii) the Commissioners' terms are not coterminous with the President. A majority vote of the Commissioners is required for rule changes, enforcement actions, legislative proposals, and administrative proceedings.

The SEC has several operating divisions which specialize in different areas of securities regulation.[16)] Division of Market Regulation is largely responsible for regulatory issues pertaining to the microstructure of securities markets, including the regulation of exchanges and broker-dealers. As the SEC's 1990 Annual Report describes, the Commission's "Division of Market Regulation, together with [its] regional office examination staff, oversees the operations of the nation's securities markets and market professionals (brackets added)."[17)] The SEC's **Market 2000 Report** was produced by the Division of Market Regulation.

Congress retains oversight over the operations of the SEC both through the budget appropriations process and through public hearings which it holds periodically on issues that appear to have public interest considerations. A large body of scholarly literature argues that independent regulatory agencies can be viewed as agents of Congress, even though ostensibly they are "independent." [18)] According to this view, if regulatory agencies prefer larger to smaller budgets, then Congress can affect the behavior of regulatory agencies through the budget appropriations process.

The principal Congressional committees with oversight jurisdiction over the SEC are the Committee on Energy and Commerce in the U.S. House of Representatives, chaired by John Dingell (Democrat from Michigan), and the Committee on Banking and Finance in the U.S.

---

16) These include the Divisions of Corporate Finance, Enforcement, Investment Management, and Market Regulation In addition, the SEC has three major policy offices, including the offices of the Chief Accountant, Economic Analysis, and General Counsel.

17) **United states Securities and Exchange Commission Annual Report** (1991), p. 25.

18) See, for example, Weingast (1984) and Weingast and Moran (1984).

Senate, chaired by Donald S. Riegle (Democrat from Michigan). The respective subcommittees with SEC oversight jurisdiction are the Subcommittee on Telecommunications and Finance, chaired by Edward Markey (Democrat from Massachusetts), and the Subcommittee on Securities, chaired by Christopher Dodd (Democrat from Connecticut). These committees and subcommittees have held several hearings on the structure of securities markets in recent years. Most recently, Chairman Markey's Subcommittee on Telecommunications and Finance held hearings during the spring of 1993 on the national market system (April 14, 1993), inducements for order flow (May 13, 1993), and proprietary trading systems (May 26, 1993), three topics addressed in the SEC's Market 2000 release.

After the passage of the **Maloney Act** in 1938, the next major legislative event affecting the SEC's authority to regulate market structure occurred in 1975, with the passage of amendments to the **1934 Act**. The **Amendments**, often referred to as the **National Market System Amendments**, require the SEC to facilitate the development of a national market system for trading securities. In addition, the **Amendments** bring clearinghouses and suppliers of financial information under SEC jurisdiction, and they strengthen the SEC's authority over rule-making by self-regulatory organizations. For example, the **Amendments** state that

> (S)elf-regulatory organizations must display a greater responsiveness to their statutory obligations and to the need to coordinate their functions and activities. In the new regulatory environment created by this bill, self-regulation would be continued, but the SEC would be expected to play a much larger role than it has in the past to ensure that there is no gap between self-regulatory performance and regulatory need and, when appropriate, to provide leadership for the development of a more coherent and rational regulatory structure to correspond to and to police effectively the new national market system.

Congress and the SEC initially disagreed over how much authority the Commission should have to regulate market structure in the securities industry. Congressional oversight committees preferred to grant the SEC more authority to promote "competition" among marketplaces through the development of a national market system for trading securities. Khademian (1992) describes the Congressional desire by quoting a former staff member of the SEC who participated in the drafting of the **1975 Amendments:**

> For [Representative] Moss [Chairman of the House Subcommittee] and particularly [Senator] Williams [Chairman of the Senate Subcommittee], they wanted to abolish the floor of the New York Stock Exchange, and create this kind of ... black box trading system, set up to [receive orders to trade stock and] disseminate information at the speed of light. There would be no coming together of people on the New York Stock Exchange.[19)]

---

19) Khademian (1992), p. 74.

In contrast, the Commission resisted the Congressional demands for it to micromanage the design of a national market system, preferring instead to rely on a combination of disclosure and incremental rule-making to promote "competition." For example, Khademian (1992) cites the following passage from an SEC letter transmitting the Institutional Investor Study (1971):

> We do not believe ... that it is either feasible or desirable for the Commission or any other agency of the government to predetermine and require a particular structure, and still less to specify now particular procedures for the markets of the future. It is better to observe and, if necessary, to modify the structure which evolves through the ingenuity and response of the marketplace.[20]

The SEC largely prevailed, as the **1975 Amendments** establish goals for a national market system, but refrain from directing the SEC to micromanage the structure of equity markets. Becker and Angstadt (1994) describe the mandate given to the SEC by the **1975 Amendments:**

> Congress did not define what the NMS [national market system] was or what it should be. Instead, Congress believed that it was best to provide the Commission maximum flexibility and discretion in working out specific details, and that the NMS should evolve through the interplay of competitive forces as unnecessary restrictions were removed. The Commission was expected, in those situations where competition was not sufficient, to use the powers granted to it to act promptly and effectively to ensure the NMS was put in place.

The **Amendments** establish five goals of a national market system, including (1) fair competition among brokers and dealers, among exchange markets, and between exchanges and other marketplaces; (2) economically efficient executions of securities transactions; (3) availability to brokers, dealers, and investors of information with respect to quotations for and transactions in securities; (4) opportunities for best trade execution; and (5) the opportunity for the execution of customer orders without dealer intervention. Congress also called for the linking of markets for qualified securities through communication and data processing facilities.

The **1975 Amendments** potentially expand the SEC's role in affecting the industrial organization of U.S. equity markets. In 1975, the year the **Amendments** passed, the Commission adopted a rule phasing out fixed brokerage commission rates on grounds that agreements among exchange members to fix commission rates are anticompetitive. Since the 1975 **Amendments**, the major SEC actions affecting market structure include (a) an attempt to foster intermarket competition through the adoption of Rule 19c-3, which allows exchange members to act as dealers in stocks that were newly listed on an exchange after April 26, 1979, and (b) attempts to make markets more transparent through the development and refinement of intermarket linkages, such as the Intermarket Trading System (which displays

20) Ibid, p.73.

quotation information at participating markets and provides order routing facilities), the Consolidated Transactions Tape (which disseminates last sale price and volume information for exchange listed stocks), and the Consolidated Quotations System (which disseminates best bids and offers in exchange listed stocks to vendors).

Ⅱ—2. Regulation By SROs

As noted above, U.S. securities regulation is a mixture of federal oversight and reliance on the self-regulatory organizations. U.S. exchanges are SROs with rules designed to "prevent fraudulent acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities."[21)]

Section 6(b)(1) of the **1934 Act** provides that the criteria for registration as a national securities exchange include a determination by the SEC that, among other things, an exchange has the organization and capacity to comply, and to enforce compliance by its members and persons associated therewith, with the provisions of the **1934 Act**, the rules promulgated by the SEC under the **1934** Act, and the rules of the exchange.

In addition, Section 19(g)(1) of the **Act** requires that an exchange enforce compliance by its members and associated persons with such provisions. Market professionals (brokers, dealers, investment managers) are required to register with the SEC. Brokers and dealers are also required to be members of a self-regulatory organization which is responsible for supervising their trading activity and assuring that it conforms with federal securities laws.

Congress views securities exchanges as quasi-governmental institutions. This role was stated explicitly in a report by the Committee on Banking, Housing, and Urban Affairs associated with the **1975 Amendments:**

> The Committee has found a common and serious misunderstanding of the nature and limits of the concept of self-regulation. ... self-regulation is thought to mean that the securities industry regulated itself and therefore is not regulated by the government.... this fails to recognize the essential and continuing role of the federal government. Industry regulation and governmental regulation are not alternatives, but complementary components of the self-regulatory process. ...The SEC is charged with supervising the exercise of this self-regulatory power.

The interface between self-regulation and SEC oversight underlines much of the rulemaking discussed in the **Market 2000 Report** and this paper.

The self-regulatory role is well-illustrated by the specialist's job description contained in the NYSE's **Floor Official Manua1:**[22)] "An exchange member registered as a specialist is accountable to the Exchange for the quality of the Exchange markets in the securities in

---

21) **See SEC Release No.34-27445** (November 16, 1989) and **SEC Release No.34-29185** (May 15,1991) Self-Regulatory oreganizations in the U.S. securities industry include the NYSE, AMEX, NASD, the regional stock exchanges, and the Chicago Board Options Exchange (CBOE).

which the specialist is registered. ...The specialist helps ensure that such markets are fair, orderly, operationally efficient and competitive with other markets in those securities. A "fair" market is free from manipulative and deceptive practices and affords no undue advantage to any participant. An "orderly" market is characterized by regular, reliable operation, with price continuity and depth, in which price movements are accompanied by appropriate volume, and unreasonable price variations between sales are avoided. ... As is true of all exchange members, the specialist is expected to adhere to all applicable Federal laws and regulations, and Exchange rules and policies, including the provisions that apply to specialists in Section 11 (b) of the Securities Exchange Act of 1934."

