GOVERNANCE OF MARKETS IN THE UNITED STATES AND THE EUROPEAN UNION: A COMPARATIVE SURVEY OF SEC REGULATION NMS AND THE EU MARKETS IN FINANCIAL INSTRUMENTS DIRECTIVE

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and the European Union:
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Financial Instruments Directive

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Abstract

Regulation NMS and MiFID were proposed in the U.S. and the EU, respectively, in the same year of 2004 and are now dramatically changing U.S. and EU securities market infrastructure and practices. They possess a large number of similarities and address common issues that markets and regulators are facing on both sides of the Atlantic. Through an examination of Regulation NMS and MiFID, this Article conducts a themed comparison of the governance of securities markets in the U.S. and the EU by history, regulatory governance and supervisory developments, market infrastructure issues of fragmentation and transparency, and long-term consequences for market participants. It identifies, despite the two rules’ different historical origins and regulatory philosophies, a large number of convergence trends in regulation and supervision, including the trend from principle-based regimes to rule-based regimes, that have developed, demonstrating that the U.S. and EU markets are in fact quite similar. This regulatory convergence could one day serve as the foundation for regulators in building an integrated trans-Atlantic securities market.

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I. INTRODUCTION

In 2004, the U.S. Securities & Exchange Commission in an ongoing effort to create and facilitate a “national market system” proposed Regulation NMS, which led to an extensive rule-making process that lasted over a year. Across the Atlantic, the European Union (“EU”), as part of its plan of integrating its financial markets, adopted in the same year the Markets in Financial Instruments Directive (“MiFID”). At first glance, these new rules appear to be mostly IT and compliance exercises. In fact, they will dramatically affect U.S. and European market infrastructure.

Regulation NMS presents primarily four new rules concerning trade-throughs with a best price requirement, market access, sub-penny quoting and market data. While MiFID, as a self-standing regulatory regime, is overhauling the European financial markets and covers a broad range of issues, including the new European passport, the abolition of the concentration rule, best execution and price transparency.

The origins of Regulation NMS began with the 1975 Amendments, passed by Congress in response to the “Back Room Crisis” of the 1960s and other trading scandals and self-regulatory failures. Congress mandated the Securities & Exchange Commission (the “SEC”) “to facilitate the establishment of a national market system,” creating a system of competing markets. With its new Congressional mandate, the

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2 In this Article, the term “European Union” (“EU”) is used to indicate the geographic, economic and political aspects of the EU. Whereas, the term “European Community” (“EC”) is used in a strictly legal sense to refer to the source of legislation in which the EC is part of the first pillar of the EU.
SEC began focusing its attention on modernizing market infrastructure. Meanwhile, the EU was in the midst of creating a new single common market, guided by the four Treaty principles of free movement of goods, free movement of services and freedom of establishment, free movement of persons, and free movement of capital. It was not until more than a decade later, with the 1986 Single European Act, the EU truly began the process of integrating its financial markets. This integration rapidly accelerated with the adoption of the Financial Services Action Plan (“FSAP”) in 1999, which led to the adoption of several new comprehensive directives crowned by the most ambitious one: MiFID.

Although Regulation NMS and MiFID come from different origins and political motivations, they were adopted in the face of similar competition challenges of globalization, technological advances and deregulation. Competition between market centers in both the U.S. and Europe have intensified, triggering a number of trends, including the demutualization and consolidation of stock exchanges, the emergence of electronic markets and alternative trading systems. The two systems also cannot ignore the reality of their increasing financial trans-Atlantic interdependence and must face the challenges of facilitating and supervising the substantial growth of international financial conglomerates, transactions and activities.

In response to similar pressures, the U.S. and the EU have chosen different yet fundamentally similar approaches. They have both chosen the competing markets model and are both trying to create a level playing field for all types of market centers. With the elimination of concentration in exchange trading, they both must address the enormous issue of fragmentation and its corresponding difficulties. Although both sides are trying to create an integrated market out of disparate trading centers through the tool of trade transparency, they chose significantly different paths. The EU chose a market-forces approach, respecting the property rights of market centers generating the data. The U.S. chose a public goods approach, requiring all market centers to feed data into a single data consolidator plan consisting of joint

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5 Single European Act (1986) [hereinafter “SEA”].
8 A “market center” meaning an order execution facility, national securities exchange, or national securities association.
industry plans. Despite these different approaches, they may very well end up with similar results in the future due to market forces or the SEC or the EU needing to modify their approaches along the way. Either way, it is clear that both sides are experimenting with different solutions.

The U.S. market structure is essentially a dual auction/dealer system, dominated by the New York Stock Exchange (now a mixed manual and automatic auction exchange with a trading floor) and Nasdaq (an electronic dealer market), with a central settlement and clearing system. It has a longer history of decentralization and deregulation, which permitted the entry of new market players, including electronic communication networks ("ECNs")\(^9\) and internalizers. Whereas the EU, besides the hybrid dealer/auction London Stock Exchange, has mostly electronic, continuous auction exchanges, different national regulatory regimes and a fragmented and expensive settlement and clearing system.

Not only do the U.S. and the EU have different market structures, but they also have different regulatory structures. The U.S. has a two-tiered system of competing self-regulatory organizations overseen by the SEC. The EU is still developing an EU-wide financial regulatory regime, which is now fairly harmonized, across its 27 member states, but supervision is still constrained by national jurisdiction.

Despite these structural and regulatory differences, the U.S. and the EU have now adopted rules that will not only radically alter their market structures but also dramatically affect their supervisory models and regulatory philosophies. Although it is always a delicate process to compare rules from two different systems, the globalization of financial activities, growing financial interdependence and trans-Atlantic mergers, such as the New York Stock Exchange merger with Euronext, makes a comparison of Regulation NMS and MiFID particularly pertinent. Moreover, this comparative overview could serve as a useful contribution towards the EU-U.S. dialogue on regulatory convergence.

\(^9\) The U.S. and EU use different terms to describe fairly the same animal. In the U.S., alternative trading system (ATS) is the term used and includes electronic communication networks (ECNs). ATSs are electronic systems that bring together potential buyers and sellers and include call markets, matching systems, crossing networks and ECNs. In the U.S., ECNs are ATSs that have registered with the SEC as either a broker or an exchange. See Hal McIntyre, *ECN and ATS…The Electronic Future*, White Paper for Wall Street Technology Association (September 1999), available at [http://64.33.34.189/library/ecn_at](http://64.33.34.189/library/ecn_at). In the EU, multi-lateral trading floor (MTF) is the term used by MiFID to describe ATSs and thus ECNs as well.
This Article conducts a comparative survey of Regulation NMS and MiFID and highlights some of the common debates surrounding the new rules. It argues that Regulation NMS and MiFID are reversing the previous trend in the privatisation of regulation and that they are indicative of convergence in the governance of U.S. and EU markets. Part II of this Article describes the historical background of the new rules. This part identifies historical parallels leading to the adoption of Regulation NMS and MiFID in spite of their different political origins. Part III describes the regulatory and supervisory consequences of the two rules. It argues that the rules are indicative of a global trend in securities law moving from standards-based self-regulation regimes to rule-based direct formal regulation regimes, but then argues in turn that the new rule-based regimes improve market participants’ once traditionally self-regulatory practices. Part IV highlights two of the most important debates common to Regulation NMS and MiFID: the fragmentation versus consolidation debate and the closely-related debate of price transparency. It describes the role fragmentation plays in the U.S. and EU market infrastructure and the tools chosen to combat its undesired effects. It also discusses the utility of price transparency and the different approaches chosen by the U.S. and the EU regarding market data consolidation and dissemination. Part V outlines the long-term consequences for stock exchanges, ECNs, internalizers and firm intermediaries. It describes the pressures for stock exchanges to automate, the burdens ECNs and internalizers must face upon becoming subjected to the same regulations as stock exchanges, and the increased ambiguity in firms’ liabilities to clients. Part VI concludes the Article.
II. HISTORICAL PARALLELS

SECTION I. DIFFERENT ORIGINS

A. The American Experience: Self-Regulation Failures and the National Market System

The two fundamental principles of American federal securities laws promoted by the U.S. Securities Exchange Act of 1934 (the “Exchange Act”) are competition and self-regulation. With these two principles, Congress created a system of competing self-regulated exchanges responsible for creating their own rules and for monitoring their issuers and broker-dealers. In turn, these self-regulated organizations (“SROs”) are overseen by the SEC. Congress believed this system of self-regulation would promote competition between different SROs and their respective regulatory regimes. Furthermore, the markets would be better run by the industry itself. Nevertheless, limitations in self-regulation were exposed in the “Back Room Crisis” of 1968 and 1969 when the paper process of settling and clearing, which required physical creation and transfer of a large number of documents, failed to keep up with the exponential growth of trading volume. This back-office crisis in paper

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work inefficiency resulted in a large number of failed trades, fraud, theft, and the closure of over two hundred brokerage houses. This industry-wide collapse of recordkeeping procedures was the most severe failure of self-regulatory controls since the enactment of the Exchange Act.

Congress conducted extensive hearings and asked the Securities and Exchange Commission ("SEC") to study the problems plaguing the U.S. securities markets. The SEC responded that there should be a creation of a "central market system" characterized a national communications system subjecting all exchanges and their specialists, over-the-counter market-makers and anyone dealing securities to the forces of competition through prompt reporting of trades. In 1972, the SEC issued four objectives for a central market system:

1. the implementation of a nation-wide system for disclosure of market information to make universally available price and volume in all markets and quotations from all market makers;
2. the elimination of artificial impediments, created by exchange rules or otherwise, to dealing in the best available market;
3. the establishment of terms and conditions upon which any qualified broker-dealer can attain access to all exchanges; and
4. the integration of third-market firms into the central market system.

After a number of advisory committee reports on how to achieve the goal of a nationwide system for disclosure of market information in which exchanges and OTC markets would be linked, the SEC issued a Policy Statement on the Structure of a Central Market System announcing a three-pronged plan to create a system-wide communications system, to facilitate competition by eliminating unjustifiable

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14 Id. at 117 (stating up to forty percent of trades had failed).
15 An estimated $100 to $400 million worth of securities went stolen or missing between 1966 and 1970. Id. at 121.
16 Id. at 120.
17 See Seligman II, supra note 12 at 1366-1367.
20 Id., at 499.
impediments such as NYSE Rule 390, and to create a systemwide specialist limit-order book as an electronic execution system.\(^\text{23}\)

In 1975, Congress sided with the SEC by significantly amending the Exchange Act for the first time since its enactment, authorizing the SEC to “facilitate the establishment of a national market system for securities.”\(^\text{24}\) The 1975 Amendments to the Exchange Act created a national market system that was not a centralized market but instead a system of competing markets.\(^\text{25}\) In Section 11A, Congress stated five basic goals for the functioning of the new system as well as the linking of all markets to facilitate best execution:\(^\text{26}\)

1. the economically efficient execution of transactions;
2. fair competition among brokers and dealers, among exchange markets, and between exchange markets and markets other than exchange markets;
3. the availability to brokers, dealers, and investors of information with respect to quotations for and transactions in securities;
4. the practicability of brokers executing investors’ orders in the best market; and
5. the opportunity, consistent with the provisions in the first and last bullets above, for investors’ orders to be executed without the participation of a dealer.\(^\text{27}\)

Thus, Congress made it very clear that it wanted fair competition between all market players with no trading market favored more than another.\(^\text{28}\) These basic principles for a new national market system promoted the objectives of efficiency, competition, price transparency, best execution, and direct interaction of investor orders.\(^\text{29}\) Yet, the SEC noted that these objectives for the investor’s best interest often conflicted.\(^\text{30}\) Moreover, Congress did not define the term “national market system” nor did it

\(^{23}\text{See SELIGMAN I, supra note 4 at 499.}\)
\(^{24}\text{Id. at 500.}\)
\(^{29}\text{See Proposed Regulation NMS, supra note 25 at 11128.}\)
\(^{30}\text{Id.}\)
provide much detail on how to achieve it. Thus, it was up to the SEC to balance these objectives.

Notwithstanding, in order to promote the development of competition between the members of the National Market System, the SEC cautiously proceeded to make four major changes: the elimination of fixed commissions, the prohibition of “anti-competitive” trading restrictions on exchange members, the granting of unlisted trading privileges and the establishment of intermarket linkages. These changes included the abolition of New York Stock Exchange (“NYSE”) commission rates on May 1, 1975, the rescinding of NYSE Rule 390 in 1999, and the enactment of Section 12(f) of the Exchange Act, which allowed direct competition between exchange specialists and OTC market makers for unlisted securities trading. The final adoption in June 1980 of Rule 19c-3, which prohibited all off-exchange restrictions on exchange-listed securities and opened the door for firms to “internalize” trading in these securities.

In addition, after the loss of investor confidence in the market system during the “Back Room Crisis”, Congress and the SEC had developed a strong interest in electronic forms of trading, such as Nasdaq, which began operations in 1971. This enthusiasm for new electronic ways of trading also extended to electronic ways of reporting. The Policy Statement described a new national system for disclosing price

31 See Seligman II, supra note 12 at 1368; Oesterle, supra note 28, at 622.
32 See Proposed Regulation NMS, supra note 25 at 11128.
33 See Seligman II, supra note 12 for a general history of the SEC’s cautious beginnings.
38 See Off-Board Trading Restrictions Release, supra note 35.
quotations (bids and offers) on exchange traded securities, whereas the SEC previously had only focused on reporting of last sales. The 1975 Amendments led to three new systems of electronic communications linking the different markets: the Consolidated Tape Association (“CTA”), the Consolidated Quotation System (“CQS”), and the Intermarket Trading System (“ITS”). The idea was that these disclosure and communication links would help combat the effects of fragmentation introduced by the 1975 Amendments.

1. Consolidated Tape Association Plan (the “CTA Plan”)

This consolidated system included the Consolidated Tape Association Plan (“CTA Plan”), which disseminates information on securities transactions within 90 seconds of their completion whether on an exchange or on the OTC market for most of exchange-listed stocks. It was created in May 1974 after much NYSE stonewalling and jurisdictional jockeying among the national and regional stock exchanges and the National Association of Securities Dealers (“NASD”). As the only industry proposal submitted to the SEC as a transaction reporting plan, the CTA Plan was to be run by the Securities Industry Automation Corporation (“SIAC”), a subsidiary of the NYSE and the American Stock Exchange (“Amex”). There were criticisms from the regional stock exchanges and Congress about the NYSE’s and Amex’s domination of SIAC and its running of the CTA, but the NYSE strongly defended its plan, arguing its role should be conserved until all markets are subject to the same regulations and duties. In the end, the CTA Plan was accepted and was supplemented by a number of Nasdaq-operated trading systems, which disseminated last-sale data on non-exchange-listed securities.

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40 The Policy Statement described a national system for disclosing price quotations (bids and offers) on exchange traded securities; whereas before, the SEC had only focused on reporting of last sales. See Oesterle, supra note 28, at 619.
41 See Beny, supra note 34, at 415.
42 See Seligman III, supra note 39, at 117.
43 See Beny supra note 34, at 415.
44 The NASD self-regulates the OTC market (Nasdaq).
46 See Seligman III, supra note 39, at 88.
47 A security is subject to this rule if it is considered an “NMS security.” NMS securities include all securities traded on an exchange and OTC securities that were designated as “Nasdaq/National Market” securities. See 17 C.F.R. §240.11Ac1-1(a)(25)(1998); Beny, supra note 34, at 416.
2. Consolidated Quotation System ("CQS")

The SEC also requested proposals for a consolidated quotation system, which the NYSE also strongly disagreed with, arguing that taking such data was an illegal taking of property and that the SEC had exceeded its authority.\(^{48}\) The NYSE found this especially threatening as a consolidated quotation system of quotes, bids, and offers could provide the foundation for a significant diversion of trading from the NYSE and Amex to the regional stock exchanges and the OTC market.\(^{49}\) Furthermore, the SEC proposal would allow third-party vendors to disseminate the information, which would be a taking of the NYSE’s and Amex’s property rights, and it was questionable whether the SEC had the authority to issue such a vendor rule.\(^{50}\)

The CQS was meant to be the cornerstone of the National Market System that would encourage market-maker competition, so the SEC was not sympathetic to the NYSE’s argument that the inclusion of OTC dealer quotations would allow Exchange members to act as upstairs market makers rather than to send orders to the floor.\(^{51}\) Eventually, the 1975 Amendments on June 4, 1975 gave the SEC explicit statutory authority in supervising and overseeing the creation of such a system, which was finally achieved in 1978 through the adoption of Rule 11Ac1-1. The resulting CQS distributed pre-transaction quotation information, especially national best bid and offer prices ("NBBO") for NMS securities\(^{52}\) provided by exchanges and OTC dealers.