The NYSE's Division of Enforcement is part of its Regulatory Group that also includes the Division of Member Firm Regulation (responsible for conducting periodic examinations of member firms and monitoring their financial condition, operations, and sales practices) and the Division of Market Surveillance (responsible for monitoring the trading activities of members, member firms, and their customers).[23] In 1991, there were 476 people with regulatory responsibilities at the NYSE, ninety-five in surveillance alone. The primary role of the surveillance group is the monitoring of trade data and the investigation of abuses relating to insider trading, market manipulation, frontrunning, specialists' obligations (both affirmative and negative as discussed below), member firms' proprietary trading, and rules governing the NYSE's trading floor.

The Intermarket Surveillance Information System (ISIS) is an extensive data base containing more than 25 billion pieces of on-line information including current and historical consolidated trade, quote, and clearance data. ISIS contains pertinent information on all orders entered through the NYSE's automated delivery system, as well as data relating to program trading on the exchange. In addition, ISIS produces an audit trail, which is a sequential reconstruction of trading in each stock, identifying the time of trade, the buying and selling member firms, the floor brokers who represented the order involved, and whether the trade was for a member firm's proprietary account.

Surveillance analysts review, among other things, price continuity, market depth, and specialists' trading activity including the extent of participation and degree to which such dealings are stabilizing. SEC Rule 11b-1 allows an exchange to have a specialist system if it adopts various rules. Among other things, an exchange's rules must (1) establish "adequate capital requirements" for specialists, (2) impose limits on specialists' trading, including restrictions limiting specialists' trading as far as practicable to these dealings reasonably necessary to permit him to maintain a fair and orderly market and (3) provide procedures for the effective and systematic surveillance of the activities of specialists.

Over and above the capital requirements, the limitations on specialists dealing effectively

---

22) See the NYSE's **Floor official Manual**, published by Market Surveillance The manual provides a description of specialist responsibilitities and it defines in detail the character of specialist dealings.

23) The material on enforcement and survillance by the NYSE in this subsection draws heavily on information provided in Doherty, Okun Korostoff and Nofi (1991), and Cochrane, McNamara, Shapiro and Simon(1993).

requit that specialists trade in as passive a manner as possible (negative obligation) -- only when there is gap between buyers and sellers (affirmative obligation). Specifically, the specialist's affirmative obligation refers to the maintenance of "fair and orderly market" in the stocks in which he or she is registered, which implies the maintenance of price continuity with reasonable depth and the minimizing of temporary disparities between supply and supply and demaned though dealing to a reasonable extent from his or her own account. The specialists negative obligation refers to the requirement that all purchases and sales by the specialist meet the test of "reasonable necessity"[24)] In the context of the affirmative and negative obligations, there are strict limits on the manner in which specialists can liquidate their positions, special rules govening participation in openings, reporting requirements on all trading activity, and strict controls on preventing the misuse of information when a specialist unit is affiliated with a member organization conducting a public business.

With respect to surveillance of specialists' trades, the exchange requires electronic submission of information regarding all dealer trading activity, as well as dealer position information. Such data are integrated for analytical purposes with the Exchange's Intermarket Surveillance Information System (ISIS). A large number of reviews relating to specialist performance in individual stocks are conducted during the course of a year, supplemented by reviews resulting from inquiries received by the Exchange from the general public, retail investors, institutions, broker-dealers, listed companies, and government agencies. In addition, on a quarterly basis, the exchange administers the Specialist Performance Evaluation Questionnaire (SPEQ), which is completed by floor brokers sufficiently in contact with a specialist unit to be able to fairly evaluate its performance. Specialist unit performance is also reviewed regarding the timeliness of specialists' interactions with orders and administrative messages received through the Exchange's automated order routing system, as well as the timeliness of specialists' openings of stocks. The specialist's role in conducting auctions is supplemented by the oversight of other experienced market professionals -- floor officials -- who must approve all transactions at specified amounts away from the last sale for a stock trading at less than $20, and $2 for a stock trading at $20 or more.[25)]

Ⅱ—3. Regulation of Broker-Dealers

The duties of registered brokers and dealers are different from those of exchanges. The chief aim of the SEC's regulation of broker-dealers is to protect their customers. The SEC defines a "broker" as any person "engaged in the business of effecting transactions in securities for the accounts of others, but does not include a bank." They are required to register with the SEC and with an SRO by which they are supervised. Broker-dealers do not have special responsibilities for enforcing the SEA, but must agree to abide by federal securities law. Thus, the business practices of broker-dealers which are NYSE or NASD members are supervised by the NYSE and NASD, respectively. Often brokers and dealers

24) See **NYSE Rule 104.10**

25) **Rule 79A of the NYSE Constitution.**

are members of several exchanges, which results in duplicate supervision. Those that also are active in the futures markets must register with the National Futures Association (NFA) and abide by its requirements. These overlapping jurisdictions do result in much duplication, and some inconsistencies.

The requirements for exchange membership include a standard for capital adequacy, registration with the SEC, and completion of the necessary certification to operate as a broker-dealer. NYSE membership is further restricted to entities which pass a primary purpose test -- that is, fifty percent of their brokerage businesses are with the public. The Martin Report written at the time of the hearings preceding the 1975 Act Amendments ("The Securities Markets," William McChesney Martin, Jr.) took the position that the overriding concern was the concentration of economic power which might result from institutional membership and could lead to a market dominated by dealers dealing for their own account which would tend toward the elimination of the agency relationship between broker and customer. An additional concern was that the interests of powerful groups would not be the same as those of the "general public investor."

Thus, by law, NYSE membership is restricted to broker-dealers. Additionally, Section 11(a) prohibits exchange members from effecting transactions on national securities exchanges of which they are members for accounts managed by the member or its associated persons. Consistent with the concerns referred to above, the restriction was adopted in the mid 1970's due to concerns over institutional access to exchanges and the potential conflicts of interest resulting from allowing combinations of money management and brokerage functions. Money managers can use affiliated brokers to do everything other than actually executing a buy or sell order on the exchange floor for their managed accounts. Thus, exchange members can effect transactions for managed accounts as long as independent brokers execute the trades on the exchange floor. Section 11(a) has come under increasing pressure for repeal from the industry.

Ⅲ. The SEC's Market 2000 Report

Ⅲ—1. Motivation

Roughly twenty years after its last major studies of U.S. equity markets,[26] which preceded the passage of the **1975 Amendments**, in December 1991 the SEC announced that its Division of Market Regulation would undertake a major study of issues related to the industrial structure of U.S. equity markets. As a prelude to the **Market 2000 Report**, the Commission's July 1992 concept release asks for public comments on several issues related to market structure. In the introductory section of the concept release, the SEC refers to

26) The SEC conducted three studies on the structure of U.S. equity markets in the early 1 970s, including **Institutional Investor Study Report of the Securities and Exchange Commission (1971) ; Statement of the Securities and Exchange commission on the Future Structure of the Securities Markets** (1972) **and Policy Statement on the Structure of a Central Market System** (1973).

several market developments in the past twenty years that precipitate the study, including (i) the dramatic increase in equity market trading volume, (ii) the growing importance of large institutional investors, (iii) the proliferation of equity derivative products, including individual stock options, stock index options, and stock index futures, (iv) the development of new equity trading strategies, such as program trading, index arbitrage, and indexation, (v) technological innovations that have facilitated order routing and execution, and (vi) certain equity brokerage practices (e.g., growth in payment for order flow and the use of third party soft dollars).

The concept release fails to document any adverse effects of these market developments on economic efficiency or investor welfare. The Commission recognizes that "to date, technological and competitive developments appear to have benefitted investors by sharply reducing transaction costs"[27] and that "it does not appear that any of these issues poses an immediate threat to the quality of U.S. equity markets."[28] However, the SEC adopts the perspective that potential "problems" may be in their incipient stages and therefore may require regulatory attention.

Ⅲ—2. Regulatory Approach Advocated in Market 2000

In January 1994, the SEC released the **Market 2000 Report.** The **Report** contains specific proposals for the SEC, under the following four headings: transparency, fair treatment of investors, fair market competition, and open market access. A description and discussion of these proposals is deferred to later in the section.