3. Intermarket Trading System ("ITS")

In order to allow brokers to take advantage of this new market information dissemination system by routing orders automatically to the market with the best quotation, linkages between the different markets need to be created. In 1978, the SEC proposed a universal message switch, which was dropped after it received a number of criticisms.\(^{53}\) Instead of adopting a universal message switch, such as a Composite Limit Order Book ("CLOB") that would be able to provide system-wide

\(^{48}\) See BLUME I, supra note 13, at 167.  
\(^{49}\) See Seligman III, supra note 39, at 90.  
\(^{50}\) Id. at 91.  
\(^{51}\) Id. at 90-91.  
\(^{52}\) "NMS securities" include all securities traded on an exchange and OTC securities that were designated as "Nasdaq/National Market" securities. See 17 C.F.R. §240.11Ac1-1(a)(25)(1998).  
\(^{53}\) Id. at 94.
linkage of trading through price and time priority.\textsuperscript{54} the SEC approved the Intermarket Trading System (“ITS”). ITS was a communications system between market centers, permitting specialists and floor brokers on one exchange floor to transmit orders to market makers on another exchange floor. It was essentially a member-driven association that preserved the dominance of exchange floors, especially that of the NYSE. ITS provided the SEC with the first opportunity to pressure exchanges to adopt rules prohibiting “trade throughs.”\textsuperscript{55} Due to its limited number of exchange members\textsuperscript{56} and listed securities, ITS never gained much volume and made little impact on the market system.

As for the OTC market, on February 21, 1981, the NASD began operating the Computer Assisted Execution System (CAES), to permit brokers to directly route orders to OTC market makers disseminating quotations within the system. However, very few NMS securities were traded on the CAES system.\textsuperscript{57} Separately, the SEC approved the NYSE’s Designated Order Turnover (“DOT”) system for small orders, which electronically routes brokers’ orders directly to the specialists without using a floor broker.\textsuperscript{58} This system was more successful but was considered too slow for the brokers who had to confirm prices to customers during phone call orders.\textsuperscript{59}

\section*{B. The European Experience: Single Market Integration and the Investment Services Directive}

Rather than being spurred by trading scandals and self-governance failures, the European Union securities markets were being rushed along a path of single financial market integration, beginning with the 1957 Treaty of Rome, stating that freedom of movement of capital will take place only “to the extent necessary to

\textsuperscript{54}See Seligman II, \textit{supra} note 12, at 1369.
\textsuperscript{55}“Trade-throughs” are executions of orders on one exchange when a superior quotation exists on another market. \textit{Id.} at 95.
\textsuperscript{57}See Seligman III, \textit{supra} note 39, at 104.
\textsuperscript{58}See Seligman II, \textit{supra} note 12, at 1369.
\textsuperscript{59}See Seligman III, \textit{supra} note 39, at 108.
ensure the proper functioning of the common market”. Still it was not until the 1986 SEA, that the free movement of capital was considered as important as the free movement of goods and services and the elimination of all barriers to the free movement of capital and free provision of financial services became a principal goal.

The free circulation of capital was finally achieved on July 1, 1990. The introduction of the euro greatly facilitated integration among the European securities markets through the use of a single currency by the different national securities markets. This liberalization of international capital flows and technological advances have led to greatly increased competition between exchanges. The major continental European exchanges had become continuous, electronic order-driven systems while the London Stock Exchange became a hybrid. All these changes triggered a need to revise EU policy on financial regulation, which was one of the last frontiers in European market integration.

The European Commission’s 1985 White Paper “Completing the Internal Market” stated a need “to break down barriers between stock exchanges” and to link them electronically, “so that their members can execute orders on the stock exchange

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61 SEA, supra note 5.
62 See Levasseur supra note 60, at 279.
66 See Ferrarini, supra note 65, at 571.
67 Id. at note 11. The London Stock Exchange has partially replaced its quote-driven system with an order-driven system. “Quote-driven systems” are dealership markets where market makers quote prices at which they are ready to satisfy incoming orders. “Order-driven systems” are auction markets, where prices are determined by a computerized auctioneer in charge of balancing supply and demand. See Marco Pagano & Ailsa Roell, Trading Systems in European Stock Exchanges: Current Performance and Policy Options, 5 Economic Policy 63, 69 (1990) [hereinafter “Pagano & Roell I”]. The NYSE, though, has only recently introduced a mixed system of floor trading and electronic execution. See note 466 infra for more details.
market offering the best conditions to their clients.”69 The White Paper reiterated the use of the two fundamental principles in European financial regulation: “mutual recognition” and “minimum harmonization” in order to achieve its objectives of complete liberalization of capital movement, integration of national markets for financial services, and the creation of a harmonized regulatory framework for the licensing, operation and on-going supervision of financial instruments. After the White Paper was adopted by the Council of Ministers, it formed the basis of the Single European Act of 1986.70

Along these lines, the Federation of European Stock Exchanges, inspired by the U.S. National Market System of 1975, proposed “Euroquote.”71 The objectives of this initiative were to collect and disseminate market information, develop and operate an automated communication network of linkages among the exchanges and their members, and to develop automated facilities in trading, clearing and settlement.72 Germany, though, opposed the project, arguing that private vendors were already providing such services, so the Euroquote proposal was dropped in 1991.73

Meanwhile, despite minimum harmonization of listing rules and securities admission criteria of the earlier Directives,74 there was no harmonization in the regulation of service providers in securities transactions, which would have been necessary to the completion of the internal capital market, until the enactment of the Investment Services Directive (“ISD”)75 in 1992.76

1. Investment Services Directive (“ISD”)

ISD used the principle of mutual recognition to encourage cross border securities activities. When securities intermediaries authorized in their home State carried out securities transactions in another Member State, the host Member State

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69 See European Commission, Completing the Internal Market, White Paper from the Commission to the European Council, COM (1985) 310 final at 6; Ferrarini, supra note 65, at 577.


71 Id.

72 Id. See also Amir N. Licht, Stock Market Integration in Europe (CAER II Discussion Paper No. 15), Jan. 1998, at 41 et seq.

73 See Ferrarini, supra note 65, at 577.

74 See the Consolidation Directive, 2001/34/EC, OJ L 184 (06 July 2001), which consolidated the Admissions, Listing Particulars, Public Offers and other earlier securities Directives.


would recognize the securities intermediaries as authorized to carry out the same activities already authorized in their home State. It did not completely harmonize all areas, but it did provide minimum harmonization in trade transparency, market concentration and market access.\textsuperscript{77}

After much negotiation between Member States with auction markets led by France supporting complete and prompt price transparency and other Member States with dealer markets led by the United Kingdom arguing for a delay regarding post-trade publication, a compromise was struck in Article 21 ISD, which introduced minimum standards for post-transparency in investment markets and allowed Member States some flexibility in interpreting these standards.\textsuperscript{78} Article 21 ISD forbade long delays in trade disclosure but immediate disclosure was not required and exceptions were allowed for “highly illiquid securities,” “exceptional transactions” and “transactions concerning bonds and other forms of securitized debt”.\textsuperscript{79}

In addition, ISD imposed a “concentration” rule. For countries such as France, Belgium and Italy where listed securities were required to be traded on national exchanges, this rule did not change much. However, for countries where off-exchange trading was permitted, like the United Kingdom and Germany, this would have been a significant change. Thus, another compromise was made in Article 14(3) paragraph 4, which gave investors the right not to comply with the concentration rule.

As for market access, Article 15(1) ISD, utilizing the mutual recognition concept, provides that host Member States must ensure that investment firms authorized by competent authorities in their home Member States to provide broker-dealer services can become members or have access to the regulated markets in their host Member States. Also, the very important “remote access rule” in Article 15(4) states that investment firms do not need to be established in the host Member State to have access to electronic trading systems in the host Member State if the electronic trading system does not require physical presence in order to operate.

Although ISD was recognized for facilitating the large increase in cross-border EU securities transactions\textsuperscript{80} and for contributing to the strong growth of European

\textsuperscript{77} See Ferrarini, supra note 65, at 580.
\textsuperscript{78} Id. The inherent conflict between auction markets and dealer markets is that any restriction on transparency of dealer markets would impact competition between auction and dealer markets; whereas immediate disclosure of post-trade data would compromise the competitive position of dealer markets.\textsuperscript{79} Id. at 581.
\textsuperscript{80} See NIAM C. MOLOYE, EU SECURITIES REGULATION (2003) at 429.
capital markets, there was still significant regulatory and market fragmentation. There was regulatory fragmentation through national transpositions of different interpretations. There was also supervisory fragmentation in home country control and enforcement.

In the area of price transparency, the compromise reached incorporated the arguments of the United Kingdom and Germany who did not want to disadvantage the dealer markets with immediate post-transaction publication by including numerous exceptions, which made the transparency requirements meaningless. The compromise reached in market concentration also led to different interpretations as to whether it covered exchange rule restrictions on off-exchange transactions. Furthermore, the concentration requirements were questionable from an anti-trust perspective. For example, concerning market access, Article 15 ISD was drafted in light of the fact that the exchanges’ dominant position was troubling from an anti-trust perspective under EC Treaty Articles 81 (ex 85) and 82 (ex 86) because it exacerbated the exchanges’ dominant position by not requiring membership access rules to take into account exchange ownership structure, i.e. if it is owned by third-party investors, or has a dominant position in the market.

2. Financial Services Action Plan (“FSAP”)

In order to determine the measures required to overcome this regulatory and market fragmentation, the Financial Services Action Plan (“FSAP”) was launched on 11 May 1999 by the Financial Services Policy Group comprised of Ecofin Council ministers, the European Central Bank, and the European Commission. The FSAP was

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82 See Chiu I, supra note 76, at 123.
83 Id. at 125-127.
85 See Ferrarini, supra note 65, at 585.
86 Id. at 585-586.
87 Id. at 589.
approved by the Lisbon European Council of March 2000 and the Stockholm European Council of March 2001 and was to be fully implemented by 2005.\footnote{See Koën Coppenholle, \textit{Reflections on Regulatory Developments in the European Union}, 1 Euredia 5 (2004); Buzelay, \textit{supra} note 63 at 652.}

The FSAP announced three strategic objectives:

(i) a single market for wholesale financial services,

(ii) an open and secure retail financial market and

(iii) state-of-the-art prudential rules and supervision,

and contained a total of 42 measures.\footnote{See Buzelay, \textit{supra} note 63, at 652.} It was a significant departure from the traditional EU principle of minimum harmonization,\footnote{See Avgouleas, \textit{supra} note 70, at 181.} focusing on regulatory convergence that would create a more level playing field for market players.\footnote{See Chiu I, \textit{supra} note 76, at 123-124.} The FSAP reforms resulted in a new generation of securities regulations directives: Market Abuse Directive in 2003, the Prospectus Directive in 2004, the Market in Financial Instruments Directive (“MiFID”) in late 2004, and then the Transparency Directive in 2005.\footnote{See Buzelay, \textit{supra} note 63, at 652.}

Despite the Commission having done well in submitting proposals by the timeline required under FSAP, the Council and the European Parliament still had the tough task of passing the legislation by the required deadlines. Furthermore, Member States also needed to implement the EU directives more quickly and correctly.\footnote{See Coppenholle, \textit{supra} note 89, at 7.} Hence, the Lamfalussy process was introduced with the goals of streamlining the legislative process and achieving higher convergence in national implementation.

3. \textit{The Lamfalussy Process}

Baron Alexandre Lamfalussy and his Committee of the Wise Men had been given a mandate to identify and recommend an efficient and streamlined procedure that could keep pace with the ever-changing European securities markets. The Final Report of the Committee of the Wise Men\footnote{Final Report of the Committee of Wise Men on the Regulation of European Securities Markets, Brussels, 15 Feb. 2001 [hereinafter “Lamfalussy Report”].} agreed that the EU institutional bodies
needed to keep up with the rapid pace of change and innovations in the securities markets. It described four challenges to creating a European securities market: lack of basic legislation, insufficient prioritization, inflexibility and slowness of current legislative system for rapidly evolving modern financial markets, and inconsistent implementation.\(^96\) In response, the Lamfalussy Committee recommended a new four-level regulatory approach and the creation of two new committees: the European Securities committee (“ESC”) made up of Member State high-level representatives and the Committee of European Securities Regulators (“CESR”) with advisory functions composed of national regulators.

In Level 1, the Council and European Parliament, through a co-decision procedure, adopt a legal framework, laying out principle/framework directives to be followed by technical, specific implementing measures issued under Level 2.\(^97\) The Lamfalussy Committee adopted an improved “comitology” procedure for Level 2. In this procedure, the Commission adopts implementing measures with the assistance of ESC after consultation with CESR.\(^98\) To the great dismay of the European Parliament, the Level 2 procedure conserved its consultation role but not its drafting role.\(^99\) Then in Level 3, CESR is responsible for coordinating the cooperation between its members, the national regulators, in order to ensure consistent and efficient transposition of Level 1 and Level 2 directives. Finally, it is the European Commission’s responsibility at Level 4 to monitor Member States’ compliance with their implementation and enforcement obligations.\(^100\)

The Lamfalussy Process was later extended to the banking, insurance and occupational pensions and asset management sectors after appeasing the concerns of the European Parliament with the addition of a sunset clause limiting delegation of

\(^96\) *Id.* at 18.
\(^97\) The comitology procedure is enshrined in Article 5 of Council Decision 1999/468/EC of 28 June 1999, which laid down procedures for the exercise of implementing powers given to the Commission.
\(^98\) In Level 2, implementing measures are adopted by the Commission after having been voted on by ESC (Level 2 committee) and taking into consideration the technical advice of CESR (Level 3 committee). If the Level 2 Committee votes against the proposal or no opinion is offered, the draft measures are submitted to the Council as the proposal of the Commission. The Council can then adopt or oppose the proposal within a maximum period of 3 months. If opposed, the Commission shall re-examine the proposal and can choose between three options: (i) submit an amended proposal to the Council, (ii) re-submit its initial proposal, or (iii) abandon the draft implementing measures and present a legislative proposal on its own initiative. If the Council neither approves nor opposes the draft measures, the Commission shall adopt the proposed implementing measures. *See* Lamfalussy Report, supra note 95, at 29-30; Coppenholle, supra note 89, at n. 24.
\(^99\) *See* Avgouleas, supra note 70, at 186.
\(^100\) *See* Coppenholle, supra note 89, at 12.

The Lamfalussy process was used in drafting the Market Abuse Directive, the Transparency Directive, the Prospectus Directive and MiFID.\footnote{See Avgouleas, supra note 70, at 186.} It was praised for improving the quality and speed of legislation and increasing regulatory and supervisory convergence through increased “transparency, trust and teamwork”.\footnote{See Commission Staff Working Document, \textit{The Application of the Lamfalussy Process to EU Securities Market Legislation, A Preliminary Assessment by the Commission Services}, 15 Nov. 2004, SEC (2004) 1459, at 9 [hereinafter “European Commission, Application of the Lamfalussy Process”].} Yet by using the comitology procedure, which had been designed when the European Parliament had only a consultative role, the Lamfalussy process excluded the European Parliament’s rights as co-decisionmaker in the Level 2 process and thus effectively reduced democratic representation in the decision-making process.\footnote{See Ferran review, supra note 81, at 953. Ferran, though, generally approved of the Lamfalussy approach of delegated law-making but thought the different levels may affect the integrity of the legislation.}

Furthermore, there were criticisms that the boundaries between the four levels of legislative activity were not clearly defined.\footnote{See Duncan Alford, \textit{The Lamfalussy Process and EU Bank Regulation: Another Step On the Road to Pan-European Regulation}, 25 Ann. Rev. Banking & Fin. L. 389, 434 (2006). See also his Appendix D: Table 4: Comparison of Securities Directives: Pre-Lamfalussy and Post-Lamfalussy. See also Table 2 in Jean-Pierre Casey & Karel Lannoo, \textit{The MiFID Implementing Measures: Excessive Detail or Level Playing Field}, ECMI Policy Brief No. 1 (May 2006) [hereinafter “Casey & Lannoo II”] for a comparison of the number of articles in the ISD and MiFID and its implementing measures.} Many argued that beyond Level 1 the Lamfalussy process was not that much faster.\footnote{See Avgouleas, supra note 70, at 186.} After supporting the conclusions of an expert group, the Inter-Institutional Monitoring Group (“IIMG”) appointed to evaluate the process, the Commission recommended the following improvements:

- Level 1 Directives should be focused on general rules and principles;
- Level 2 implementing measures should be carefully considered as to avoid over-regulation or duplicative requirements at the EU level;
- Clearly defining the role of Level 3;
● Strengthening Level 4 through clear, practical arrangements between the Commission and the Member States and national regulators;
● Make better efforts at obtaining consumer input in consultation processes; and
● Making sufficient resources for conducting required consultations.  