For the most part, the **Report** claims that competition has been effective in leading the market centers to greater efficiency. For instance, it states that "competition for equity market share has resulted in notable service improvements and efficiencies, and has forced the primary markets to respond to their users."[29] Nonetheless, the **Report** anticipates that the SEC will continue to play a large role in regulating market structure. Perhaps the most fundamental purpose of the study is reflected in the following statement: "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"[30] The Division's answer is suggested by the following statement:

> 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

27) **Securities and Exchange Commission Release No.34-30920**, note 11, p.8.
28) Ibid, pp.9-10
29) **Market 2000**, note 12, p.Ⅲ-1.
30) Ibid, p.4

universe of investors.[31)]

By so associating the quality of markets with the involvement of the SEC, the **Report** reaffirms the **1975 Amendments** and their mandate for the development of a national market system. This posture effectively keeps the SEC involved in market structure issues. For example, in the **Report's** conclusion, the Division states that its recommendations are "consistent with the Congressional intent expressed in the **1975 Amendments** and reflects the market's evolution since that time."[32)] It then cites a multitude of goals which its recommendations are designed to achieve:

> 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."[33)]

In short, in crafting its recommendations, the Division attempts to juggle numerous goals imposed on the SEC by the **1975 Amendments.** For reasons discussed later in the section, it is unlikely that the SEC has the information and incentives necessary to achieve a desirable balance between these goals. Furthermore, its substantial involvement in the regulation of market centers maintains the regulatory uncertainty that hangs over new, innovative trading systems and impedes the adjustment of SROs and PTSs to new ways of trading securities. For example, operations that do not conform with the SEC's vision of a National Market System may be discouraged or even disallowed. As we discuss later in the section, this power to enforce or disallow is likely to damage the dynamic development of the U.S. securities markets.

Ⅲ−3. Analysis of the Market 2000 Report

Ⅲ-3-1. *A Framework for Examining Market 2000*

Later in this section, we describe and comment on specific policy recommendations contained in the **Report.** Our first goal, however, is to critique the **Report's** absence of a conceptual framework to guide the SEC's regulation of market structure. In part, our analysis builds on points raised initially in Kleidon (1994).

(1) *Market Centers as Business Enterprises*

As discussed in Section 1, we adopt the perspective that self-regulatory organizations and proprietary trading systems are business enterprises that compete in the market for transaction services. There are several dimensions on which they compete, including the

31) Ibid, p.13.

32) Ibid, p.32.

33) Ibid.

provision of (i) immediacy, (ii) price discovery, (iii) low price volatility, (iv) liquidity, (v) transparency, and (vi) transaction costs.[34] Some cater only to institutional investors (e.g., Arizona Stock Exchange, POSIT, Instinet), while others service both retail and institutional investors (e.g., NYSE). The production of transaction services is costly and requires (i) the development of rules and procedures to govern trading activity, (ii) investments in trading facilities, and (iii) a governance structure which allocates decision rights within the enterprise[35].

A growing literature on the governance of firms suggests that governance structures matter and that the choice of governance structures conforms with rationality[36]. Most relevant for this paper is the relation between the instability of a firm's operating environment and its governance structure. In unstable environments, where rapid decision-making is desirable, firms are expected to develop accommodating governance structures that are less bureaucratic than those observed in more stable environments. For example, firms in the biotechnology industry are expected to select different governance structures (e.g., smaller boards of directors, higher insider holdings of equity) than their counterparts in the electric utility industry.

The special legal status of SROs mandates a highly bureaucratic governance structure for these enterprises, while their PTS counterparts are allowed to select from a larger menu of governance structures. The SROs are required by law to be nonprofit membership corporations which are quasi-governmental institutions. As described in the previous Section, since the **1934 Act** SROs are required to play an important role in the regulatory process and are subject to substantial oversight from both Congress and the SEC. For example, Section 19(b) of the **1934 Act** requires SROs to file all proposed rule changes with the SEC. The SEC then publishes notice of proposed rule changes and awaits written comments from the public. The proposed rule changes do not become effective unless the SEC approves them and this can only occur after the notice period.

In contrast to the SROs, the PTSs are for-profit corporations, not membership organizations, which have more nimble governance structures. Perhaps most importantly, the PTSs are exempt from Section 19(b), which facilitates the adaptation of their rules and procedures to changing market conditions. While these institutions also are subject to SEC regulation, it is less onerous than that governing SROs.

The Division recognizes the controversy over the disparate regulatory treatment of SROs and PTSs. Under the heading of "fair market competition," the Division states that "the SROs point out that PTSs may add new services or procedures to their systems instantaneously without governmental approval ... 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

---

34) These dimensions are discussed in more detail in the paper that follows See Schwartz (1994).

35) The perspective that market centers are business enterprises is developed in more detail in Mulherin, Netter, and Overdahl (1991)

36) See, for example, the special issue of the **Journal of Financial Economics, Symposium on the Structure and Governance of Enterprise,** Parts I and II, (September1990).

from the review requirement.[37] As we discuss later, the Division proposes to "level the playing field" somewhat by increasing recordkeeping requirements for the PTSs and expediting the Section 19(b) review process for SROs for certain administrative proposals.
Since the **1934 Act** and the **1975 Amendments** require the SEC to play an important role in the governance of the SROs, these enterprises are burdened with bureaucratic, decision-making processes at a time when technological change and competitive forces are inducing substantial change in the industry. Whereas many large enterprises in other industries have substantially decentralized their organizations over the past several years, especially those experiencing large losses of market share and value (e.g., General Motors and IBM), the SROs are constrained in similarly adapting their organizational structures to a rapidly changing environment.

Jensen and Meckling (1990) provide a framework for examining the advantages and disadvantages of centralized versus decentralized decision-making in business enterprises.[38] Where specific knowledge exists, defined as knowledge that is costly to transfer, an advantage of decentralization is that it co-locates decision rights with individuals at lower levels of the organization who possess knowledge about input prices, technology, customers' tastes, and so forth. This raises the likelihood that the "right" decisions are made. However, a disadvantage of decentralization is that the decision-makers may use the rights to maximize their own utility, rather than the value of their organizations. Hence, greater decentralization results in lower information costs, but higher agency costs, and greater centralization results in the opposite. One of the tasks faced by all organizations is to choose a governance structure that strikes an efficient balance between these two costs.

The SEC's involvement in the governance of SROs represents a high degree of centralized decision-making. Following Jensen and Meckling, one of the costs of this governance structure is that the Commission does not have the information and business expertise that managers of market centers are likely to possess. Hence, SEC involvement in the business decisions of market centers is likely to be costly, since the likelihood of value-reducing decisions increases. Relatedly, the bureaucratic regulatory procedures impose additional costs on market centers, both directly and indirectly through foregone (or less profitable) opportunities. These costs are likely to be higher in periods when both production functions and consumer preferences are changing rapidly, as they are today in the securities industry.

The benefit of centralized decision-making generally is that it may mitigate agency problems at lower levels of the organization. This presupposes that the incentives of centralized decision-makers are more compatible with the owners' wishes than those of the lower level decision-makers. In the case of SEC regulation of SROs, this is a suspect assumption. The "owner" in this case presumably is "the public." The implicit assumption behind SEC regulation is that the public interest would be ill-served if SROs were allowed to

---

37) **Market 2000**, note12, p.28

38) Michael C. Jensen and William H Meckling, "Specific and General Knowledge, and Organizational Structure," in **Contract Economics**, edited by Lars Werin, Blackwell, 1992, pp.251-274.

operate as for profit enterprises, independent of SEC control. Regardless of whether the "natural monopoly" rationale for this position was once valid, it is certainly less true today[39].

This is not to say that there is no reason for regulating SROs and other market centers. As with firms in other industries, regulation can play a useful purpose in mitigating anticompetitive behavior and externalities. But direct regulation of business decisions, especially in a highly unstable environment, is likely to result in high costs, with little or no public benefit. The Division recognizes this somewhat in the Report and proposes a streamlined 19(b) process for SROs. However, no conceptual justification is provided for continued SEC involvement in the governance of SROs. This, of course, is not a policy decision that the SEC can make, but rather is a matter for the U.S. Congress.

Oesterle, Winslow, and Anderson (1992) argue that the traditional organizational structure of the New York Stock Exchange is stifling innovation and inhibiting the development of more effective equity markets. In response, Cochrane, McNamara, Shapiro, and Simon (1993), point out that Oesterle, Winslow, and Anderson's proposal for restructuring the governance structure of the NYSE presently is illegal. They note that Section 6 of the **1934 Act** mandates that only broker-dealers, or persons associated with broker-dealers, can be members of an exchange. Also, such members must be "fairly represented" in the selection of exchange directors, as well as in the administration of an exchange's affairs. These requirements effectively limit exchanges to be membership-controlled, not-for-profit corporations.

Cochrane, McNamara, Shapiro, and Simon also note that Congress clearly intends that the exchanges be membership-controlled entities. While the law allows considerable flexibility in the governance structure of clearing agencies, it restricts the organizational structure of exchanges. This issue also has been addressed by the courts. For example, in a recent ruling (1990), the U.S. Court of Appeals for the Seventh Circuit held that

> The Delta System cannot register as an exchange because the statute requires an exchange to be controlled by its participants, who must be registered brokers or individuals associated with such brokers.

The authors note that they "do not mean to imply that it would never be appropriate for an U.S. exchange to operate as a for-profit corporation with governance separated from membership. "What they demonstrate is that the possibility is "contrary to current U.S. legal requirements and Congress' expressed intent on how exchanges should be governed."

Since organizational structure matters for economic performance, the SEC and Congress should consider freeing SROs from this regulatory process and widening the choice of organizational forms they can adopt. Competition for order flow will reward market centers that choose appropriate governance structures and business decisions, while penalizing those

39) It is worth noting that in 1971, the Congressional debates were filled with discussions that individual investors would become ill-served with the growing institutionalization of the markets. In fact, the NYSE faces stiff competition from electronic trading Services which have designed their trading systems to service retail investors. This development was not anticipated in the 1971 debates.

which do not.

(2) *Defining Competition*

The **Securities Exchange Act**, which circumscribes the authority of the SEC, stresses the role of regulatory oversight as being in the "public interest.[40] " In the **SEA** and the **1975 Amendments**, the term "public interest" often is linked with the phrase "or the protection of investors and the maintenance of fair and orderly markets," as in Section 11(a) dealing with the "Segregation and Limitation of Functions of Members, Brokers, and Dealers:"

> The Commission shall prescribe such rules and regulations as it deems necessary or appropriate in the public interest or for the protection of investors

and in Paragraph 1095, mandating the establishment of a national market system,

> The Commission is directed, therefore having due regard for the public interest, the protection of investors, and the maintenance of fair and orderly markets, to use its authority under this title to facilitate the establishment of a national market system for securities.

Congress also regards the public interest as benefitting from a competitive environment. In Section 249 of the **1975 Amendments**, Congress seeks to clarify the authority of the SEC "to take all necessary steps to bring ... a national market system into existence ... The objective would be to enhance competition and to allow economic forces, interacting within a fair regulatory field, to arrive at appropriate variations in practices and services."

Carrying out the Congressional mandate to promote competition between marketplaces is not without ambiguities for the SEC, since the term "competition" has many different meanings. As Bork (1978) points out in a classic text on antitrust policy, the ambiguous meanings of the term "competition" often results "in the fruitless discourse of men talking past each other.[41]" Bork cites several definitions of competition that have been used in antitrust law, including (i) the presence of rivalry, (ii) the absence of restraints by one firm

---

40) The term "public interest" gained prominence in nineteenth century Supreme Court decisions that addressed the issue in the context of rulings that delineated bounds for regulation. **Munn v. Illinois** (1877) is a landmark decision which sets limits on property rights when the public interest is involved. At the time, virtually all of midwestern grain flowed through Chicago, the "gateway of commerce." Nine firms owned all of Chicago's grain elevators and met periodically to fix storage rates. In 1871, the Illinois legislature passed a law fixing the rates firms could charge. Munn and Scott, owners of one of the firms, ignored the law and were sued for failing to comply. Upholding the state of Illinois, Chief Justice argued "... we find that when private property is affected with a public interest it ceases to be juris private only ... Property does become clothed with a public interest when used in a manner to make it of public consequence, and affect the community at large. When, therefore, one devotes his property to a use in which the public has an interest, he, in effect, grants to the public an interest in that use, and must submit to be controlled by the public for the common good."

41) Bork (1978), p.58

over others, (iii) the existence of a fragmented market consisting of many small firms, and (iv) economically efficient resource allocation. Implicitly, the Division's **Report** accepts the first two definitions of competition, which may not be consistent with economic efficiency and the interests of investors.

Economists usually refer to "competitive" outcomes as those which promote economic efficiency (i.e., the sum of producer and consumer surplus). Economic efficiency, in turn, has two components: allocative efficiency, which concerns the relation between price and marginal cost; and productive efficiency, which concerns the unit costs associated with the production of goods and services[42]. An analytical device that frames the frequent tradeoff between the two types of efficiency is shown in Figure 1, which was developed by Williamson (1968) for the purpose of examining the welfare effects of mergers.

Figure 1 reveals the tradeoff associated with market structures that provide firms with the ability to set price above marginal cost. The deadweight efficiency loss associated with this pricing policy is the triangle labelled A. This reflects the fact that profit-maximizing firms with "market power" will produce X1 units of output and charge a price of P1, even though the marginal cost of production is less than the marginal benefit to consumers over the output range from X1 to X2.

The triangle A, then, represents a loss of allocative efficiency. However, "market power" (i.e., the ability to set price above marginal cost) usually is obtained because a firm has lower unit costs of production; without this, it is hard to imagine how the firm achieved its dominant market position in the first place. The efficiency gains associated with this market structure is the rectangle labelled B in Figure 1. This represents the fact that the unit costs of production over the output range from 0 to X1 are lower for the firm with the price-setting ability than they are for other firms in the industry. This rectangle represents the gains in productive efficiency.

Figure 1 provides a simple conceptual framework for identifying the tradeoffs associated with alternative market structures. Most importantly, the promotion of allocative efficiency (i.e., reducing the triangle) may come at the expense of reducing productive efficiency (i.e., reducing the rectangle). From an efficiency point of view, the objective should not be the maximization of allocative efficiency per se, but rather the maximization of producer and consumer surplus.

The Division's **Report** ignores the "efficiency" definition of competition and instead seems to equate competition with the promotion of rivalry. For example, the Division implicitly adopts the rivalry definition to justify mandated market linkages, such as the Intermarket Trading System (ITS). In the concept release, the Division describes the ITS as "an important

---

42) These terms are coined by Bork, note 24, page 91. Frank Knight recognized these two components of efficiency in 1933: "From a social point of view, this process may be viewed under two aspects, (a) the assignments or allocation of the available productive forces and materials among the various lines of indusntry, and (b) the effective coordination of the various means of production in each industry into such groupings as will produce the greatest result." (**The Economic Organization**, University of Chicago Press, 1933).

addition to the National Market System"[43] in part because it purportedly enhances the competitive position of regional exchanges vis-a-vis the NYSE. The release states that ITS has permitted "regional specialists to attract orders from other markets by providing superior quotations and facilitated their marketmaking by enabling them to lay off their risk positions more efficiently, and at lower cost, through offsetting transactions on primary markets.[44]

Enhanced rivalry of the sort promoted by the Division often leads to greater efficiency, but it also can lead to less efficient outcomes, especially if subsidized by government regulation. An example often used in antitrust is the case of resale price maintenance, that is, the practice whereby a manufacturer requires retailers to sell its product at a minimum or maximum retail price established by the manufacturer. One view is that this practice is **per se** anticompetitive since it diminishes price rivalry in the retail market. An alternative view is that resale price maintenance can promote efficiency by discouraging socially wasteful price rivalry. This can be the case if a manufacturer wants retailers to invest in the advertising, promotion, and marketing of its products. Without resale price maintenance or another type of vertical restraint, retailers (e.g., department stores) would be reluctant to incur costs associated with the promotion of products, since other retailers (e.g., discount chains) could free-ride off their promotion and undercut their prices because they have not incurred the costs of advertising, promotion and marketing. This is one illustration of how the promotion of price rivalry may work contrary to economic efficiency.

In a similar way, mandated market linkages may promote rivalry between market centers, but they can also diminish economic efficiency. The primary market is analogous to the department store that incurs the cost of advertising, promotion, and marketing. Potentially, other market centers can free ride off the primary market's quotes and perhaps provide "superior" quotes since they have invested less in the facilities necessary for price discovery. If mandated linkages reduce the ability of primary markets to capture the returns on their investments in price discovery, they have less incentive to produce price discovery. Hence, the promotion of rivalry through mandated linkages may have the perverse effect of reducing the quality of transaction prices. In the context of Figure 1, mandated linkages may improve allocative, but impair productive efficiency. We revisit this issue later in our discussion of transparency as it is dealt with the **Market 2000 Report**.