Against this background, ISD was becoming clearly outdated in the 1990s by enormous technological changes, the emergence of alternative trading venues and increased volume in cross-border trading. Although ISD facilitated a more level playing field between credit institutions and investment firms and discouraged regulatory discrimination against cross-border competition, it suffered from gaps in regulation from a lack of harmonization in national conduct of business rules and gaps in supervision due to host State ability to impose restrictions for the “general good,” resulting in an unclear “home country” supervision regime and ineffective ISD passport. This ISD passport could not be enjoyed, anyways, by firms offering only “ancillary services,” such as investment research for distribution and commodities dealing. In addition, there was no clear system of supervisory cooperation for enforcement responsibilities and allocation of regulatory responsibilities.

More importantly, ISD had not considered that competition between securities exchanges and alternative trading systems (“ATSs”) would spread from the United States. Neither did it have the regulatory framework to address internalization of client orders by investment firms and banks. ISD simply could not address the blurring in roles between intermediaries and regulated markets. Finally, not only were many European regulated markets becoming more international, they also were demutualizing. In becoming profit-driven organizations, these exchanges had to change their governance structures and reduce their self-regulatory duties.

The Commission launched formal discussions in November 2000 on how to revise the ISD with its “Green Paper,” which received a large number of responses. After receiving many criticisms on its proposal for regulation of ATSs, the Commission revised its proposal again for open consultation. On November 19,

108 See Avgouleas, supra note 70, at 188.
109 See note 9 supra, about the terms ECN, ATS and MTF.
110 These intermediaries either match in-house the client order against another client order or against a proprietary position.
111 Avgouleas, supra note 70, at 189-190.
2002, the final proposal\textsuperscript{113} was submitted to the European Parliament and Council for first readings.\textsuperscript{114} The European Parliament was very worried about losing its competence and control over the Commission and discussed adding an amendment that would eliminate delegating the issue of “best execution” to the Commission for technical Level 2 measures.\textsuperscript{115} This amendment did not succeed but the European Parliament added 145 other amendments on September 25, 2003. Then the ECOFIN Council of Ministers adopted by a qualified majority a Common Position on October 7, 2003 in opposition to the United Kingdom, Ireland, Luxembourg, Sweden and Finland.\textsuperscript{116} The Council renamed the proposal as “the proposal for a Directive on markets in financial instruments” (“MiFID”). The Council’s common position was sent to the European Parliament for a second reading. After the European Parliament agreed to a compromise by adopting a resolution drafted by MEP Theresa Villiers, who incorporated a compromise she had reached with the Council\textsuperscript{117} on several points including the most controversial one on pre-trade price transparency for intermediaries internalizing orders.\textsuperscript{118} Finally after Parliament’s favorable vote, the MiFID was adopted by the Council of Ministers on April 27, 2004.\textsuperscript{119}

\section*{SECTION II. SIMILAR RESULTS: EVOLUTION OF REGULATION IN THE FACE OF NEW TECHNOLOGY AND PLAYERS}

\subsection*{A. Regulation NMS}

\textsuperscript{114} See Avgouleas, \textit{supra} note 70, at 191.
\textsuperscript{115} Resolution drafted by MEP Theresa Villiers (10 March 2003). See Sousi, \textit{supra} note 101, at 214.
\textsuperscript{116} See Avgouleas, \textit{supra} note 70, at n. 20.
\textsuperscript{119} See MiFID, \textit{supra} note 3.
Meanwhile, despite longer American regulatory experience with ATSS,\textsuperscript{120} internalization and new technologies, the regulatory framework in the National Market System was also becoming outdated. After being given the Congressional mandate to “facilitate the establishment of a national market system” for securities trading,\textsuperscript{121} the SEC spent the past thirty years developing detailed provisions for the National Market System. It was certainly agreed that during this development, the SEC had achieved certain goals, such as the creation of a consolidated system of market data dissemination in the 1970s, the inclusion of the Nasdaq securities into the NMS in the 1980s, and the adoption of the Order Handling Rules in the 1990s.\textsuperscript{122}

However, the development of the NMS experienced several regulatory inefficiencies, including regulatory timidity and then regulatory over-zealousness.\textsuperscript{123} Concerning the consolidated system for disseminating market information, some argued that the SEC had committed regulatory failures. In creating only one exclusive information processor: the CTA, the SEC had failed in facilitating competition among cross-market securities information processors as had been desired by Congress.\textsuperscript{124} It ignored the competition principle of the 1975 Amendments because it believed the effects of information fragmentation would be best fought with a consolidated information system.

Another criticism was that the SEC’s Congressional mandate did not give it discretion to force markets to participate in a inter-market trade execution system like ITS or its potential upgrade, a universal message switch like CLOB. Furthermore, some argued that Congress never intended for the SEC to micro-manage the behavior of market players in the national market system, including the newly-emerging electronic markets, such as ECNs.\textsuperscript{125}

According to the SEC, the most important weakness of NMS was the inability of investors’ buy and sell orders to directly interact in a truly efficient manner.\textsuperscript{126} There were two other incidences of SEC timidity and inefficiency concerning the two

\begin{footnotesize}
\begin{enumerate}
\item[\textsuperscript{120}] See note 9, supra, about the terms ECN, ATS and MTF.
\item[\textsuperscript{122}] See Proposed Regulation NMS, supra note 25 at 11128.
\item[\textsuperscript{123}] See generally Oesterle, supra note 28.
\item[\textsuperscript{124}] See Oesterle, supra note 28, at 630. In fact, if there were only to be one primary security information processor, Congress wanted that it not be owned by a major exchange. Instead, the SEC accepted that the Consolidated Tape be run by SIAC, a subsidiary of the NYSE and AMEX. \textit{Id.} at 636.
\item[\textsuperscript{125}] \textit{Id.}
\item[\textsuperscript{126}] See David F. Freeman Jr. \textit{et al.}, The SEC’s Proposed Regulation NMS, 23 Banking & Financial Services Policy Report No. 6 (June 2004) at 2.
\end{enumerate}
\end{footnotesize}
fundamental barriers to competition: barrier to open competition in the trading of exchange-listed securities and the barrier to open competition in the trading of non-exchange-listed securities. The SEC took a very long time to eliminate rules, such as NYSE Rule 390, which prohibited NYSE members from executing NYSE-listed securities off the NYSE exchange floor. It was not until 1980 did the SEC partially restrict NYSE Rule 390.\textsuperscript{127} Yet the newly adopted SEC Rule 19c-3 restricted market maker competition to only securities listed on an exchange after April 26, 1979 (the so-called “Rule 19c-3 securities”).\textsuperscript{128} It was not until 1999 was NYSE Rule 390 completely abolished.\textsuperscript{129} The other related regulatory disappointment was that the SEC kept deferring the issue of how to break down the barrier against exchange specialists from making markets in OTC securities, which already had been legally abolished under Section 12(f)(2) of the Exchange Act.\textsuperscript{130}

More significantly, SEC regulatory inefficiencies hindered the NMS regulatory framework from addressing the rapid pace of technological change and the emergence of new market players, such as alternative electronic trading venues. The 1975 Amendments were passed before the enormous development in computer technology, and SEC market structure policy was based on the assumption that the NYSE would remain the dominant exchange and its viable competitors were the regional stock exchanges. Instead, electronic communication networks (“ECNs”), Nasdaq and its computerized trading system have turned out to be the real competitors.\textsuperscript{131} Rather than from competitive security quotes, competition has come from payment for order flow (“POF”)\textsuperscript{132} or internalization of order flow.\textsuperscript{133}

Brokers found POF and internalization attractive because they could share in the profits earned by the market maker:

Under internalization and payment for order flow arrangements is the opportunity to share in the profits that can be earned by a market maker that

\textsuperscript{127} See Off-Board Trading Restrictions Release, \textit{supra} note 35.
\textsuperscript{128} See Seligman III, \textit{supra} note 39, at 124.
\textsuperscript{129} Id. at n. 27
\textsuperscript{130} See Seligman III, \textit{supra} note 39, at 124.
\textsuperscript{132} Payment for order flow (“POF”) is a practice “by which OTC market makers or regional exchange specialists pay a rebate to customer’s brokers for directing transactions to it rather than to another exchange which is usually the NYSE.” \textit{Id}. at 665.
\textsuperscript{133} See note 39, \textit{supra}, for a definition of internalization.
will have an opportunity to execute the orders as principal without facing significant competition from investors or other dealers to interact with the directed order flow. Moreover, the linkages among market centers that are currently in place do not require that market orders be routed to the market center that is displaying the best prices, even if that price represents an investor limit order. As a result a market maker with access to directed order flow often may merely match the displayed prices of other market centers and leave the displayed trading interest unsatisfied. The profits that can be earned by a market maker trading at favorable prices with directed order flow can then be shared with the brokers that routed the orders.\textsuperscript{134}

Thus, instead of sending orders to an exchange floor, brokers sent them to market makers. The SEC even acknowledged that POF existed because it was difficult for market makers to get order flow through competitive quotes.\textsuperscript{135}

1. \textit{New Players: Electronic Communication Networks ("ECNs") or Alternative Trading Systems ("ATSs")}\textsuperscript{136}

The advances in technology not only were changing market structure behavior, it was changing the market structure itself with the emergence of new market centers: ECNs. Until recently, the regulatory assumption made by the SEC was that securities exchanges and securities dealers associations were the primary market centers and, thus, the recipients of corresponding regulatory rights. This stable regulatory framework became quickly outdated with the emergence of ECNs.\textsuperscript{137}

Although they performed some of the functions of an exchange, ECNs were not exactly securities exchanges,\textsuperscript{138} facilities of an exchange,\textsuperscript{139} or members of an

\textsuperscript{136} See note 9, supra, about the terms ECN, ATS and MTF.
\textsuperscript{137} See Seligman IV, supra note 131, at 673.
\textsuperscript{138} Exchange Act section 3(a)(1) defines "an exchange" as: any organization, association, or group of persons, whether incorporated or unincorporated, which constitutes, maintains, or provides a market place or facilities for bringing together purchasers and sellers of securities or for otherwise performing with respect to securities the
They were first described as proprietary trading systems (“PTSs”) by the SEC Division of Market Regulation:

The development of PTSs primarily can be attributed to two factors. First, PTSs fulfill the needs of institution investors not satisfied by the traditional markets. For example, some “matching systems” compliment the trading needs of patient investors who do not need the instant liquidity that exchange markets provide by allowing investors orders to meet directly at pre-announced times during the day. Such matching of orders may reduce transaction fees, eliminate the bid-ask spread, and minimize the market impact of large trades. Second, technology has revolutionized securities trading and trading no longer must take place on the floor of an exchange or be negotiated by telephone, but can be accomplished through networks of computer terminals. The sponsors of PTSs have developed sophisticated, innovative trading systems to accomplish this.

PTSs have combined technology and features that are attractive to institutional investors to gain an increasing share of volume in the past few years. For the first half of 1993, the total share volume of PTSs was 4.7 billion shares and was almost the same amount as for the entire year in 1992. The total share volume for 1992 was nearly 4.9 billion, up more than 60 percent from 1991’s volume of 2.9 billion. Most of the PTS volume has been in securities included for quotation on the National Association of Securities

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functions commonly performed by a stock exchange as that term is generally understood, and includes the market place and the market facilities maintained by such an exchange.


139 Facility of an exchange includes:
its premises, tangible or intangible property whether on the premises or not, any right to the use of such premises or property or any service thereof for the purpose of effecting or reporting a transaction on an exchange (including, among other things, any system of communication to or from the exchange, by ticket or otherwise, maintained by or with the consent of the exchange), and any right of the exchange to the use of any property or service.

Id. § 78c(a)(2).

140 “Member” of a registered national securities exchange is defined by Section 3(a)(3)(A) of the Exchange Act as:

(i) any natural person permitted to effect transactions on the floor of the exchange without the services of another person acting as a broker, (ii) any registered broker or dealer with which such a natural person is associated, (iii) any registered broker or dealer permitted to designate as a representative such a natural person, and (iv) any other registered broker or dealer which agrees to be regulated by such exchange and with respect to which the exchange undertakes to enforce compliance with [its rules and the federal securities laws].

Id. § 78c(a)(3)(A).
Dealers Automated Quotation System ("NASDAQ"). Almost 87% of the PTS volume in the first half of 1993 was in NASDAQ stocks, and only 13% in listed stocks.\textsuperscript{141}

Step-by-step, the SEC brought ECNs under regulation. In the beginning when ECN trading volume was negligible, the SEC issued no-action letter exempting ECNs from having to register as national securities exchanges.\textsuperscript{142} Then ECNs were subjected to record-keeping and reporting regulation under former SEC Rule 17a-23.\textsuperscript{143}

Finally, in 1998, the SEC adopted a comprehensive new regulation for ECNs: Regulation ATS ("Alternative Trading System").\textsuperscript{144} Regulation ATS presented ECNs (now redefined as ATSs) a choice, depending on activity and trading volume, between registering as a national securities exchange or registering as a broker-dealer and complying with additional requirements.\textsuperscript{145}

National securities exchange registration under Rule 3a1-1 exempts most ATSs\textsuperscript{146} as long as they comply with Regulation ATS. An eligible ATS is defined by Regulation ATS in Rule 300(a) as a system that:

(1) Constitutes, maintains, or provides a marketplace or facilities for bringing together purchasers and sellers of securities or for otherwise performing with respect to securities or for otherwise performing with respect to securities the functions commonly performed by a stock exchange under Exchange Act Rule 3b-16; and

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\textsuperscript{142} See Seligman IV, \textit{supra} note 131, at 674.
\textsuperscript{145} See Seligman IV, \textit{supra} note 131, at 674.
\textsuperscript{146} Systems during three of the four preceding calendar quarters that had fifty percent or more of the daily dollar trading volume in any security and five percent or more of the average dollar daily trading volume in any class of securities or forty percent of the dollar volume in any class of securities and the Commission determines, after notice and opportunity for a response that registration as an exchange would be necessary or appropriate, would not be eligible for the Rule 3a-1 exemption. 17 C.F.R. § 240.3a1-1 (2001).
(2) Does not set rules governing conduct of subscribers other than the conduct of such subscribers’ trading on such organization, association, person, group of persons, or system, or discipline subscribers other than by exclusion from trading.\textsuperscript{147}

If the ATS satisfies Rule 300(a) of Regulation ATS, it can register as a broker-dealer under Section 15 of the Exchange Act.\textsuperscript{148}

As their trading volume began to increase and competition among market centers became more intense, these ATSs and increasingly automated market makers began demanding a more level playing field with the stock exchanges.\textsuperscript{149} Existing NMS rules did not address disparities in regulation of the different market centers concerning trade-throughs, the ability to charge fees for access to displayed quotes, and the practice of using sub-penny quoting to “step ahead” of displayed limit orders for small amounts.\textsuperscript{150} For example, ITS’s trade-through rule, which prevents members from trading through another market’s quote,\textsuperscript{151} prevented the efficient operation of automated markets from providing an automatic execution for customers valuing speed or certainty of execution over price protection whenever a better price is displayed by another market member.\textsuperscript{152}