The Division also takes a narrow view of competition in its discussion of contractual restraints that exchanges place on their members and listed companies. For example, the Division expresses concern about the effects of NYSE Rule 390 on competition, since the Rule limits the ability of NYSE members to effect transactions off an exchange. Coase (1988) has commented more generally on a tendency to view exchange rules as anticompetitive:

> economists observing the regulations of the exchanges often assume that they represent an attempt to exercise monopoly power and aim to restrain competition.

---

43) **SEC Release No.34-30920**, note 10, p.19.

44) Ibid.

> They ignore, or at any rate, fail to emphasize an alternative explanation for these regulations: that they exist in order to lower transaction costs and therefore to increase the volume of trade[45].

Exchange members may voluntarily agree to limit their behavior through rules like NYSE Rule 390, an off-board trading restriction, in order to enhance the efficiency of the exchange. Off-board trading restrictions can promote economic efficiency by mitigating the problems associated with fragmented order flow. By consolidating order flow, these restrictions are likely to sharpen price discovery, foster liquidity, and generally reduce the cost of providing trading services. In this regard, they may be inconsistent with a definition of competition that judges competition by the absence of restraints of one firm over another, but not inconsistent with an efficiency based definition of competition[46].

It is noteworthy that the order consolidation rules which the Division views as anticompetitive had their genesis before the NYSE became the dominant market for equity trading -- these rules originated as part of the Buttonwood Agreement in the late 18th century. Since anticompetitive devices are self-defeating in competitive markets, it is unlikely that the **raison d'etre** of order consolidation rules is to deter competition. Furthermore, since the NYSE emerged as the dominant firm in a market initially characterized by many competitors, it is likely that its dominance derived from its superior ability in providing transaction services -- otherwise, how did it emerge as the dominant firm? To the extent that the rules governing trading in its market, such as order consolidation rules, account in part for its success, these rules should not be viewed as **per se** anticompetitive.

It is unwise for the Division to regulate voluntary, **intrafirm** contractual agreements, such as NYSE Rule 390, in a market which it characterizes as "highly competitive." If the market is highly competitive, there cannot be any loss of allocative efficiency, since any attempt to set price above marginal cost would be self-defeating. Yet, a mandated abolition of Rule 390 risks a loss of productive efficiency. More generally, this perspective suggests that the Division should limit its "antitrust" regulation to agreements between market centers to restrict output or collude on the pricing of their services. As seen in Figure 1, interfirm collusion results in a loss of allocative efficiency with no countervailing gain in productive efficiency.

(3) *Externalities, Regulation and Property Rights*

The Division's **Report** identifies many purported "market failures" and recommends numerous corrective policy actions. However, as the burgeoning literature on the economics of regulation shows[47], governments, as well as markets, often "fail" to achieve idealized

---

45) Coase (1988), p.9.

46) The effect may be similar to that discussed above with respect to market linkages, that is, if dynamics are considered as well, by infringing on the property right of the established firm, incentives are reduced for investment over the longer term.

outcomes. The Division's **Report** commits the "nirvana" fallacy described initially by Demsetz:

> The view that now pervades much public policy economics implicitly presents the relevant choice as between an ideal norm and an existing "imperfect" institutional arrangement. The nirvana approach differs considerably from a comparative approach in which the relevant choice is between real institutional arrangements. ... Whether the free enterprise solution can be improved upon by the substitution of the government or other non-profit institutions ... cannot be ascertained solely by examining the free enterprise solution. The political or nonprofit forces that are substituted for free enterprise must be analyzed and the outcome of the workings of these forces must be compared to the market solution before any such conclusions can be drawn[48)].

In particular, there are costs associated with using government regulation to supplant market outcomes, including the costs associated with (i) collecting and analyzing information, (ii) rent-seeking behavior, whereby interest groups compete for regulations that advance their economic interests, even though the regulations may impair efficiency, and (iii) the creation of institutional or statutory rigidities that may not be easily modified later.

It is widely accepted that an appropriate role for government regulation is to mitigate the effects of externalities. Externalities, in the tradition of Pigou, are said to exist when there is a divergence between the private and social costs (or benefits) of one's behavior. Regulation or taxes often are prescribed as solutions to the externality problem. However, as Coase (1960) showed in a seminal article, a necessary condition for the persistence of externalities is the existence of transaction costs. Without, transaction costs, economic agents will bargain to an efficient outcome. However, as a precondition to bargaining, property rights must be well-defined. Hence, as an alternative to regulation and taxes, some externality "problems" can be resolved most efficiently by creating well-defined property rights, and allowing market forces to determine resource allocation.

The Division's **Report** commits the nirvana fallacy by asserting that the optimal amount of transparency (i.e., the dissemination of real-time trade and price information) in securities markets can only be achieved through regulation. In fact, the Division's approach to transparency not only fails to appreciate that there may be a property rights / contracting solution to the transparency problem, but regulation itself may actually create new externality problems.

As pointed out in Bronfman and Overdahl (1993) and Bronfman (1994), a 1984 SEC ruling, which determined the NASD's obligations to sell real-time information to Instinet, effectively allowed the NASD to charge no more than its costs for the collection and dissemination of

---

47) Seminal work in this area includes Buchanan and Tullock (1962); Stigler (1971); and Peltzman (1976). Also, for a discussion of different nonmarket failures, see Wolf (1979).

48) Demsetz (1969), pp.1 and 2.

quotation data[49]. This policy was consistent with the Congressional sentiment at the time that exchanges should be treated as public utilities. Congress was less concerned with compensating the producers of information and more concerned with assuring that all securities information processors distribute and publish the information on **fair and reasonable terms**. This ruling has had the effect of restricting the freedom of a market center to price its product. Consistent with public utility regulation, the SEC ruling encouraged cost-based pricing regulation in the dissemination of real-time trade information, since the law regards the transaction prices produced by exchanges as being in the public domain.

The present regulatory policy towards transparency contrasts sharply with a property rights based approach which previously existed. Mulherin, Netter, and Overdahl (1991) and Bronfman and Overdahl (1993) trace how the rights to trade and quote information in financial markets evolved in the 19th century after the advent of the telegraph. The telegraph facilitated free-riding by "bucket shops" off the prices discovered in primary markets, which set off legal disputes concerning the ownership rights to information about securities and futures prices. These disputes culminated in a 1905 decision in which the Supreme Court ruled that information about trades is the property of the exchanges on which the trades occur[50]. Once the ownership rights to this information were defined, exchanges were free to sell these rights to vendors and other market centers at freely negotiated prices. Hence, determining how much real-time information should be disseminated need not be a problem for the SEC, provided rights to this information are well-defined[51]. However, by viewing this information as being in the "public interest," and subjecting exchanges to cost-based pricing in the dissemination of this information, the SEC has created a public goods like problem where one need not exist.

A disadvantage of a regulatory solution to the transparency problem is that the Division adopts the view that transparency is an unambiguous good, and ignores the costs associated with greater transparency. One disadvantage of mandating greater transparency can be seen by observing order flow between international securities markets with different levels of transparency[52]. For example, the Securities and Investments Board in London requires only

49) This SEC ruling is dated April 17, 1984; it appeared in the **Federal Register,** Vol. 49, No. 80, April 21, 1984. The SEC ruled that the only costs that were relevant in determining the fees for the sale of this information are the costs incurred by the NASD in collecting the information and passing it onto vendors.

50) **Board of Trade of the City of Chicago v. Christie Grain and Stock Company,** (1905) 198 U.W 236. In deciding in the Board of Trade's behalf, Justice Holmes wrote that "the plaintiff's collection of quotations is entitled to the protection of the law."

51) The **Report** (p.25) takes on Bronfman and Overdahl's arguments that primary markets be compensated for the provision of price discovery by appropriate fees for price and quote information. The **Report** takes the position that this argument ignores the substantial revenues and benefits that the primary markets currently receive, and that such a position would force regulation into rate-making procedures.

that firm quotes be displayed on the Stock Exchange Automatic Quotation (SEAQ) system screens. Transaction prices and volume information are released, but with a lag, currently as long as five business days for the largest trades. Because the London market is a dealer market, NYSE members who route their orders to London when the NYSE is closed do not run afoul of NYSE Rule 390. London's International Stock Exchange (ISE) thus competes directly with the NYSE for order flow (and the resulting trading volume). Competition arises, in part, because of differences in the microstructure of the market centers. The willingness of dealers in London to put large amounts of capital at risk allows large traders to minimize the market impact of their orders, and thus reduces an implicit cost of trading. Because the dealers take large positions to accommodate these traders, the exchanges differ significantly in terms of the level of transparency; a dealer who has a large inventory (long or short) will want to be able to unwind that position before the trade is publicly revealed. However, these differences in the levels of transparency create problems for the NYSE.

In addition to the cost imposed on the NYSE because of these differences in transparency and the loss of order flow to London, the asymmetry means that the more opaque exchange, London, has better information. While market professionals in London can monitor the prices set on the NYSE, the NYSE is less aware of market activity in London. At least some portion of the costs that the opaque market imposes on the retail market could be recovered if the "transparent" NYSE could charge appropriately for the contemporaneous dissemination of its market data.

By regulating both the level of transparency and the price at which the information can be sold, Congress, through the SEC, has prevented market-based contracting solutions to informational problems between competing exchanges, necessitating more complicated regulations[53)] By precluding a market solution, the dual regulation (of the level of transparency and the price at which the information can be sold) has created a public goods type problem, with the regulators now facing the problem of how to regulate the proprietary trading systems, several of which free-ride off the price discovery of the NYSE.

III-3-2 Critique of Market 2000

Earlier in the Section, we criticized the Division's **Report** for lacking a conceptual framework to govern its policy recommendations on issues pertaining to the governance of SROs and PTSs, competition, and externalities. In this Section, we describe and comment on specific recommendations made by the Division under the four headings in the **Report:** transparency, fair treatment of investors, fair competition, and open market access.

---

52) The discussion on the disadvantages of mandating a level of transparency which follows is drawn largely from Bronfman and Overdahl (1993).

53) For example, the SEC has approved lower levels of transparency for the after hours crossing session on the NYSE, in part to help the exchange recapture some portion of the order flow that has migrated to London. And the proposed rule-making in the **Market 2000 Report** recommends eliminating this exception to its position on transparency.

(1) *Transparency*

Report's Recommendations. The **Market 2000 Report** (**Study IV, Transparency**) defines transparency 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[54]. The **Report** notes that:

> The Division (of Market Regulation) believes that transparency plays a fundamental role in the fairness and efficiency of 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[55].

One of the **Report's** conclusions is that the "Division believes that the Commission must lead the markets again to enhance transparency[56]." The Division's recommendations in this area focus on the disclosure of customer interest within a given market, the exposure of customer orders across markets, narrowing the minimum spread variation, and public reporting of after-hours trades and of overseas trades of U.S. equities. We expand on these recommendations briefly below and then include some comments of our own immediately after.

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). 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 recommends that the SROs develop proposals to reduce the minimum price variation (tick size) lower than the current $O.125, suggesting either one-sixteenth, or the adoption of a decimal pricing system, similar to that in effect in foreign equity markets and in the derivative markets. The **Report** draws support for its recommendation from the fact that much of the trading in stocks on PTSs is done in stocks quoted in eighths, by parties that trade inside the quotes at one-sixteenth or finer.

The **Report** also raises concerns about the limited information available for trading on SelectNet, a screen-based trading system on NASDAQ workstations, offered to NASD members to facilitate negotiation of securities transactions through computer automation. SelectNet orders are not always disseminated over all NASDAQ terminals. Instead, market makers using SelectNet may display orders selectively to other market makers or may broadcast orders to other market makers or to all NASD members. (In other words, under the current system, discretion is left to the market maker as to how he or she wants to negotiate the order). The Division also recognizes that the mandatory display of all SelectNet

---

54) **Market 2000,** note 12, p. IV-1.

55) Ibid, p. 17.

56) Ibid.

orders could discourage the use of SelectNet for larger orders. The **Report** states this is a factor for the NASD to consider in determining how best to increase disclosure.

Trading that takes place in U.S. markets during regular hours is captured by public trade reporting. However, a growing amount of trading is occurring after regular trading hours and in foreign markets and therefore escape public reporting requirements. The **Report** recommends that the SROs develop a transaction reporting system to capture trades in U.S. equities executed outside regular trading hours.

Both the NYSE and the General Accounting Office have recommended that the Commission reconsider an order exposure rule, and the **Report** encourages the NYSE together with other SROs to coordinate the development of an order exposure rule for Commission consideration. In developing such a rule, the **Report** notes that order exposure rules may change the pricing of market maker services. That is, if market makers earn less income because they expose orders and execute fewer trades at the quotes, they can be expected to charge higher commissions. The **Report** suggests that while customers may be no better off financially, the markets as a whole may improve because of greater information on the flow of trading interest.

Authors' Critique. We consider the Division's suggested rule makings in the area of market transparency in the spirit of our comments earlier in the section. Several of the Division's recommendations can be viewed as attempts to redistribute the property rights to information. For example, the Division's recommendations can be interpreted as suggesting that the property rights to an order be reassigned from the SROs to customers. The Division leaves to the markets the determination of the precise terms and conditions for the display of limit orders, recognizing that there may be customers who do not want their orders exposed. This recommendation appears to encourage private contracting as a means of resolving problems related to customer orders.

On the other hand, the rulings suggest some hesitation about the effectiveness of competition in the industry. The **Report** notes:

> that 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[57].

Two factors are worth noting here: (i) competition among market centers may well lead the NASD to respond out of self-interest ev&n in the absence of SEC rule-making; and (ii) SEC regulations prevent retail investors from using the PTSs. We also question whether the recommendations encouraging eventual decimalization of stock prices are wise, given that this is largely a business decision which should be governed by competition among market centers. If decimalization is desired by the customers of an exchange, and it is cost-effective

57) Ibid, p. 18.

to provide it, the exchange will have strong private incentives to adopt decimalization without prodding or rule-making from the SEC.

SEC rule-making with respect to making markets transparent maintains the correctness and value of its position. However, the question of why this "unambiguous good" is not being adequately supplied deserves attention. If institutions prefer the anonymity of foreign markets, U.S. markets are perhaps better able than the SEC to assess the trade-offs associated with greater transparency.

Lastly, the order exposure rule raises concerns similar to the cautions we raised earlier in the section with respect to the expansion of ITS. Our comments there note that the linkage may reduce a market center's ability to capture a return on its investment in price discovery. Similarly, if one of the dimensions along which competition takes place between market centers is in attempts to capture order flow, an order exposure rule can reduce the number of dimensions along which competition can occur. The impact of the rule on property rights also needs to be addressed. For example, if the NYSE develops a centralized facility, it will capture order flow from other market centers. From this perspective, this consolidated limit order book may have the effect of weakening the competitive thrust from other market centers. Other questions that should be addressed are whether participation will be (i) mandated or voluntary and (ii) left to the wishes of customers.

(2) *Fair Treatment of Investors*

Report's Recommendations. A broker-dealer has a duty to seek to obtain the best execution for its customer orders, that is, a broker-dealer must seek to obtain the most favorable terms under the circumstances for a customer's transaction, one of the cornerstones of market integrity. The rapid increase in payment for order flow, soft dollar practices, the use of automatic routing procedures, and the use of price improvement are addressed in the **Report.** Some of the suggestions on transparency discussed above are in part designed to reduce payment for order flow by narrowing spreads. In the main, the **Report** relies on greater disclosure to customers of these practices and of improved monitoring of execution quality by broker-dealers,

Authors' Critique. We return once again to the involvement of the SEC in this level of operation if securities markets are viewed as business enterprises. On the one hand, the markets may have very little incentive to disclose practices that may have the appearance of harming individual customers. On the other hand, the empirical evidence is mixed. Evidence reported below suggests that there may be some loss to investors from the payment for order flow; however, the total dollars involved are relatively small compared to the total dollar volume of trade. Lee (1993) finds that for NYSE-listed securities, the price obtained on similar adjacent trades can differ by location of execution. In particular, the results for 1988 and 1989 suggest that Cincinnati, Midwest, and the NYSE executions are generally more favorable to the initiator of the trade than executions on the other exchanges. The average price difference between the NYSE and the matched off-board trades is 0.7 to one cent per share. In total dollars, the aggregate excess cost for off-board trades is estimated at $13 million to $18 million for 1988 and $36 million to $47 million for 1989. Lee notes that while investors appear to pay more for off-board executions, brokers who receive order flow inducements might indirectly pass on these savings through lower commission fees.

The **Report** also points out that 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. This common law principle has been incorporated into case law and Commission decisions under the federal securities laws. 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 federal securities laws. As noted earlier in the **Report**, the Commission has not promulgated a separate best execution rule or explicitly defined best execution. Self-regulatory organizations have prescribed rules or provided interpretive guidance concerning their members' duty to obtain best execution of customers orders.

Nissen (1991) notes that in response to the need to define a broker's fiduciary duties in a principled manner, the courts increasingly have turned to contract law principles. Rather than imposing new broad fiduciary duties on all brokers, courts have looked at the contract between customers and brokers as the source for the broker's duties. Under this theory, a broker's fiduciary duties depend upon what he undertook to do for the customer, and therefore they may be different for different brokers. Rather than rely upon regulation, the Division would be wise to let this matter be governed by contract law and competition among brokerage firms.