2. \textit{Proposed Regulation NMS}

Thus, to address all these changes and new problems, the SEC proposed in February 2004 to reform the National Market System. The major goals of Proposed Regulation NMS were to improve direct interaction of investor’s buy and sell orders

\begin{itemize}
  \item \textsuperscript{147} Exchange Act Release No. 40,760, 63 Fed. Reg. at 70,859 (footnote omitted).
  \item \textsuperscript{148} See Rule 301(b) of Regulation ATS. 17 C.F.R. §242.301(b) (2001).
  \item \textsuperscript{150} See Freeman, \textit{supra} note 126, at 1.
  \item \textsuperscript{151} To trade through another market’s quote means to execute an order at a price in one market that is inferior to the price displayed in another market. The object of a trade-through rule is to prevent trade-throughs. Before Regulation NMS, NASDAQ did not have any intermarket trade-through rules and argued that they were unnecessary. \textit{Id} at 2.
  \item \textsuperscript{152} \textit{Id.}
\end{itemize}
and to improve the depth of public price discovery.\textsuperscript{153} The Proposed Regulation NMS was intended to address the problems of isolated markets, unequal regulation and technology, and non-transparent market data distribution systems. It included four substantive main proposals: (i) the Trade-Through Proposal, (ii) the Market Access Proposal, (iii) the Sub Penny Rule, and (iv) the Market Data Amendments to achieve the following regulatory objectives:

1. A uniform trade-through rule for all NMS market centers that would affirm the fundamental principle of price priority, while also addressing problems posed by the inherent difference in the nature of prices displayed by automated markets, which are immediately accessible, compared to prices displayed by manual markets;
2. A uniform market access rule with a \textit{de minimis} fee standard that would help assure non-discriminatory access to the best prices displayed by NMS market centers, but without mandating inflexible, “hard” linkages such as the Intermarket Trading System (“ITS”);
3. A sub-penny quoting rule establishing a uniform quoting increment for NMS stocks to promote greater price transparency and consistency;
4. Amendments to the arrangements for disseminating market information that would reward self-regulatory organizations (“SROs”) for their contributions to public price discovery, as well as implement many of the recommendations of the [SEC]’s Advisory Committee on Market Information; and
5. Regulation NMS, which would modernize and restructure the Exchange Act rules governing the NMS to promote greater clarity and understanding of the rules.\textsuperscript{154}

(i) \textit{Trade-Through Proposal}

The Trade-Through Proposal was especially controversial. The proposed rule would require a market center\textsuperscript{155} to establish, maintain, and enforce polices and procedures reasonably designed to prevent the execution of a trade-through in its market. The proposed rule would apply to all incoming orders in “NMS Stocks” – all NASDAQ, NYSE, and AMEX-listed stocks - and to any order execution facility that executes orders internally within its market, whether or not that market posts its best

\textsuperscript{153} Proposed Regulation NMS, \textit{supra} note 25 at 11127.
\textsuperscript{154} \textit{Id}.
\textsuperscript{155} A “market center” meaning an order execution facility, national securities exchange, and national securities association.
bid and offer in the consolidated quote system. The proposal included two major exceptions: (1) Exception for Opt-Out Orders, which allowed customers (and broker-dealers trading for their own accounts) to “opt-out” of the protections of the rule by providing informed consent to the execution of their orders, on an order-by-order basis, in one market without regard to the possibility of obtaining a better price in another market; and (2) Exception for Automated Order Facilities, which recognized the differences between the speed of execution in electronic versus manual markets by permitting an automated market with the ability to trade-through a non-automated market up to a certain amount away from the best bid or offer displayed by the non-automated market.

At the SEC’s April 21, 2004 hearing in New York, many market participants spoke out against the proposed Trade-Through Rule. The major stock exchanges argued that the current rules were already sufficient in getting the best price. Also, some specialists argued that the changes were unnecessary as the current rule gives the public the incentive to place limit orders. On the other hand, NASDAQ, which had no trade-through rule, and ECNs argued that the proposed rule was unnecessary and unfairly favored NYSE’s dominant position as the best price was often available at the NYSE albeit its manual auction system was incapable of immediate, automated execution. Nevertheless, SEC Chairman Donaldson re-emphasized the importance of investor access to best price if the market system was to maintain public confidence.

The most controversial part of the Trade-Through Proposal was the opt-out exception, which would permit trade-throughs to occur. Some argued that allowing

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156 “NMS Stock” is defined in proposed Rule 600 of Regulation NMS to mean any NMS Security other than an option. NMS Security is defined in proposed Rule 600 of Regulation NMS to mean any security or class of securities for which transaction reports are collected, processed, and made available pursuant to an effective transaction reporting plan, or an effective national market system plan. See Proposed Regulation NMS, supra note 25, at endnote 8.
157 Id. at 11138-41
158 See SEC Hearings on Regulation NMS (Apr. 21, 2004), archived webcasts available on the SEC’s website http://www.connectlive.com/events/secregnms/.
159 Id.
160 At the time of the proposal, NYSE had 75% of the trading volume of NYSE-listed stocks. See Proposed Regulation NMS, supra note 25, at 11128.
exceptions for trade-throughs to occur would harm investors’ best interests. In response, the SEC explained the proposed Trade-Through Rule’s emphasis on best price would not lessen broker-dealer’s fiduciary duty of best execution, which included reviewing the quality of the execution and other criteria. Others, such as NASDAQ and ECNs argued in support of blanket opt-outs not just order-by-order opt-outs.  

(ii) Market Access Proposal

In order to keep the trade-through prohibition fair, the Market Access Proposal would (1) require market centers to permit all market participants access to published bids and offers; (2) limit access fees to *de minimis* amounts; and (3) requires self-regulatory organizations (“SROs”) to establish rules to reduce locked or crossed markets. The proposed uniform market access rule introduced two new terms: “quoting market centers” and “quoting market participants.” Direct market-to-market access was considered better than the antiquated, hard linkage ITS system. In limiting quote access fees from the current standards of up to $0.009 per share to a cap of $0.002 per share. In addition, every SRO would be required to establish and enforce policies and procedures preventing locking or crossing the quotations of quoting market centers and quoting market participants. Finally, proposed amendments to the Fair Access Standard under Regulation ATS would lower the fair-access threshold under Regulation ATS from 20 percent to 5 percent, thus subjecting ATSs with 5 percent of the total trading volume in a security to the same transparency and access standards of Regulation ATS.

(iii) Sub-Penny Proposal

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165 See Proposed Regulation NMS, *supra* note 25, at 11153.
166 A “quoting market center” would be defined to mean an order execution facility of any exchange or association that is required to make available to a quotation vendor its best bid or best offer in a security pursuant to Quote Rule (Rule 11Ac1-1 under the Exchange Act, 17 C.F.R. § 240.11Ac1-1). *See Proposed Rule 600; Proposed Regulation NMS, supra* note 25, at 11157.
167 A “quoting market participant” is defined to mean any broker-dealer that provides its best bid or best offer in a security to an exchange or association pursuant to the Quote Rule or Regulation ATS, and whose best bid or best offer is not otherwise available through a quoting market center. *See Proposed Rule 600; Proposed Regulation NMS, supra* note 25, at 11157. *See also* Freeman, *supra* note 126, at fn. 39
168 Locked quotes cause confusion because the bid and offer quotes are displayed at the same price, indicating that one of the quotes is incorrect. *See Freeman, supra* note 126, at 5.
169 See Rule 301(b)(5)(i) of Regulation ATS, 17 C.F.R. § 242.301(b)(3).
Meanwhile the Sub-Penny Proposal addressed the decimalization of U.S. equity markets in April 2001. This conversion from pricing in fractions to pricing in decimals contributed greatly to the growth in electronic trading. Decimalization also led to a growing practice, especially by ECNs, to display quotations in their proprietary systems in increments smaller than a penny (“sub-pennies”). However, these sub-penny quotes were often rounded up and would not be available to the general public, thus creating hidden markets to the advantage of sophisticated market participants, who often “stepped-ahead” of customer limit orders for an insignificant amount in order to gain execution priority.

(iv) Market Data Proposal

Finally, the SEC proposed in its Market Data Proposal to amend the three joint industry plans (“the Plans”) consisting of the Consolidated Tape Association Plan, the Consolidated Quote System Plan, and the Nasdaq UTP Plan. Earlier in September 2001, the SEC Advisory Committee on Market Information appointed to study the issue of market data dissemination delivered its report reaffirming the importance of price transparency and consolidated market information. A majority of the Advisory Committee recommended a competing consolidator model to replace the single consolidator model of the Consolidated Tape Association. The SEC rejected the recommendation and chose instead to keep the single consolidator model due to fears of excessive information fragmentation. However, the SEC did accept some of the Advisory Committee’s suggestions that if the SEC were not to adopt a competing model.

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consolidator model, then governance of the single consolidator should be improved
with the addition of an independent non-voting advisory committee.

Before, many SROs engaged in “shredding” their total trading volume into the
smallest trades possible in order to maximize market data revenues.\textsuperscript{173} Therefore, the
proposal included a new complicated allocation of fees formula, replacing the
previous incentive to produce the largest number of transactions and rewarding
instead market centers producing the highest quality quotes with the best prices and
the largest sizes most useful for price discovery. Market centers would remain free to
distribute independently their own market data, but they must continue reporting data
to the consolidated system.\textsuperscript{174}

3. \textit{Final Regulation NMS}

Finally after 15 months of debate including a supplemental request for
comment in May 2004\textsuperscript{175} and a reproposal in December 2004,\textsuperscript{176} the SEC approved on
April 6, 2005, by the finest of margins (three Commissioners to two)\textsuperscript{177} a new set of
market reforms that would significantly change the regulatory structure of U.S. equity
markets: Regulation NMS.\textsuperscript{178} In general, Regulation NMS kept the four substantive
rule proposals of Proposed Regulation NMS with some changes.

The Trade-Through Rule was renamed the \textit{Order Protection Rule} (Rule 611),
to emphasize the importance of the intermarket price protection principle. It requires
“trading centers”\textsuperscript{179} to establish, maintain and enforce written policies and procedures
designed to prevent trade-throughs of protected quotations and to ensure compliance
with the rule’s exceptions. The original voluntary opt-out exception was eliminated

\textsuperscript{173} See Freeman, \textit{supra} note 126, at 7.
\textsuperscript{174} \textit{Id}.
\textsuperscript{176} On December 16, 2004, the SEC reproposed Regulation NMS for comment. Regulation NMS,
["Reproposed Regulation NMS"].
\textsuperscript{177} Commissioners Cynthia A. Atkins and Paul S. Atkins dissented.
\textsuperscript{178} See Regulation NMS, \textit{supra} note 1.
\textsuperscript{179} “Trading centers” were defined in Reproposed Regulation NMS to include national securities
exchanges, national securities associations that operate SRO trading facilities, alternative trading
systems, exchange market-makers, OTC market-makers and any other broker-dealers that execute
orders internally by trading as principal or crossing orders as agent. See Reproprosed Regulation,
\textit{supra} note 176.
and was replaced by a number of specific exceptions. The SEC considered the opt-out provision to be harmful to the intermarket price protection principle. Furthermore, in deciding to protect only immediately accessible automated quotations, the SEC considered the opt-out exception unnecessary.

Meanwhile the Market Access Rule (Rule 610) establishes a uniform market access rule to promote non-discriminatory access to quotations displayed by SRO trading centers through private linkages. The access fees to be charged by trading centers to access the quotations will be limited to no more than $0.003 per share (or if the quotation is less than $1.00, then no more than 0.3% of the quotation per share). Also, SROs are required to prohibit members from engaging in practice or pattern of locking or crossing protected quotations of other trading centers.

The Sub-Penny Rule (Rule 612) prohibits quotations that are priced in increments of less than $0.01 (unless the quotation is less than $1.00, then the minimum increment shall be $0.0001).

The Market Data Rules (Rules 601 & 603) and Amendments to Industry Plans introduced a new formula that allocates greater revenues to SROs that contribute to public price discovery. By dividing market data revenues equally between trading and quoting activity, the new formula reduces the former formula’s emphasis on number of transactions. Also, the governance of the market-data consolidation systems is to be improved by requiring their governing SRO committees to create advisory committees comprised of non-SRO representatives. Finally, markets are permitted to distribute their own data independently. However, they will still be required to provide their best quotations and trades for consolidated distribution through the joint industry plans.

B. Markets in Financial Instruments Directive (“MiFID”)

Springing from different political motivations but subjected to the same influences of rapid technological change, competition from new market players and globalization pressures, both Regulation NMS and MiFID were proposed the same
year of 2004. While Regulation NMS is considered to be by many a regulation regime that would bring major changes to the U.S. equities market structure, MiFID is even more sweeping in scope. Unlike Regulation NMS, which targets specific microstructure issues, MiFID was drafted as a self-standing regime covering nearly all areas of securities trading.

Following the adoption of MiFID, the European Commission adopted two implementing measures on August 10, 2006: an implementing directive\textsuperscript{182} regarding organizational requirements and operating conditions for investment firms and an implementing regulation regarding record-keeping obligations for investment firms, transaction reporting, market transparency and admission of financial instruments to trading.\textsuperscript{183} The difference between directives and regulations is that regulations, being maximum harmonization measures, are directly applicable while directives must be nationally transposed by Member States. The deadline for compliance with MiFID is November 1, 2007 whereas Regulation NMS has varying compliance dates stretching through years 2006 and 2007.

1. The Principal Features of MiFID

For achieving market integration, MiFID’s first tool was replacing 25 regimes with one. Another one of its tools is the “European passport,” which allows investment firms to conduct investment business throughout the EU on the basis of home state authorization,\textsuperscript{184} which is complemented by choice of access to different national clearing and settlement systems. MiFID enlarged the regulatory oversight to most of the important ATSs, redefining them as multilateral trading facilities (“MTFs”).\textsuperscript{185} Very importantly, it extended its regulatory scope to cover investment advice and dealing in commodity derivatives.\textsuperscript{186}


\textsuperscript{184} See Avgouleas, supra note 70, at 191.

\textsuperscript{185} See note 9, supra, about the terms ECN, ATS and MTF.

\textsuperscript{186} See Avgouleas, supra note 70, at 191.
The objective of investor protection is approached with the establishment of an EU-wide conduct of business regime. Also, investor protection is served by the introduction of equal regulation of exchanges, ATSSs and investment firms who internalize, subjecting all market centers to extensive pre-trade and post-trade transparency obligations.

The pre-trade transparency provisions require these market centers to make public “current bid and offer prices which are advertised through their systems for shares admitted to trading”, on reasonable commercial terms and on a continuous basis.\(^{187}\) Large size orders and quotes or illiquid securities orders and quotes are exempted from these disclosure requirements.\(^{188}\) Whereas post-trade transparency rules require disclosure of price, volume, and time for all trades in equities on a reasonable commercial basis and as close to real time as possible.\(^{189}\) Again, large trades and trades in illiquid securities publication can be deferred.

MiFID captures the most important ATFs through its definition of MTFs, which include systems that support the multilateral disclosure of firm orders/indications of interest between users of the system and the execution of orders resulting from the interaction of buy/sell interests expressed through the system. MTFs also include “auction-crossing” systems, which usually have the common feature of autonomous trading without the participation of the system operator, i.e. a system that supports a direct third-party interaction.\(^{190}\) MiFID also captures “systematic internalizers,” who are investment firms dealing on own account by executing client orders outside a regulated market or an MTF on an organized, frequent and systematic basis.\(^{191}\)

MiFID has also introduced the infamous and strict “best execution” rule. Unlike Regulation NMS, which focuses on best price, MiFID lays out a list of criteria that must be reviewed. Investment firms are required to take all reasonable steps to obtain the best possible results for their clients, taking into account price, cost, speed, likelihood of execution and settlement, size, nature of the order or any consideration relevant to the execution of the order (unless the client has given specific

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\(^{187}\) Art 44(1) MiFID.

\(^{188}\) Art 44(2) MiFID.

\(^{189}\) Art. 45(1) MiFID.

\(^{190}\) See Avgouleas, supra note 70, at 194.

\(^{191}\) Art. 4(1) to (7) MiFID.
instructions). Besides harmonizing best execution rules, MiFID also harmonizes conflict of interest rules especially for systematic internalizers.\textsuperscript{192}

Another change is the way of classifying customers: retail, professional, or eligible counterparty. Each class has different levels of protection, and investment firms must notify their clients of their classification.\textsuperscript{193} Clients may choose to opt-out or opt-in of their classification if they satisfy certain criteria in choosing higher or lower protection.\textsuperscript{194} Furthermore, for investment advice and portfolio management, intermediaries must determine the client’s “suitability” by collecting required information from the client’s financial background, knowledge and experience in order to determine if a specific product or service is suitable.\textsuperscript{195} For other kinds of investment services, intermediaries must determine the “appropriateness” of the service according to the knowledge and experience of the retail client or potential client.\textsuperscript{196}

Unlike the SEC, which focused on specific areas of market microstructure, the EU is essentially reforming the entire financial market, including not only price transparency, best execution and order handling rules, conflicts of interest, conduct of business rules, market structure and new market centers including ATSs and systematic internalizers. By eliminating its concentration rule, the EU is positioning its financial markets to better compete with U.S. markets.

\textsuperscript{192} Art 18 MiFID.
\textsuperscript{193} Art. 19 MiFID; Art. 28 MiFID Implementing Directive.
\textsuperscript{194} Art. 28 MiFID Implementing Directive.
\textsuperscript{195} Art. 19 MiFID; Art. 35 MiFID Implementing Directive.
\textsuperscript{196} Art. 19 MiFID; Art. 36 MiFID Implementing Directive.
III. REGULATORY CONSEQUENCES

SECTION I. FROM PRINCIPLE-BASED TO RULE-BASED REGIMES

Although EU securities regulation and U.S. securities regulation possess different regulatory philosophies and traits, the adoption of Regulation NMS and the Markets in Financial Instruments Directive (MiFID) represents a convergence in the use of legal rules over soft law principles. “Soft law” has never been clearly defined but is generally considered to be “standards,” and there is certainly no lack of literature on the subject and attempts to define it. Soft law has historical roots in the *lex mercatoria* of the Middle Ages. In modern times, it experienced a revival in financial regulation through the Basel Committee on Banking Supervision in the 1970s and the April 1997 G10 Report on “Financial Stability in Emerging Market Economies,” which endorsed the development of sound principles and practices concerning financial systems. This Article argues that Regulation NMS and MiFID are reversing the previous trend in privatisation of regulation.

Some main characteristics of soft law standards are non-enforceability and lack of legal character. However, it does not preclude sanctions of some form by the market or authorities. The Financial Stability Forum (FSF) has given the following definitions for “standards”:

Standards are guidelines or principles that set out what are widely accepted as good principles or practises in a given area… International standards are

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199 See Dialti, supra note 197, at 357-358.
generally accepted by the international community as being objective and relatively free of national biases... Standards are not an end in themselves but a means for promoting sound financial systems and sustained economic growth.\textsuperscript{200}

The FSF goes on to give three different classifications of standards:

(i) \textit{Principles} are fundamental tenets pertaining to a broad policy area. Principles are usually set out in a general way and therefore offer a degree of flexibility in implementation to suit country circumstances;
(ii) \textit{Practices} are more specific and spell out the practical application of the principles within a more narrowly defined context;
(iii) \textit{Methodologies/Guidelines} provide detailed guidance on steps to be taken or requirements to be met and are specific enough to allow a relatively objective assessment of the degree of observance.\textsuperscript{201}

In addition, other researchers have devised different categories. For example, researcher Margot Priest identified five categories of soft-law instruments:

(i) voluntary codes of conduct,
(ii) self-regulation provided for by the statutes or self-regulation laid down by law,
(iii) internal rules of businesses,
(iv) self-regulation supervised or monitored by government agencies, and
(v) self-management based on regulations.\textsuperscript{202}

These lists show the wide-range of soft law instruments that have been and are in use.\textsuperscript{203} Moreover, these instruments are much favored by financial markets, which prefer voluntary standards to legal rules.

\textbf{A. Advantages and Weaknesses of Soft Law v. Hard Law}

Financial markets prefer private standards because of their non-legal character and their ability to satisfy the need for flexible, innovative solutions. Treaty-making for setting international norms is considered too slow and cumbersome for the fast changing pace of financial markets.\textsuperscript{204} Furthermore, private financial institutions

\textsuperscript{200} See \url{http://www.fsforum.org}.
\textsuperscript{201} See \url{http://www.fsforum.org/compendium/what_are_standards.html}.
\textsuperscript{203} See Dialhi, \textit{supra} note 197, at 354.
appreciate the pragmatism and consensus building involved in developing soft law principles.\textsuperscript{205} The generality of principles allows flexibility and ease of compliance, and soft law’s dual nature of market and regulatory discipline makes market players more receptive and regulators a little more at ease.\textsuperscript{206}

However, it is misleading to think the simplicity of soft law’s minimum harmonization can address more complex implementation problems.\textsuperscript{207} Not only are there difficulties in the implementation of soft law standards but also the existence of these standards provides less incentive to convert the principles into legally-enforceable hard law.\textsuperscript{208} Furthermore, soft law lacks the legitimacy of democratically-approved legislation and is less precise.\textsuperscript{209}

Finally, soft law has shown to be somewhat incompatible with civil code systems. The legal centralism of continental European countries does not usually accept standards and codes of conduct.\textsuperscript{210} Whereas common law systems, where many of the largest securities markets exist, have easily accepted standards, especially conduct of business rules that fall below the binding force of legislation.\textsuperscript{211} This aversion to legislated legal rules may have arisen out of the common law tradition of judge-made legal rules.\textsuperscript{212} Thus, the implementation of international soft law principles may result in uneven application across different national legal systems.

\textbf{B. From Self-Regulation to Direct Regulation}

\textbf{1. Principle of Self-Regulation in U.S. Federal Securities Law}

One of the soft law instruments identified by Margot Priest is self-regulation supervised or monitored by government agencies.\textsuperscript{213} The tool of industry self-regulation supervised by the SEC was adopted by Congress in its enactment of the 1934 Securities Exchange Act in reaction to the 1929 crash and stock market

\textsuperscript{205} Id. See also, Mario Giovanoli, Reflections on International Financial Standards as ‘Soft Law’, in ESSAYS IN INTERNATIONAL FINANCIAL AND ECONOMIC LAW, 16 (London Institute of International Banking, Finance and Development Law, No. 37/2002).

\textsuperscript{206} Id. See also, Jordan and Majnoni, supra note 204, at 14.

\textsuperscript{207} Id.

\textsuperscript{208} Id. at 366.

\textsuperscript{209} Id.

\textsuperscript{210} Id at 359.

\textsuperscript{211} Id.

\textsuperscript{212} Id. at 19.

\textsuperscript{213} See Priest supra note 202, at 321.
manipulation scandals. Congress’ idea was to create a two-tiered regulatory structure of SROs overseen by the SEC. Congress believed that the securities industry with its greater practical knowledge and business experience would be better prepared to develop appropriate rules than the SEC. Another advantage was that the cost of self-regulation would be borne by the industry itself. Furthermore, this would allow competition, another fundamental principle in federal securities law, between the different self-regulatory models of the SROs.

Self-regulation is generally understood as “a regulatory regime under which an organization or industry sector establishes its own rules and regulates itself accordingly.” Thus, the self-regulated organization has the “obligation” to set its own rules and ensure compliance by its members, subject to the oversight of the SEC.

The SEC has two primary areas of supervision: registration of SROs and the continual monitoring and control of the conduct of these SROs, which are primarily stock exchanges. The most important registration requirements cover independent directors, equitable allocation of fees, prevention of fraud and manipulation, removal of impediments to a free and open market, investor protection and disciplinary rules.

The SEC is also vested with the authority to approve SRO rules, which falls under its second type of power: controlling the conduct of SROs. In the beginning when all SROs were stock exchanges, a cautious SEC left a large degree of discretion

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214 See Seligman II, supra note 12, at 1349.
215 See Fleckner, supra note 7, at 2551.
216 Id.
217 Id. at 2582.
218 Id. at 2581.
221 See Fleckner, supra note 7, at 2582.
to the exchanges in developing their rules. The first SEC Chairman, Joseph Kennedy, encouraged “cooperative” regulation and did not commence one fraud case against an NYSE member during his fourteen-month tenure. These exchanges acted more like private clubs and were confident of their abilities to self-regulate.

His successor James Landis studied the issues of unlisted securities, the OTC securities market, and broker-dealer segregation. He felt the problems were complex and would not be well addressed by extensive rules. Landis argued against the abolition of unlisted securities trading. He left alone the issue of broker-dealer segregation but recommended the registration of broker-dealers, which led to the creation of the NASD as an SRO in 1939. In general, he limited regulatory measures to the confirmation of fiduciary duties. While keeping regulation at a practical minimum, Landis extended SEC jurisdiction over unlisted trading and OTC markets.

Then over the decades, the SEC gradually took on broader powers. The 1975 Amendments gave the SEC significant new powers over SROs:

1. Stock exchanges must seek SEC approval of rule changes.
2. If the SEC does not like the existing rules of an exchange, the SEC can alter, add, or delete from the rules of the exchange.
3. The SEC can even amend a stock exchange’s Constitution and Certificate of Incorporation, including number of seats at the stock exchange.
4. The SEC has the power to investigate whether persons regulated by the stock exchanges comply with the Exchange Act and the rules of the exchange, and the SEC can discipline broker-dealers directly if they are registered with the SEC.
5. The SEC can impose limitations, remove officers, or even revoke the registrations of stock exchanges that do not fulfill their obligations.

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223 See Seligman II, supra note 12, for a general history of the evolution of SEC supervision of stock exchanges.
224 See SELIGMAN I, supra note 4, at 111-112.
225 See Seligman II, supra note 12, at 1351.
226 Id.
227 Id. at 1352.
228 Id. at 1353.
229 Id at 1354.
230 See SRO Governance Release, supra note 222, at 71128-29.
The SEC reviews SRO’s disciplinary actions.\textsuperscript{237} The SEC has the right to request all information necessary for its oversight. Stock exchanges must file reports to the SEC and are subject to recordkeeping requirements.\textsuperscript{238}

Nevertheless, the SEC’s powers are limited to what it is authorized under the Exchange Act, leaving many areas under the jurisdiction of stock exchanges, such as corporate governance requirements for issuers.\textsuperscript{239} Furthermore, the SEC must share its powers of government oversight with Congress and the courts.\textsuperscript{240}

However, with intense inter-market competition leading to a rash of demutualizations, new conflicts of interest have arisen and thrown doubt on the industry’s ability to self-regulate.\textsuperscript{241} An exchange that has demutualized and gone public but continues to self-regulate must address new conflicts of interest with itself as well as with its competitors, members, issuers, shareholders and other stakeholders.

The limitations of self-regulation include:

- the natural lack of enthusiasm for regulation on the part of the group to be regulated, the temptation to use a façade of industry regulation as a shield to ward off more meaningful regulation, the tendency for businessmen to use collective action to advance their interests through the imposition of purely anticompetitive restraints as opposed to those justified by regulatory needs, and a resistance to changes in the regulatory pattern because of vested economic interests in its preservation.\textsuperscript{242}

In response, the SEC is becoming more aggressive in broadly interpreting its powers provided by Congress’ 1975 Amendments in “facilitating a national market system.” Some argue that it has, in the process, overstepped its Congressional mandate, in particular when it approved the Intermarket Trading System (ITS), the industry’s inter-market order routing and execution system.\textsuperscript{243} Now going a step further, by replacing ITS’s trade-through rules (which had applied only to its members and exchange-listed securities)\textsuperscript{244} with Regulation NMS’s trade-through and access rules, the SEC is replacing the industry plan’s self-governing rules with direct

\textsuperscript{238} Securities Exchange Act § 17(a)(1), 15 U.S.C. §78q(a)(1) and §78q(b).
\textsuperscript{239} See Fleckner supra note 7, at 2541. See also Business Roundtable v. SEC, 905 F. 2\textsuperscript{nd} 406 (D.C. Cir. 1990).
\textsuperscript{240} Id. at 2585. Gordon v. NYSE, Inc., 422 U.S. 659, 679-81 (1975) (Dissatisfied with SEC’s inaction over eliminating fixed commissions, Congress stepped in to abolish them with the 1975 Amendments.)
\textsuperscript{241} See Fleckner, supra note 7, at 2586.
\textsuperscript{243} See Oesterle, supra note 28, at 615.
\textsuperscript{244} See Regulation NMS, supra note 1, at 37501.
Some major changes of Regulation NMS in securities trading include the following:

(i) trade-through protection is extended to Nasdaq, covering all NMS stocks, from large to small trades;
(ii) the trade-through protection is limited to automated trades, excluding quotations in manual markets;
(iii) trade-through protections may be extended to depth of book quotations, which are quotations in any market center that are inferior to the market’s best bid and offer, at the choice of individual markets;\textsuperscript{245} and
(iv) open market access to the protected quotes through capped fees, so markets centers cannot control its own membership.\textsuperscript{246}

Instead of the private clubs they once were, the NYSE and the Nasdaq have become, in a sense, operating subsidiaries of the SEC, which has clearly adopted a public utility approach to regulating its “subsidiaries.”\textsuperscript{247} Regulation NMS's centralized order routing system, being a “public utility,” would be a type of government-sponsored monopoly and would hinder innovation.\textsuperscript{248} Congress’ express desire was the emergence of a superior market structure created by a competitive process among private parties,\textsuperscript{249} so the SEC was never supposed to be the final arbiter of market structure.\textsuperscript{250} In conclusion, this competitive process of self-regulation has been co-opted by SEC direct regulation.

2. **EU Directives Co-opting Stock Exchange Rules in Mandatory Disclosure**

In contrast to the two fundamental principles of self-regulation and competition in American federal securities law, the two fundamental principles of the European regulatory model traditionally have been minimum harmonization and mutual recognition.\textsuperscript{251} Before these principles were applied by MiFID’s predecessor,

\textsuperscript{245}See Proposed Regulation NMS, supra note 25, at 11135-37.

\textsuperscript{246}Id. Regulation NMS reversed the 1975 Amendments’ removal of the SEC from setting fees. The business model of some ECNs depends on setting access fees to encourage liquidity. The access fee rule eliminates the ECNs’ flexibility. See Marshall E. Blume, *Competiton and Fragmentation in the Equity Markets: The Effect of Regulation NMS*, The Rodney L. White Center for Financial Research, The Wharton School, University of Pennsylvania, at 12 (February 2007) [hereinafter “Blume II”].

\textsuperscript{247}See Oesterle, supra note 28, at 648-649; Fleckner, supra note 7, at 2583.


\textsuperscript{249}See Oesterle, supra note 28, at 649.

\textsuperscript{250}See Blume II, supra note 246, at 3.

the 1993 Investment Services Directive (ISD), supervision of brokers in many Member States was conducted by stock exchanges or professional organizations.\textsuperscript{252} The ISD introduced the concept of home State competence through mutual recognition and the notion of “competent authorities.”\textsuperscript{253} The implementation of ISD led many Member States to fundamentally reform their supervisory institutional framework.\textsuperscript{254} Then, taking a step further, MiFID expressly states that “competent authorities” must be public authorities and provides limits on the possibility of these competent authorities to delegate to other bodies, such as stock exchanges.\textsuperscript{255}

Furthermore, with increased inter-market competition and globalization, stock exchanges have been turning themselves into for-profit entities, and European stock exchanges have been at the forefront of this global trend.\textsuperscript{256} Due to concerns with conflicts of interest from demutualization, there has been a significant reduction in self-regulation in European markets.\textsuperscript{257}

While the two fundamental principles of self-regulation and competition in American federal securities laws and the two fundamental principles in the European regulatory model of minimum harmonization and mutual recognition differ, they support the same goal of regulatory competition. Instead of competition among SROs, there is competition in the EU among national regulatory regimes. However, it must be noted that such a model of regulatory competition is predicated on the existence of efficient competitive markets, which do not exist in all EU Member States. The regulatory competition model becomes weak when faced with the existence of imperfect information, poor economies of scale and public choice failures, making supervisory cooperation particularly necessary.\textsuperscript{258} Moreover, there is

\textsuperscript{252} Id. at 350.
\textsuperscript{253} Article 23 ISD.
\textsuperscript{255} See Article 48(2) MiFID. According to Recital 58 competent authorities “should be of a public nature guaranteeing their independence from economic actors and avoiding conflicts of interest.”
\textsuperscript{256} American stock exchanges have been slower in jumping on this trend. \textit{See generally}, Fleckner, \textit{supra} note 7, for a history of American stock exchange demutualization.
\textsuperscript{257} See Avgouleas, \textit{supra} note 70, at 189. For example, Euronext is not an SRO. In the U.S., when the NYSE demutualized, it had to reorganize and separate its self-regulatory arm from its trading operations. NYSE’s member regulation, enforcement and arbitration functions have since merged with the NASD earlier this year to form an independent SRO: FINRA. \textit{See note 388, infra}.
\textsuperscript{258} See Daniel C. Esty and Damien Gerardin, \textit{Regulatory Co-Opetition, in REGULATORY COMPETITION AND ECONOMIC INTEGRATION. COMPARATIVE PERSPECTIVES, 30, 33 et seq.} (D. Esty and D. Gerardin eds. 2001) for a discussion of the limitations of the regulatory competition model.
the constant fear of regulatory competition leading to a “race to the bottom,” resulting in suboptimal or negligible regulation.  