(3) *Fair Market Competition*

Report's Recommendations. The **Report** notes that the alternative markets and services for equity trading have developed in response to investors' desires to utilize prices discovered in primary markets. The primary markets derive benefits from their primary status (e.g., listing fees, majority of the order flow, membership, and information fees), and they also bear many of the regulatory costs. Therefore, the **Report** considers whether the primary markets are saddled by burdens that affect their competitiveness, While resistant to suggestions that the exchanges deserve compensation for their provision of price discovery, the **Report** suggests that fair market competition can be promoted by fairly allocating regulatory responsibilities among the various market centers. Specifically, the **Report** considers the surveillance and order handling responsibilities for Third Market Trading (issues of self-dealing and safeguards against fragmentation), additional recordkeeping and reporting requirement for PTSs, transaction fees for NASDAQ securities, and the process of reviewing SRO rule or system changes.

As mentioned above, the **Report** also suggests that the Commission amend Rule 19b-4 to accelerate review of routine administrative and procedural modifications. The **Report** maintains that modifications that present restrictive or anti-competitive concerns or raise investor protection issues should still be considered in detail after a notice and comment period. While lowering the burden on the exchanges is clearly the goal, the **Report** is unclear about which areas of exchange governance do not require a notice and comment period. Arguably, almost any change in procedures can have potential implications for investor protection at some level.

Authors' Critique. On a more general level than these specific recommendations is the issue of whether a "level playing field" is an appropriate basis for regulating market structure. The determination of the appropriate level of regulation is a concern shared by a number of securities market regulators. Among the criteria that have been proposed are (i) an "institutional approach" followed by the SEC which regulates exchanges differently than broker-dealers, even if they perform similar functions, (ii) a functional approach advocated by the Commission des Opérations de Bourse in France (i.e., all systems should be regulated equally if they perform the same functions), (iii) that the regulatory scheme is a function of the market microstructure (Bronfman and Lawton (1993)), and (iv) that the trading public is the key determinant of the appropriate regulatory regime (basis of the exemptive authority granted to the Commodity Futures Trading Commission under the **1992 Futures Trading Practices Act**). In opposition to many of these is the argument for a "level playing field" in order that regulation not impose differential costs on market centers putting some at a competitive disadvantage relative to others.

For instance, SROs have certain statutory obligations not imposed on alternative trading systems; that is, proprietary trading systems (the Arizona Stock Exchange) and systems regulated as broker-dealers (POSIT and Instinet) operate under a different regulatory regime. For example, in addition to the responsibility of assuring that the federal securities laws are not violated, the exchanges have to file proposed rule changes with the Commission for approval. Specifically, Section 19(b)(2) states that no changes in the rules of any self-regulatory organization may become effective until the SEC finds it to be consistent with the registration requirements for the organization and purposes of the **1934 Act**. This often requires a period for public comment as well.

There are historical parallels between the current debate and that which took place at the time **1975 Amendments** were considered. For example, during hearings on the Structure, Operation, and Regulation of the Securities Markets that took place in December 1971, the U.S. Department of Justice stated that the issue was whether to have a regulated monopoly or whether to allow the forces of competition to make most of basic economic allocations (p. 3134-56). The **Martin Report** also referred to "unequal regulation:" with respect to (1) specialists, (2) institutional membership on various exchanges; (3) the use of reciprocal commission splitting arrangements; (4) rule 394 - off-board trading by members of the NYSE; (5)requirements to print all executions on the tape; (6) restrictions on short sales of odd-lots. In the statement of Richard A. Wescott, Vice President Mid-America, Inc., prepared on behalf of the Committee for the **Martin Report**, he refers to "unequal regulation:"

> The existence of unequal regulation grant(s) a competitive advantage to certain groups within in the industry. ... Such regulation as exists is unequal in that it imposes different duties and responsibilities on participants. ... We do not want to

> imply that the regulation of regional exchanges or the National Association of Securities Dealers is inadequate. Such regulation as exists is unequal.

And in the context of the **1975 Amendments**, the **Report** from the Senate Committee on Banking, Housing, and Urban Affairs stated,

> The subject of equal regulation has been a matter of considerable controversy. ... In the Committee's view, equal regulation is appropriate only if the phrase is understood to mean that persons enjoying similar privileges, performing similar functions, and having the potential for similar market impact are treated equally. ... that the Commission regulate comparably those market makers and specialists enjoying the same opportunities, having the same market power, and subject to the same conflicts of interest.

Donald M. Fueuerstein (former chief counsel, Institutional Investor Study) argued:

> To the extent that public customer is unsophisticated, as are most individual investors, the protection of agency representation is important. ... On the other hand, sophisticated investors, such as institutions, are able to fend for themselves[58)].

The issue can be restated in efficiency terms. Efficient regulation takes into account both the costs and benefits of its rule-making. As analyzed in Albrecht, Bronfman, and Messenheimer (1994), the efficient level of regulation will differ according to the peculiarities of the trading system and the sophistication of the trading public. The same level of regulation will not provide the same benefits in a market that is predominantly institutional as it will in a market that is largely made up of retail investors. Similarly, a market structure that relies on intermediaries to execute customers' orders will require a different level of oversight than one where trades take place between principals.

(4) *Open Market Access*

Report's Recommendations. The **Report** observes that "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." The **Report** also notes that certain exchange rules are keeping participants from accessing all markets and suggests that these rules be modified, including NYSE Rule 390 concerning off-board trading of NYSE-listed securities (to enable the after-hours trading of listed securities by NYSE members); NYSE Rule 500 and American Stock Exchange Rule 18 concerning delisting requirements; and extending the ITS-CAES link to

58) U.S. Senate, Committee on Banking, Housing and Urban Affairs, **Hearings on the Structure, Operation, and Regulation of the Securities Markets,** December 1, 1971, p. 2973.

include securities not covered by Rule 19c-3 under the **1934 Act.**

Authors' Critique. Earlier in the section, we suggest that all of the market centers should be viewed as business enterprises. From this perspective, an enterprise forms contracts which are deemed advantageous for the efficient functioning and performance of the business. The particular organizational form that has evolved into the present structure of the NYSE has clearly served the exchange well. While Rule 390 may appear to have anti-competitive aspects, in its present form, it is limited to the trading of NYSE members' proprietary trades. Although the SEC has limited its recommendations to after hours trading, the basis for its interference in the internal affairs of an exchange, which by its own admission, operates in a highly competitive environment, is unclear.

It is worth noting that the Division's suggestion for modifying NYSE Rule 500 and American Stock Exchange Rule 18 is inconsistent with an earlier SEC position that competition for listings was quite robust. The position concerned a controversy in the 1980s over SROs' rules governing dual class recapitalizations, in which listed companies recapitalize from one class of common stock (with one share, one vote) to multiple classes of common stock with different voting rights. Some argue that these recapitalizations are highly effective takeover defenses, since they effectively transfer corporate control from outside investors to corporate managers. While these transactions violated the NYSE's "one share, one vote" rule, they were permissible on both the AMEX and NASDAQ.

During the hostile takeover wave of the 1980s, many NYSE-listed companies threatened to delist from the NYSE and relist on the AMEX or NASDAQ in order to adopt this purported takeover defense, unless the NYSE changed its listing standards to allow multiple classes of common stock with different voting rights. The SEC adopted a rule (which was later struck down by the courts) to curtail dual class recapitalizations, on grounds that competition for listings between the NYSE, AMEX, and NASDAQ was resulting in a "race to the bottom" that could result in undesirable transfers of corporate control. This position seems to acknowledge that delisting requirements are not as onerous as the Division portrays in the **Market 2000 Report.**

IV. Conclusion

Much of the force for change in U.S. equity markets today is driven by (i) the changing demands of institutional investors and (ii) technological innovations which have facilitated the entry of new market centers such as the Arizona Stock Exchange, POSIT, and Instinet. Both of these factors account, at least in part, for a substantial change in the industrial organization of U.S. equity markets in recent years. This change has been characterized, most prominently, by a large decline in the share of equity trading accounted for by the New York Stock Exchange.