More likely, forms of oligopolistic competition among regulators may emerge. Hence, the EU has embarked on an upward trend in maximum harmonization in financial regulation with the accompanying decrease in mutual recognition and national regulatory competition.

For example, prior to the Financial Services Action Plan (FSAP) generation of new securities regulation directives, such as the Prospectus, Market Abuse, Transparency and Markets in Financial Instruments Directives, the regulation of mandatory disclosure, such as the continuous disclosure of publicly traded companies and price transparency of markets in the EU were mostly governed by stock exchanges. Now they have been brought under the jurisdiction of EU rules, which have co-opted self-regulatory rules in mandatory disclosure.

(a) Minimum Harmonization to Maximum Harmonization

Furthermore, many argue that MiFID and its fellow generation of directives have departed from the principles of minimum harmonization and mutual recognition, which permitted regulatory diversity. In order to counter regulatory fragmentation from the subsidiary principle, the “public good” defense and gold-plating, the EU has issued more detailed and far-reaching directives, aiming for regulatory convergence through FSAP and the Lamfalussy process.

Clearly, the Commission’s approach has evolved from a principles-based approach to a rule-based one. The general trend in more specific and detailed securities regulation is evident not only in Level 2 implementing measures but was already evident in Level 1 framework directives. MiFID, the framework directive, already has 73 articles with a word count of 31,451 words as compared to ISD’s 32

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259 See Recine supra note 251, at 339
262 See Michel Tison, Financial Market Integration in the Post-FSAP Era, University of Gent, Working Paper 2006-09, 1-2 (April 2006). (Tison argues that MiFID is an example of neither minimum harmonization nor maximum harmonization but something in between called “effective harmonization.”)
263 See Casey & Lannoo II, supra note 106, at 1.
264 Id.
articles and 14,381 words.\textsuperscript{265} With the addition of MiFID Implementing Directive’s 55 articles and MiFID Implementing Regulation’s 41 articles, the total number of MiFID articles is more than five times that of ISD’s.\textsuperscript{266}

An “implementing regulation” is directly applicable and uses a maximum harmonization approach, while an “implementing directive” is more flexible and must be nationally transposed.\textsuperscript{267} MiFID’s implementing directive covered investment services’ conduct of business rules, such as exercising due diligence in selling services to retail clients, client order handling, best execution, safeguarding client assets, conflicts of interest and outsourcing.\textsuperscript{268} Whereas the implementing regulation covers the more contested mandatory disclosure areas of pre- and post-trade disclosure requirements, recordkeeping and transaction reporting, which apply to both investment firms and market centers.\textsuperscript{269} According to the Commission, the MiFID Implementing Directive is “principles-based”, yet it is so highly-detailed that it essentially amounts to a “maximum harmonization” measure.\textsuperscript{270} In addition, it is very likely that additional implementing measures will be issued in the future. Nonetheless, in creating a level playing field with regulatory convergence, it must be admitted that the minimum harmonization approach with its regulatory gaps and weakness for gold-plating by Member States is no longer sufficient for creating a single internal European market.\textsuperscript{271}

(b) Committee of European Securities Regulators
(“CESR”): Its Integrating Role through Soft Law

What room is left for soft law standards and principles in the maximum harmonization approach? CESR hopes to assist in filling in regulatory gaps by using soft law as one of its principal tools.\textsuperscript{272} CESR is a network of national securities regulators, which meet several times a year to ensure the smooth and harmonized implementation of new directives, with a permanent secretariat devoted to specific

\textsuperscript{265} Id. at 3.
\textsuperscript{266} Id.
\textsuperscript{267} Id. at 1.
\textsuperscript{268} Id.
\textsuperscript{269} Id.
\textsuperscript{270} Id. at 2.
\textsuperscript{271} Id. at 2.
\textsuperscript{272} See Chiu I, supra note 76, at 128.
tasks of overseeing implementation and enforcement of securities directives among the Member States. It issues soft law codes and guidelines to assist in ensuring uniform implementation of securities directives by Member States.

Yet, there exists a potential for conflict between the directives and CESR’s soft law codes and guidelines. Conflicts have arisen between MiFID’s provisions on the retail regime for conduct of business and CESR’s standards. Responding to the markets’ urgent need for guidance on common investor protection rules, CESR issued these standards (“the CESR Standards”) before the Commission finished its consultation on the MiFID draft. This resulted in differences between MiFID and the CESR Standards on advisory and non-advisory services. The CESR Standards distinguish two types of services: investment advice and execution-only service. Whereas MiFID defines three types of services: execution-only, investment advice, and “appropriateness” (a service that introduces the possibility of lightly profiling a client or potential client without the personal assessment required for investment advice). While CESR Standards require a client’s written confirmation to execute a transaction beyond its profile created by the firm, MiFID only requires that the customer has received a standardized warning under its “light-touch” appropriateness provision. In addition, MiFID does not require customer profiling for certain instruments under certain conditions; whereas CESR had limited such possibilities of executing services beyond the client’s profile to case-by-case written confirmations by the client.

273 See Chiu I, supra note 76, at 128-129.
274 See CESR’s website www.cesr-eu.org.
277 See Burçak Inel, Investment Advice and Execution-Only Services in the Single European Market, the New FIMD Regime, 2 Euredia 301, 303 (2004).
279 CESR Retail Regime, supra note 276, at Section 3.2, paragraph 71; see Inel, supra note 277, at 318
280 Article 19(6) MiFID.
281 Article 19(4) MiFID.
282 Article 19(5) MiFID.
283 See Inel, supra note 277, at 311, 312, & 314.
284 Id. at 318.
285 Id.
It had been understood that once MiFID was adopted, it would replace CESR’s Standards. Under Level 2 of the Lamfalussy comitology procedure, CESR was mandated to provide technical advice to the Commission on Article 19 MiFID. Hence, CESR was placed in the awkward position of giving technical advice on MiFID Level 1 principles that conflicted with its own Standards.\textsuperscript{286}

Another example of the co-opting of soft law standards by rule-based regimes is the area of conflicts of interest, especially in asset management. In the 1980s, asset management conflicts of interest were mostly covered by voluntary guidelines.\textsuperscript{287} These voluntary guidelines and conduct of business codes, usually came from the U.S. or the U.K., and incorporated terms unfamiliar to continental European markets, such as fiduciary duties and “Chinese walls”. Then the Insider Trading Directive of 1989 and Article 11 ISD brought this area under EU regulatory jurisdiction.\textsuperscript{288} MiFID went further by requiring investment firms to take adequate measures to avoid conflicts of interest.\textsuperscript{289} Investment firms must adopt policies and procedures for identifying and mitigating conflicts of interest. If they cannot fully resolve the conflicts of interest, they must disclose them to their clients.\textsuperscript{290}

\textbf{C. Back to Full Circle: Direct Formal Regulation Improves Self-Regulation}

With the general trend toward electronic trading and demutualization, self-regulation is being questioned and becoming co-opted by direct formal regulation.\textsuperscript{291} Ironically, by co-opting soft law and thus self-regulation, it can be argued that direct formal regulation is improving the function of self-regulation. For instance, MiFID is forcing investment firms to better police their trading activities and, thus, making their practices more credible.\textsuperscript{292}

More interestingly, the trend of direct formal regulation is reinventing the function of self-regulation in the form of delegated or privatized regulatory administration. An example of such delegation of responsibilities in the EU can be found in the area of price transparency where the delegation model has been adopted

\textsuperscript{286} Id.
\textsuperscript{288} Id. at 2.
\textsuperscript{289} Article 18 MiFID.
\textsuperscript{290} Article 18(2) MiFID.
\textsuperscript{291} See Corcoran, \textit{supra} note 219, at 263.
\textsuperscript{292} See Casey & Lannoo II, \textit{supra} note 106, at 7.
by the MiFID Implementing Regulation concerning pre-trade and post-trade transparency. Mandatory disclosure obligations were delegated to the regulated due to the belief that the regulated (if given the responsibility to design their own market data systems) and market forces would be more capable than EU bureaucrats and politicians in creating the best solutions. In other words, the delegation model of regulatory administration incorporates, in large part, the principles of self-regulation and competition.

Pre-trade data and post-trade data do not have to be received by a national regulator. Instead, it is the responsibility of the regulated to make them available to the public. Under the MiFID Implementing Regulation, publication must be within three minutes of close of trade over a market’s facilities, a third party’s facilities or proprietary facilities. The publication duty is made up of an ensemble of duties: a duty to monitor the publication and ensure its accuracy, a duty to consolidate comparable information and a duty to make them commercially available on a non-discriminating basis and at reasonable cost.

Furthermore, through formal regulation and delegation, MiFID would be improving the quality of market data. Before, large numbers of off-exchange trades often went unreported in countries that did not require concentration of trading on exchanges, such as Germany and the U.K. Now, MiFID will capture these trades, which will improve investor confidence and will assist market participants in better monitoring their activities and their once traditionally self-regulatory practices.

Thus, the Commission has clearly chosen to delegate the publication duty of price transparency to the regulated, which includes market centers as well as commercial disseminators. The advantages and drawbacks of delegation are similar to those of self-regulation since delegation is in fact a form of self-regulation, even when the regulated appears to have less discretion in developing its own rules.

A similar phenomenon has occurred with Regulation NMS as well. Although the SEC has ventured into dictating more and more of the market structure through Regulation NMS, some argue that, in spite of the transformation of stock exchange

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293 See Chiu II, supra note 261, at 738.
294 Id. at 739.
295 Art. 29 MiFID Implementing Regulation.
296 Art. 30 MiFID Implementing Regulation.
297 Art. 32 MiFID Implementing Regulation.
rules into regulation of the regulated, the SEC’s efforts will in fact create more confidence in the U.S. securities markets through better accountability. One can argue that Regulation NMS reallocated certain self-regulatory responsibilities from exchanges to a more representative set of market participants.\(^\text{299}\) Now, in addition to the traditional SROs, new market centers, such as alternative trading systems (ATSs) and internalizers, have increased obligations and, thus, more “ownership interest” in the market structure.\(^\text{300}\)

**SECTION II. DEVELOPMENTS IN SUPERVISION: REGULATORY COOPERATION AND COMPETITION**

One of MiFID’s largest advantages for the regulated is that one regime has replaced 25 (now currently 27) regimes increasing compliance efficiency.\(^\text{301}\) However, as harmonization increases, mutual recognition and competition between national regulatory regimes decrease. Unlike regulation, which has become fairly integrated through the Lamfalussy process, supervision has not.\(^\text{302}\) Supervision, being a police subject under EU law, is limited to national jurisdictions. Hence, extraterritoriality traditionally did not occur in prudential regulatory matters, and cross-border supervision required from mutual consent and cooperation.\(^\text{303}\)

### A. NATIONAL REGULATORS OF EU MEMBER STATES

The traditional principles of European supervision have been home country control, minimum harmonization and mutual recognition.\(^\text{304}\) Included with these fundamental principles is also the overarching principle of subsidiarity, which permits and encourages regulatory diversity.\(^\text{305}\) For this very reason, some argue that this

\(^{299}\) See Dombalagian, *supra* note 10, at 1146-47.

\(^{300}\) Id.


\(^{303}\) Id. at 995.

\(^{304}\) See Recine, *supra* note 251, at 337; Alford, *supra* note 106, at 394.

\(^{305}\) See Chiu II, *supra* note 261, at 764.
principle should be maintained.\(^{306}\) Others argue there should be more centralization in supervision and have proposed various models and techniques.

I. Proposed Supervisory Models and Techniques

(a) Consolidated Regulator

As of 2006, there were 54 financial supervisors in Europe.\(^{307}\) Due to serious difficulties with coordination, there are arguments in favor of a single integrated European regulator in charge of all areas of financial supervision.\(^{308}\) This consolidated regulator would be able to efficiently resolve regulatory and supervisory fragmentation. Without a consolidated supervisor, the EU regulatory framework may not be flexible enough, requiring every detail to be legislated first in spite of the Lamfalussy process.\(^{309}\) However, a single integrated supervisor faces the obstacle of the proportionality principle under EC Treaty Article 95.\(^{310}\) Unlike the American judicial deference to agency decisions, the strong continental tradition of judicial supervision of administrative acts and the “public good” test make the creation of a single regulator difficult.\(^{311}\) To address this, some have suggested a modified version of the European consolidated supervisor with the consolidated supervisor in charge of prudential supervision and full delegation of conduct of business rules to Member States.\(^{312}\) Regardless, it is agreed by all that currently the single consolidated supervisor is politically unfeasible.

(b) Two-tiered system: the 26\(^{th}\) (now 28\(^{th}\)) regime


\(^{308}\) Id. at note 2.

\(^{309}\) See Oesterle, supra note 28, at 651.

\(^{310}\) See Coppenholle, supra note 89, at 35.

\(^{311}\) It becomes more difficult when not all national regulators are equal. For example, the United Kingdom’s FSA has the power to settle whereas France’s AMF and Germany’s BaFIN must go through court review. See Edward F. Greene, Featured Lecturer, 11 Fordham J. Corp & Fin. L. 702, 720-21 (2005-2006).

\(^{312}\) See Karel Lanno, European Financial System Governance, CEP Policy Brief no. 106 (June 2006) [hereinafter “Lanno II”].
Some support a two-tiered system comprised of an additional regime overlying the national regimes of Member States. Some have proposed this as part of a gradual transition to a single integrated regulator, calling for CESR to be the supervisor of the national supervisors. Some believe this would provide regulatory convergence yet diversity at the same time, similar to the US system of federal and state competences. The European regulator would be in charge of supervising international financial institutions and the national regulators would be in charge of local market participants. However, the division of competences could never be so simple and would in fact make the regulatory system more cumbersome. On the other hand, it is interesting to note that national regulators are becoming increasingly integrated across business sectors, such as the United Kingdom’s Financial Supervisory Authority and France’s Autorité des marchés financiers.

If national regulators continue to consolidate and the home country principle is kept, the Member States with stronger regulators could play a leading role with smaller regulators of other States primarily in charge of local institutions. Smaller Member States may even prefer to delegate supervisory functions rather than create and maintain their own supervisory infrastructure. Such a result would also be a two-tiered system but would have arisen out of competition forces. One can argue that there will be no need to artificially create a consolidated regulator when market forces encouraged by the principle of home State supervision might naturally lead to supervisory consolidation anyway.

(c) Lead regulator, the principles of home State supervision and mutual recognition

314 See Alford, supra note 106, at 434.
315 See Wymeersch IV, supra note 307, at 2.
316 Id.
318 See Wymeersch III, supra note 302, at 1008.
319 Id.
320 Id.
There are also arguments for extending home State supervision to subsidiaries of financial groups. Home State supervision currently covers branches but not subsidiaries, which are legally independent entities. From a prudential supervision perspective, this legal division is unrealistic.\textsuperscript{321} It has been suggested that home State supervision should be extended to the supervision of the whole group and its products with the host State supervisor intervening for strictly “public health” and “public order” reasons under EC Treaty Article 46.\textsuperscript{322} An extension of home State supervision would certainly lead to a decrease in host State powers. Furthermore, coordination issues and the division of responsibilities involved in the extraterritorial application of home supervision would first need to be resolved.\textsuperscript{323} This home State supervisor would in essence become the “lead supervisor”, whose decisions must be respected by the entire financial conglomerate. This approach has not been used often but Member States are becoming increasingly receptive whenever financial conglomerates are concerned.\textsuperscript{324} Finally, the lead supervisor’s powers could then be supplemented by the technique of delegation.\textsuperscript{325}

(d) Delegation

(i) Delegation on the EU level

In comparison with US practice, delegation of powers to regulatory agencies is much more strictly used in the EU.\textsuperscript{326} The creation of regulatory agencies is not explicitly provided for in either the U.S. Constitution or the EC Treaty, but the Meroni doctrine narrowly interprets the Council’s and European Parliament’s ability to delegate regulatory powers.\textsuperscript{327} In the Meroni case, the European Court of Justice (“ECJ”) laid out that an EU institution could not delegate powers that were not

\textsuperscript{321} Id. at 999.
\textsuperscript{322} Id.
\textsuperscript{323} Id. at 1000.
\textsuperscript{324} Id. at 1004-05. Some find the technique of “lead supervisor” to be a useful step but not the final solution. See Andrew Crockett, Le marché des capitaux européens vu par un acteur international : Interview (The European Capital Market viewed by an International Player : Interview), 88 Revue d’économie financière 161, 168 (April 2007). See also Greene’s proposal for the use of a lead supervisor in MoU between the SEC and European regulators. Greene, supra note 311, at 716.
\textsuperscript{325} Id. at 1004.
\textsuperscript{327} Id.
already granted to it under the Treaty. However, the Council, the Commission and the European Parliament, which do not operate within a Montesquieu division of powers, are still in the process of determining their jurisdictions and powers. Thus, the delegation doctrine, unlike in the U.S. where it does not pose a threat to the clearer division of powers between the executive, legislative and judicial branches, is a source of a power struggle among the EU institutions. This power struggle was evident during the Lamfalussy comitology process in which the European Parliament was disowned of part of its legislative powers. In general, the comitology procedure is attractive to the Commission because it retains more control. With its controlling role conserved, the comitology procedure is also attractive to the Council, allowing its Member States to monitor the Commission’s implementation powers. Furthermore, the ECJ dismissed the possibility of delegating wider discretionary powers on the basis of EU Treaty Article 7’s principle of “institutional balance,” making the emergence of EU regulatory agencies with legislative, executive and quasi-judicial powers more difficult. Thus for now, delegation as a supervisory tool will remain more in the arena of Member States and their national regulatory agencies.

(ii) Delegation on the national level

Presently, the EU regulatory model maintains a horizontal model based on the traditional home/host State rule principle, and the directives do not define “delegation”. Inter-agency delegation still corresponds with the horizontal model, but once there is delegation to non-public agencies, some aspects of a vertical model would be needed. The area of consolidation of price transparency information

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329 Id. at § 40.
330 See Gerardin, supra note 326, at 220.
331 See Meroni case, supra note 328, at § 44.
332 See Gerardin, supra note 326, at 219.
333 Article 48(2) MiFID states that “the final responsibility for supervising compliance with the Directive and with its implementing measures shall lie with the competent authority or authorities designated in accordance with paragraph 1.”
334 See Wymeersch IV, supra note 307, at 4. Wymeersch presumes that the term delegation “refers to cases where one supervisor charges another with certain tasks, to be executed on behalf of the former. These tasks may contain a certain number of minor matters or technical decisions, or may conversely amount to substituting the decision of the former by a decision of the party to whom it has been delegated.”
335 See Chiu II, supra note 261, at 771.
where responsibilities have been delegated to private parties would be such an area requiring more of a vertical model.\footnote{Id. at 744.}

MiFID includes other provisions concerning delegation, such as: (i) permitting an arrangement of multiple authorities to be in charge of supervision, which should not exclude the possibility of delegation by the competent authority;\footnote{Art. 64(3) MiFID.} (ii) authorization of firms in which “Member States may allow the competent authority to delegate administrative, preparatory or ancillary tasks;\footnote{Articles 5(5), 16(3), 17(2), 23(4) MiFID.} and (iii) paying attention to conflicts of interest when there has been delegation to a regulated market.\footnote{Art. 39 MiFID.}

It is clear, though, that the types of delegation in MiFID are delegation of discrete tasks and not of decision-making powers.\footnote{See Wymeersch IV, supra note 307, at 7.} Article 48(2) MiFID provides that “any delegation of tasks…may not involve either the exercise of public authority or the use of discretionary powers of judgment.” For now, delegation of decision-making will rest mostly among the EU institutions through the Lamfalussy process and among national regulators through directives’ delegation provisions.\footnote{Among the FSAP directives, the Prospectus Directive is the only exception and has a provision allowing the home regulator to delegate, but the delegation would not alter its liability. Articles 13(5) & (6) Prospectus Directive.} Yet even for national supervisors, the question of liability has not been clearly resolved, so national supervisors remain wary of delegating tasks to their counterparts.\footnote{See Wymeersch IV, supra note 307, at 18-19.}

The future of delegation will depend more on the development of a vertical regulatory model.\footnote{See Chiu II, supra note 261, at 771.} This may be especially true for consolidation of information and market linkages, such as the model provided under Regulation NMS.\footnote{Id. at 770.} Some argue leaving consolidation to market forces will not be sufficient. The vertical model also could help alleviate the negative effects of competition between national regulators. Others, though, argue that regulation instead of market forces will hinder innovation.\footnote{See Blume II, supra note 246, at 15.}

A vertical model in decision-making may already be in the making. In CESR’s “Himalaya” Report, CESR proposed that a vertical model could be considered for supervisory purposes if five conditions were satisfied: efficiency,
subsidiarity, balance, integration and uniformity. All considering, financial supervision will most likely integrate through either a vertical scheme where the hierarchical structure would create a clear regime of supervision competences but with little supervisory competition, or through a “multipolar” scheme in which supervisory consolidation follows market consolidation.

(e) Coordination and Cooperation

Until this point of supervisory integration is reached, coordination and cooperation between national supervisors will be absolutely necessary in addressing regulatory and supervisory fragmentation as the European single market develops. As the number of transaction increases, so will the need for increased surveillance at multiple points requiring better coordinated supervisory cooperation. The Lamfalussy process has strengthened this supervisory cooperation with the creation of CESR.

(i) CESR’s Integrating Role

In December 1997, CESR’s precursor, the Forum of European Securities Commissions (FESCO) was established. One of its notable achievements was its Multilateral Memorandum of Understanding on the Exchange of Information and Surveillance of Securities Activities agreed on 26 January 1999. Then the Lamfalussy process established the European Securities Committee (ESC) and CESR for the securities field. CESR, an independent advisory body, was created to serve as a forum for supervisory cooperation at Level 3. CESR’s tasks under Level 3 include:

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346 See the Himalaya Report, supra note 275, at 16.
347 See Wymeersch III, supra note 302, at 1009-10.
349 Id.
351 See Part I, Section 1(B)3, supra, of this Article for a description of Lamfalussy’s 4 level approach and CESR’s roles in the 4 levels.
(i) production of consistent guidelines for the administrative regulations to be adopted at national level;

(ii) issuing of joint interpretative recommendations and setting of common standards regarding matters not covered by EU legislation—where necessary, these could be adopted into Community law through a Level 2 procedure (i.e. through technical implementing measures);

(iii) comparing and reviewing regulatory practices to ensure effective enforcement throughout the EU and defining best practice; and

(iv) periodically conducting peer reviews of administrative regulation and regulatory practices in Member States. 352

Clearly, the Lamfalussy process desired that the foundation of supervisory cooperation established under FESCO be carried over to CESR under Level 3. 353

CESR then identified, in its consultation paper on how regulators could ensure consistent implementation and greater convergence in the transposition of EU financial legislation, three categories of Level 3 functions: coordinated implementation of EU legislation, regulatory convergence and supervisory convergence. For coordinating implementation, CESR intended to conduct ad hoc sessions concerning detailed measures under the responsibility of national regulators. 354 For regulatory convergence, CESR will rely on providing soft law standards, such as guidance, regulatory recommendations or standards, for national regulators to follow on a voluntary basis. 355 In addition, CESR will go ahead and adopt standards in areas not yet harmonized. 356 Finally for arguably the most difficult category of functions: supervisory convergence (defined as relating to the cooperation of regulators in the performance of the supervisory tasks and obligations under EU directives and regulations), CESR expressed that cooperation and information-exchange between regulators would be necessary, including convergence in enforcement, and proposed the establishment of an EU-wide database of

353 See Recine, supra note 251, at 345.
354 Id. at 346.
355 Id. note 251, at 345.
356 Id.
administrative decisions adopted by regulators. Through CESR, the national regulators have a forum for sharing information and strengthening cooperation.

(ii) MiFID’s provisions on supervisory cooperation

The types of cooperation to be developed by CESR still depend on the provisions of the directives. MiFID contains innovative rules on cooperation. Besides reinforcing ISD’s provisions for supervisory cooperation on responsibilities and information exchange, MiFID kept ISD’s home State rule and principle of mutual recognition through its adoption of a European passport. However, it significantly modified the home State rule principle by allowing the host State to regulate parts of cross-border services. In essence, MiFID is innovative because it struck a balance between conserving the home State rule while reserving significant residual powers for the host State. By choosing a horizontal approach respecting host State concerns, MiFID ensured a greater likelihood of political success.

These new residual powers for the host State supervisors did not exist before under the earlier generation of directives. Now, the host State has “residual intervention powers” after prior consultation with the home State supervisor concerning services of a branch in the host State in the areas of investor protection, market transparency and integrity. Article 62(1) MiFID provides that the host State can intervene in home country control when it considers its investor protection to be threatened. To supplement, Article 62(2) MiFID provides the host State with supervision competence over conduct of business of a branch in the host State,

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357 Id.
358 Id. at 337.
359 See Buisson, supra note 348, at 247.
360 It is important to note again that MiFID extended the original ISD scope to include investment services (i.e. investment advice and MTF services) and commodities derivatives. See Tison, supra note 262, at 6.
361 See Recine supra note 251, at 338.
362 See Tison, supra note 262, at 1.
364 See Tison, supra note 262, at 1.
365 Article 1(2), fourth indent, MiFID. See Tison, supra note 262, at 7. Also, Article 32(7) MiFID states the competent authority of the Member State in which the branch is located shall assume responsibility for ensuring that services provided by the branch within its territory comply with the obligations laid down in Articles 19, 21, 22, 25, 27 and 28, which relate to investor protection, market transparency and market integrity. See Recine, supra note 251, at 348.
permitting the host State to take sufficient measures to stop violations of rules without prior consultation with the home State supervisor.\textsuperscript{366} A similar provision is contained in Article 61(3) MiFID regarding activities of a regulated market in the host State through remote access. Moreover, host State authorities in charge of a regulated market may directly address remote members of the market with notification to the remote member’s home State authority.\textsuperscript{367} Although these residual host State intervention powers are to be checked by the requirements of proportionality and prior consultation of home State, these new powers will most certainly threaten the home State rule principle and result in duplication of supervision of cross-border services.\textsuperscript{368}

(iii) Gradual building blocks

From the period before the creation of FESCO and CESR, supervisory cooperative techniques have evolved from bilateral Memoranda of Understanding to a deeper system of multilateral cooperation.\textsuperscript{369} Eddy Wymeersch speculates that convergence of supervision may be gradually achieved through the “gradual building blocks” of multilateral coordination of national regulators in CESR and through the growing importance of pan-European disseminators of market information that shall come under regulatory supervision.\textsuperscript{370}

B. U.S.: the SEC and the SRO System

The federal securities regulatory model can be described as a vertical model with a two-tiered system of SROs supervised by the SEC. With the 1975 Amendments and Regulation NMS, the federal securities regulatory structure is becoming even more vertical as the market is becoming increasingly fragmented and horizontal with the traditional SROs no longer playing as central a role. Stock exchange rules are increasingly being co-opted by regulatory rules, and a self-regulation framework increasingly being pre-empted by a direct regulation framework.

\textsuperscript{366} See Tison, supra note 262, at 7.
\textsuperscript{367} See Buisson, supra note 348, at 247.
\textsuperscript{368} Id.
\textsuperscript{369} See Recine supra note 251, at 364.
\textsuperscript{370} See Ferran review, supra note 81, at 954.
Despite a fairly stable vertical model, there is an ongoing debate in the U.S. about which governance model would be best. There are many who argue that not only the SEC is encroaching upon the fundamental principle of self-regulation but also threatening the other fundamental principle of competition.\textsuperscript{371} Regulation NMS brought back to the spotlight issues concerning market data fees, an important SRO revenue source and self-regulation funding source, and SRO governance.\textsuperscript{372} Later in the same year Regulation NMS was proposed, the SEC issued its 2004 Concept Release Concerning Self-Regulation (SRO Concept Release)\textsuperscript{373} and began revisiting the issue of reforming the current SRO system plagued by conflicts of interest exacerbated by demutualization and self-regulatory difficulties arising from market fragmentation. The SEC presented for consideration and comments a variety of alternative approaches to the current SRO system:

1. enhancements to the current SRO system;
2. an independent regulatory and market corporate subsidiary model;
3. a hybrid model;
4. a competing hybrid model;
5. a universal industry self-regulator model;
6. a universal non-industry regulator model; or
7. direct SEC regulation of the securities industry.\textsuperscript{374}

Proposed enhancements to the current SRO system refer to the governance and transparency improvements proposed by the SEC in its SRO Governance and Transparency Rules Proposal,\textsuperscript{375} which accompanied the SRO Concept Release. Responding to self-regulation failures, such as the 2003 NYSE head Richard Grasso’s pay scandal and the NASD’s 1996 OTC market maker price collusion scandal and regulatory staff’s lack of independence,\textsuperscript{376} the SEC proposed to increase SRO

\textsuperscript{371} As discussed supra in Part II, Section I.(A) of this Article.
\textsuperscript{372} See SRO Concept Release, infra note 373, at 6.
\textsuperscript{374} Id. at 32.
\textsuperscript{376} See SRO Concept Release, supra note 373, at 6.
transparency through enhanced disclosure and reporting requirements. The SEC also proposed to require SROs to have a majority independent board with fully independent Nominations, Governance, Audit, Compensation and Regulatory Oversight Committees. Finally, the SEC would require all SROs to separate their regulatory function from their market operations and commercial interests. One commenter supported the increased transparency proposal but voiced concern that the adoption of regulatory independence rules would result in the loss of industry ownership of self-regulation. Then in such a situation, the commenter argued the SEC should assume direct regulation.

Independent Regulatory and Market Corporate Subsidiaries is similar to NASD corporate structure and would entail placing SRO regulatory staff within an independent regulatory subsidiary, which would report directly to the corporate parent’s board. The organizational division would be clearer, but the regulatory subsidiary would still be part of the corporate group and thus the issue of its independence would still not be resolved.

The Hybrid Model would designate a “Single Member SRO” to regulate all SRO members concerning membership rules while leaving each SRO operating a market (“Market SRO”) solely responsible for its own market operations and market regulation. This model combines aspects of a horizontal and vertical model and would be a more natural extension of the current self-regulation system with the addition of only a Single Member SRO. Furthermore, there would be a number of sub-options to choose from on how to divide market rule promulgation, market surveillance and enforcement functions between the Single Member SRO and the Market SROs. Nonetheless, there would still be conflicts concerning member funding and control as well as conflicts within the Market SROs.

The Competing Hybrid Model is another version of the Hybrid approach. Instead of having a Single Member SRO, the Competing Hybrid Model would have multiple “Competing Member SROs”. Each Market SRO member would have to be a member of one of the Competing Member SROs, which would charge a regulatory

377 Id.
379 See SRO Concept Release, supra note 373, at 35.
380 Id.
381 Id. at 36.
fee. This would allow competition between the Member SROs but would make enforcement difficult as Market SROs could change memberships. The *Universal Industry Self-Regulator* would designate a single industry-wide regulator to regulate all SRO members. All member firms and markets would have to register with the Universal Industry Self-Regulator similar to how ATSs are now registered with SROs. This model would equally subject all members to regulation and would not suffer from lack of funding but may favor large members for fees. Division of responsibilities may also not be clear between the Universal Industry Self-Regulator and the SEC.