The Division of Market Regulation's **Market 2000 Report** addresses an appropriate question: is the existing regulatory structure suitable for today's equity markets? Unfortunately, its response consists of proposals for more disclosure, changes in rules and procedures of

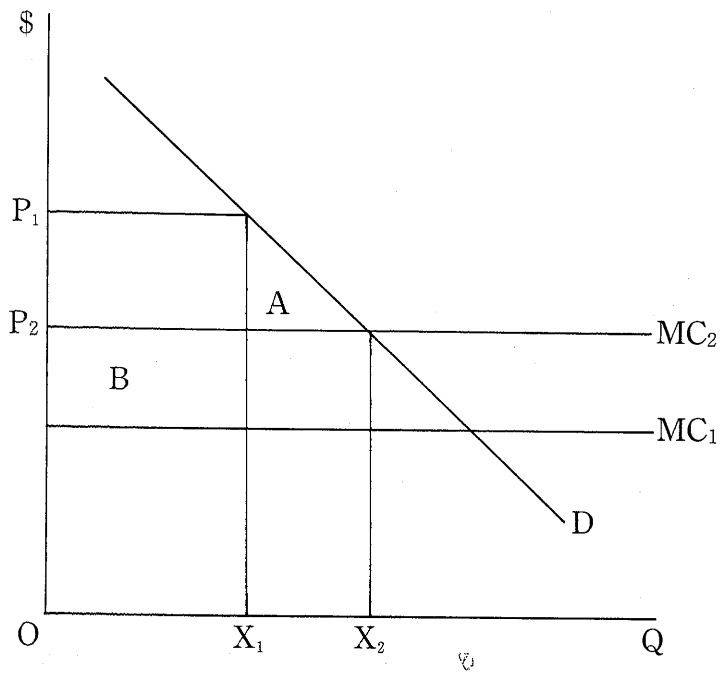
SROs, and enhanced market linkages. On balance, the Division envisions the SEC as being actively involved in regulating market structure as the year 2000 approaches.

With the remarkable changes in the securities industry, we question the wisdom of continued SEC involvement in the management of both (i) the business decisions of market centers and (ii) competition between market centers. The increased contestability of the securities industry greatly weakens the natural monopoly rationale that exists for much of the SEC's role in regulating market structure. Furthermore, the SEC's continued involvement in the governance of self-regulatory organizations (and to a lesser extent, the proprietary trading systems) imposes a highly bureaucratic structure on these enterprises at a time of rapid technological change in the industry. Given the natural risk aversion of regulators, this is likely to impede innovation, and work contrary to the public interest.

The SEC recently reaffirmed its position that the rules and procedures of market centers should be subject to federal regulation, and not left to market forces. In a December 28, 1993 comment letter to the Commodity Futures Trading Commission (CFTC) relating to petitions from futures exchanges for exemptions from some regulations, the SEC wrote that such exemptions would leave the exchanges' "surveillance and enforcement programs solely to their business judgement. This is contrary to the system of self-regulation in the financial markets. Self-regulatory organizations should have ongoing regulatory responsibilities that are overseen by the CFTC, and not merely business discretion in this area." In contrast to our arguments for a smaller SEC role in the governance of SROs, the SEC continues to advocate a rather large role.

Given its Congressional mandate, the SEC's position on these issues is not surprising. However, Congress ought to reconsider whether there remains a legitimate role for the SEC to play in regulating market structure. The **1934 Act** and the **1975 Amendments** provide the SEC with a mandate to regulate market structure. Given these constraints, it is not surprising that the Division's **Report** goes out of its way to emphasize that its recommendations promote the multiple goals laid out in the **1975 Amendments**. Rather than focusing on the SEC's proposals, which are likely to remain incremental, we encourage a new debate about the appropriateness of the Congressional mandate, and especially, the **1975 Amendments.**

FIGURE 1



References

Albrecht, William, Corinne Bronfman, and Harold Messenheimer, "Regulatory Regimes: The Interdependence of Rules and Regulatory Structure," in Andrew Lo, ed., **Industrial Organization and Regulation of the Securities Industry,** NBER Conference Volume, University of Chicago Press, forthcoming, 1994.

Baumol, William J., John C. Panzar, and Robert D. Willig, **Contestable Markets and the Theory of Industrial Structure,** Harcourt Brace Jovanovich, 1988.

Baumol, William J., and J. Gregory Sidak, **Toward Competition in Local Telephony,** The MITPress, 1993.

Becker, Brandon and Janet Angstadt, "Market 2000: A Work in Progress," in Robert A. Schwartz, ed., **Global Equity Markets: Technological, Competitive, and Regulatory Challenges,** Irwin Professional Publishing, forthcoming, 1994.

Blume, Marshall E. Jeremy J. Siegel, and Dan Rottenberg, **Revolution on Wall Street: The Rise and Decline of the New York Stock Exchange,** W.W. Norton, 1993, p. 253.

Bork, Robert H., **The Antitrust Paradox,** Basic Books, 1978.

Bronfman, Corinne, "If it Ain't Broke, Don't Regulate It," in Kenneth Lehn and Robert Kamphuis,eds., **Modernizing U.S. Securities Regulation,** Irwin Professional Publishing, 1992.

Bronfman, Corinne and James A. Overdahl, "Would the Invisible Hand Produce Transparent Markets?," **Commodity Futures Trading Commission Working Paper,** 1993.

Bronfman, Corinne and John Lawton, "Market Structure and Regulatory Cost: The Effect of a Single Price Auction," **Commodity Futures Trading Commission Working Paper,** 1993.

Buchanan, James and Gordon Tullock, **The Calculus of Consent,** University of Michigan Press, 1962.

Coase, R.H., "The Problem of Social Cost," **Journal of Law and Economics** (1960).

Coase, R.H., **The Firm, the Market, and the Law,** University of Chicago Press, 1988.

Cochrane, James L., Brian McNamara, James E. Shapiro, and Michael J. Simon, "The Structure and Regulation of the New York Stock Exchange," **Journal of Corporation Law**

(Spring 1993).

Demsetz, Harold, "Information and Efficiency: Another Viewpoint," **Journal of Law and Economics** (April 1969), pp. 1—22.

Division of Market Regulation, U.S. Securities and Exchange Commission, **Market 2000: An Examination of Current Equity Market Developments** (January 1994).

Doherty, David P., Arthur S. Okun, Steven F. Korostoff. and James A. Nofi, "The Enforcement Role of the New York Stock Exchange," **Northwestern University Law Review** (85, 3). 1991.

Institutional Investor Study Report of the Securities and Exchange Commission, H.R. Document No. 64,92nd Cong., 1st Sess., pt. 1 (1971).

Jensen, Michael C. and William H. Meckling, "Specific and General Knowledge, and Organizational Structure," in Lars Werin, ed., **Contract Economics,** Blackwell, 1992, pp. 251—274.

Khademian, Anne M., **The SEC and Capital Market Regulation,** The University of Pittsburgh, 1992.

Kleidon, Allan W. "Market 2000," in Kenneth Lehn and Robert Kamphuis, eds., **Modernizing U.S. Securities Regulations,** Irwin Professional Publishing, 1992.

Lee, Charles M.C., "Market Integration and Price Execution for NYSE-Listed Securities," **Journal of Finance** (July 1993), pp. 1009—1038.

Muiherin, J. Harold, Jeffry M. Netter, and James A. Overdahl, "Prices are Property: The Organization of Financial Exchanges from a Transaction Cost Perspective," **Journal of Law and Economics** (October 1991), pp. 591—645.

Nissen, William J., "Defining the Scope of a Broker's Fiduciary Duty with Contract Law Principles," **Commodities Law Letter** (December 1991) .

Oesterle, Dale, Donald Arthur Winslow, and Seth C. Anderson, "The New York Stock Exchange and its Out-Moded Specialist System: Can the Exchange Innovate to Survive?," **Journal of Corporation Law** (Winter 1992), pp. 223—311.

Peltzman, Sam, "Toward a More General Theory of Regulation," **Journal of Law and Economics**(August 1976), pp. 211—240.

Securities and Exchange Commission, Policy Statement on the Structure of a Central Market System(March 29, 1973), reprinted in Securities Regulation and Law Reporter (BNA), No. 196 at d-1 (April 4, 1973).

Securities and Exchange Commission Release No. 34-30920 (July 18, 1992),

Shapiro, James E., "Recent Competitive Developments in U.S. Equity Markets," NYSE Working Paper93-02 (May1993), p. 1.

Statement of the Securities and Exchange Commission on the Future Structure of the Securities Markets, FR 5286, 1972.

Stigler, George J. "The Theory of Economic Regulation," Bell Journal of Economics and Management Science (Spring 1971), pp. 3-21.

"Symposium on the Structure and Governance of Enterprise," Journal of Financial Economics, Parts I and II (September1990).

U.S. Senate, Committee on Banking, Housing and Urban Affairs, Hearings on the Structure, Operation, and Regulation of the Securities Markets, December 1, 1971.

Williamson, Oliver, "Economies as an Antitrust Defense: The Welfare Tradeoffs," American Economic Review (1968).

Wolf, Charles, Jr., "A Theory of Nonmarket Failure: Framework for Implementation Analysis," Journal of Law and Economics(April 1979), pp. 107-140.