The *Universal Non-Industry Regulator* would designate a non-industry regulator responsible for all markets and member regulation. All member firms and markets must be registered with the Universal Non-Industry Regulator, who would be solely responsible for issuing member and market rules, compliance inspections and enforcement. This model would be similar to the Public Company Accounting Oversight Board ( PCAOB) in the public accounting industry. This Universal Industry Self-Regulator would not be affiliated with any specific market and would report directly to the SEC and Congress. This model resolves issues with conflicts of interest but raises questions regarding jurisdictional issues between the Single Member SRO, the SEC and Congress. Also the Universal Non-Industry Regulator may be too removed to respond quickly to industry changes.

*SEC Direct Regulation* would eliminate the SRO system altogether. The significant cost of self-regulation would be transferred to the SEC, which would need to ask Congress for sufficient funding. This model would eliminate all conflicts of interest and would permit equal regulation of all markets and members as well as improved cross-market surveillance. However, industry expertise and participation in rule-making would be lost, and direct regulation would be too removed and slow to respond to rapid market changes.

The proposed governance and transparency rules will most likely be adopted. Among the different alternatives presented for consideration, the pure Hybrid Model is a more likely candidate to be adopted. The Independent Regulatory and Market

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382 *Id.* at 38-40.
383 *Id.*
385 *Id.*
386 See SRO Concept Release, *supra* note 373, at 45.
Corporate Subsidiaries approach is already used by the NASD and NYSE and would not change very much the current SRO system. However, the other models would require significant industry reshaping and new Congressional revamping of securities regulatory principles. The pure Hybrid Model would be an easier compromise, preserving the principles of self-regulation, appeasing conflicts of interest and governance concerns, and requiring less industry reshaping with the addition of only one supplemental layer of self-regulation.\footnote{See Robert R. Glauber, NASD Comment Letter to Jonathan G. Katz re. File No. S7-40-04, Concept Release Concerning Self-Regulation (March 15, 2005), available at http://www.sec.gov/rules/concept/s74004/rrglauber031505.pdf.} Finally, with the recent merger in July 2007 of NASD and NYSE’s member regulation, enforcement and arbitration functions, the SRO system is well on its way to adopting a pure Hybrid Model.\footnote{See the Financial Industry Regulatory Authority’s site at http://www.finra.org/AboutFINRA/CorporateInformation/index.htm.}
more fairly distribute market data as a public good.\textsuperscript{394} Meanwhile, the EU has chosen a different route: the competing consolidators model, similar to the one recommended by the majority of Seligman’s Advisory Committee, with a belief in market forces and competition. It will be interesting to see which choice turns out to be better.

\section*{C. International Regulatory Coordination}

Regulators often play catch-up with the latest changes, trends and innovations of the market. For example, market players began calling for changes, such as convergence, before there was any serious international coordination between national regulators. The reality is regulators are limited by national jurisdiction while financial markets and their participants and activities have crossed national lines. National regulators can no longer efficiently regulate financial conglomerates and international activities. Different national requirements result in high compliance costs for financial institutions. There have even been calls by some authors for a global regulator who would be responsible for generating regulatory standards and coordinating implementation.\textsuperscript{395}

Regulatory authorities began developing informal international networks outside the usual diplomatic channels in reaction to these changes.\textsuperscript{396} Examples of such international networks of regulators are the International Organization of Securities Commissions (“IOSCO”) for the securities sector and the Basel Committee for the banking sector.\textsuperscript{397}

International regulatory coordination first began in the 1980s after the emergence of international financial markets. The SEC in 1988, after a series of fraud cases involving cross-border trades in which the SEC faced difficulties relating to information sharing and jurisdictional issues, issued a policy statement on cooperation, calling on regulators to create a network of information sharing.\textsuperscript{398}

\begin{itemize}
  \item \textsuperscript{394} Id.
  \item \textsuperscript{396} See Recine, supra note 251, at 336.
  \item \textsuperscript{397} Id at 336-37.
  \item \textsuperscript{398} See Felice B. Friedman, \textit{et al.}, \textit{Taking Stock of Information Sharing in Enforcement Matters}, 10 J. Fin. Crime 37-38 (2002). Besides difficulties with information sharing, there were also problems with ability to freeze overseas assets.
\end{itemize}
Congress then strengthened the SEC’s information sharing powers and reduced legal obstacles to assisting foreign regulators. New rules included the lack of a dual illegality or dual criminality provision, which allowed the SEC to assist foreign authorities even if no unlawful activity had occurred in the U.S. and the activity in question would not have breached U.S. law.  

IOSCO began looking at this issue and adopted a number of resolutions between 1986 and 1996 for improving multilateral cooperation. In 1998 and 1999, G7 formally affirmed the principles in IOSCO’s resolutions.  

National regulators slowly began with bilateral agreements like Memoranda of Understanding (“MOU”), which became popular. From these beginnings, bilateral agreements developed into multilateral frameworks of cooperation. In Europe, as stock markets merged, such as the Euronext merger of the Paris, Amsterdam and Brussels stock exchanges, forced regulators to create formal multilateral forums for cooperation.  

More interestingly, market players have expressed early on their desire for convergence. International financial institutions have been frustrated that there is no concept of equivalency or mutual recognition between U.S., European and Asian regulators and their rules. Compliance difficulties arise from different disclosure standards between home and host countries and the ensuing liability in host countries for non-compliance. Difficulties in international compliance for financial institutions also stem from different conduct of business rules and lack of common treatment of wholesale equities and derivatives customers of market intermediaries.  

A group of industry associations published a large study calling for regulatory

399 See Recine, supra note 251, at 341; Friedman, supra note 398, at 40. New rules including the possibility for the SEC to use its powers on behalf of foreign authorities; its ability to assist any foreign authority in enforcing securities law; and the absence of a dual illegality or dual criminality provision. These rules are now codified in Section 21(a)(2) of the Trading and Securities Fraud Enforcement Act of 1988.

400 See Friedman, supra note 398, at 40.


402 The first publicly known MOU was concluded in 1986–87. By 1998, there was an estimated number of 200 MOUs. See Susanne Bergstrasser, Cooperation between Supervisors, In EUROPEAN SECURITIES MARKETS. THE INVESTMENT SERVICES DIRECTIVE AND BEYOND, 373 (Guido Ferrarini ed. 1998).

403 See Van Cauwenberge, supra note 350, at 255.

404 See Greene, supra note 311, at 705.

405 Id. at 708.

406 Id. at 718.
convergence of transatlantic institutional or wholesale markets. The report called for:

- the formulation of a common set of definitions for the purposes of classification, solicitation and documentation;
- a common approach to core investor protection, such as “know your customer” policies;
- the development of a common set of examination and registration requirements;
- a consensual regulatory approach to firms’ outsourcing arrangements;
- the simplification of regulation in other critical areas, such as best execution, trade-allocation procedures and the distribution of research, etc.

This study called for regulatory convergence for wholesale markets, but one corporate officer of an international financial institution went even further and has called for the seamless integration of U.S. and EU wholesale markets.

I. US-EU Dialogue

As European stock exchanges merged, the national regulators devised multilateral agreements on cooperation for supervising the merged exchanges. Now the merger trend has crossed the Atlantic with the notable example of the NYSE-Euronext merger. As the NYSE and Euronext were negotiating their merger, the relevant supervisors were negotiating an agreement on supervisory cooperation. There was a strong European fear of U.S. regulatory spillover into the EU, so it was agreed to extend Euronext’s federal model and observe the principle of exclusive


\footnote{408 See Greene, supra note 311, at 714.}

\footnote{409 \textit{Id}. Edward F. Greene was General Counsel of the Corporate and Investment Bank of Citigroup when he made this comment in 2006.}

\footnote{410 AMF Communiqué, \textit{Le Collège des Régulateurs d’Euronext a signé un accord de coopération et d’échange d’informations (MoU) avec la Securities and Exchange Commission des États-Unis (SEC) le 25 janvier 2007} (The College of Euronext’s Regulators have signed an agreement of cooperation and information exchange (MoU) with the Securities and Exchange Commission of the United States (SEC) on January 25, 2007), 33 Revue mensuelle de l’Autorité des marchés financiers 143 (February 2007).}
geographic regulatory responsibility for the resulting entity. Thus, the joint
ownership of a U.S. exchange and a non-U.S. exchange would not result in automatic
application of U.S. securities regulations to the listing or trading activities of the non-U.S. exchange. Thus, the SEC would be responsible only for the U.S. market and would not be allowed to interfere in the European markets while AFM would be responsible for the Dutch market, the AMF for the French market, the CBFA for the Belgian market, the CMVM for the Portuguese market and the FSA for the U.K. market. This is only another reminder of the same issue: as markets and financial institutions have become international, regulators have remained national. Such an arrangement respecting the principle of exclusive geographic regulatory responsibility may be a temporary solution while Euronext Amsterdam, Euronext Paris, Euronext Brussels, Euronext Lisbon, Euronext.liffe and the NYSE remain within their respective national markets, but once their organizational structure and activities begin to fully integrate, the regulators will have to revisit their cooperation agreement and the issue of national jurisdiction. In response, senior SEC staff members have proposed a revolutionary framework of mutual recognition called “substituted compliance,” in which foreign exchanges and broker-dealers would obtain exemptions from registration with the SEC if they were subject to regulations and supervision comparable to direct SEC supervision of U.S. domestic firms. It will be seen whether or not the SEC will adopt this framework and, if it does, how this form of mutual recognition will be implemented.

Other forms of US-EU dialogue have emerged too, such as the Financial Markets Regulatory Dialogue (FMRD), whose members include the European Commission, the U.S. Treasury Department, the SEC, the U.S. Federal Reserve and the National Association of Insurance Commissioners. Some argue that the

414 See Crockett, supra note 324, at 165.
416 An indication is that the SEC’s Office of International Affairs will be creating a new division of comparative law to study mutual recognition issues.
dialogue should involve more representatives, such as national European regulators who would be the natural counterparts to American regulatory authorities, and the European Parliament who would bring a more democratic element to the process.\textsuperscript{418} Members of the European Parliament, recognizing the importance of their institution, have even expressed that they wished to negotiate directly with the U.S. Congress rather than wait for the European Commission to define a course with American regulatory authorities.\textsuperscript{419} Some have responded that including these additional representatives would make the process of negotiation too cumbersome. Anyway, until there is a “global supervisor,” an EU-US dialogue will have to remain pragmatic, flexible, informal and transparent in order to develop mutual confidence on both sides of the Atlantic.\textsuperscript{420}

\textsuperscript{418} See Coppenholle, supra note 89, at 17.
\textsuperscript{420} See Schaub, supra note 415, at 108-09.
IV. FRAGMENTATION: CURRENT ISSUES

Currently, there are many issues surrounding Regulation NMS and MiFID. This Article shall highlight two core issues common to both rules that have been hotly debated: market fragmentation and the related issue of price transparency.

SECTION I. FRAGMENTATION V. CONSOLIDATION DEBATE

There has been a decades-long debate about whether the market should remain consolidated or become fragmented. The current reality is the market has already fragmented. This section will discuss the current issues surrounding market fragmentation.

A. Historical Summary of U.S. and EU Equities Market Structure

The U.S. has a mostly dual structure of auction (“order-driven systems”) and dealership (“quote-driven systems”) markets. Historically, there have been five different kinds of markets in the U.S.: (i) national stock exchanges, (ii) regional stock exchanges, (iii) the OTC market, (iv) proprietary internalizers and (v) alternative trading systems (ATSs). There are primarily ten U.S. securities exchanges: American Stock Exchange (AMEX), Boston Stock Exchange (BSE), Chicago Board Options Exchange (CBOE), Chicago Stock Exchange (CHX), International Securities Exchange (ISE), National Stock Exchange (NSE)(formerly the Cincinnati Stock Exchange), the Nasdaq Stock Market (Nasdaq), New York Stock Exchange (NYSE), NYSE Arca (formerly known as the Pacific Exchange), and Philadelphia Stock Exchange.
Exchange (Phlx). These exchanges are mostly auction markets, except notably Nasdaq, a dealership market, and NYSE Arca, an ECN.

Traditionally, the two national stock exchanges, NYSE and AMEX, dominated trading in their own listed stocks while market makers dominated trading in Nasdaq listed stocks. Now, competition has increased between all the markets. In the past three decades, the OTC market: Nasdaq,\(^{425}\) has experienced rapid growth and is now the main competitor of the NYSE. In turn, since the 1975 Amendments, Nasdaq has lost increasing volumes of order flow to automated market centers, such as electronic communication networks (ECNs) and internalizers.\(^{426}\) Automated market centers, such as Nasdaq’s SuperMontage, ArcaEx and INET ECN, now have more than 50% of Nasdaq-listed share volume.\(^{427}\) These automated market centers have demanded a more level playing field, resulting in Regulation NMS. Finally, there is always the option of trading on foreign markets, which are intense competitors.\(^{428}\)

For European markets, the structure varies Member State by Member State. Since the 1986 “Big Bang,”\(^{429}\) the European markets have been locked in intense competition. The London Stock Exchange (“LSE”), the most dominant European stock exchange, triggered the competition with the creation of Stock Exchange Automated Quotations (“SEAQ”) International, which was a dealer/quote-driven market that attracted much trading away from the continental exchanges. Then in the late 1980s, the continental exchanges radically restructured themselves as continuous, electronic order-driven systems\(^{430}\) as well as radically changing their rules, including the liberalization of member access and reduction of transaction fees, etc. This allowed them to regain much of their lost trading volume in the 1990s, forcing the

\(^{425}\) NASDAQ stands for the National Association of Securities Dealers Automated Quotation system.
\(^{426}\) See SRO Concept Release, supra note 373, at 6.
\(^{427}\) Id.
\(^{428}\) Id.
\(^{429}\) See Ferrarini, supra note 65, at fn. 11. The 1986 Big Bang refers to the sudden deregulation of the London Stock Exchange rules on October 27, 1986, resulting in the abolition of fixed commissions and restrictions on ownership of UK stockbrokers, and the introduction of Stock Exchange Automated Quotation system (SEAQ), which replaced open outcry trading floor with an electronic display system.
\(^{430}\) It is interesting to note while the continental European stock exchanges were evolving into electronic auction markets, the NYSE stubbornly kept its manual auction market system with a trading floor. The NYSE now has a hybrid manual/electronic auction system, which was launched in phases beginning in 2006. See note 466, infra, for more details.
LSE to partially replace its quote-driven system with an order-driven system for shares of FTSE 100 companies.\textsuperscript{431}

The U.S. system is comprised mostly of SROs subjected to oversight and minimum standards set by the SEC. The EU is still in the process of rapidly harmonizing its financial regulation. Before the adoption of ISD, some countries, such as France, Belgium and Italy, had concentration rules whereas other countries, such as the U.K. and Germany, did not. The ISD introduced a concentration rule, but the ambiguous Article 14 ISD was a compromise solution with a loophole allowing investors to escape compliance with concentration requirements.\textsuperscript{432} Now with the adoption of MiFID, which eliminates the concentration rule, Member States like France, Belgium and Italy are suddenly faced with a dramatic restructuring of their markets. For many Member States, off-exchange trading, internalizers and ATSs will be permitted for the first time and investors in the Member State may trade off-exchange in other Member States. Now both the U.S. and the EU no longer have a concentration rule and must handle the advantages and disadvantages of market fragmentation.

\textbf{B. Pros of Fragmentation}

The primary argument in favor of fragmentation is the principle of competition. Competition also allows the development of structural diversity with the emergence of different markets providing different services. Although the NYSE is still the dominant market for its own listed stocks,\textsuperscript{433} other market centers compete fiercely for NYSE-listed securities using niche strategies and specialized services.\textsuperscript{434} According to the SEC’s Concept Release in 1999,\textsuperscript{435} ATSs, which include ECNs,\textsuperscript{436} .


\textsuperscript{432} For a more detailed history of ISD, see Part II of this Article.

\textsuperscript{433} According to the SEC in 2005, the NYSE has retained approximately 80\% of the volume of its listed stocks but is losing its share of trading to other market centers. This high percentage is most likely due to NYSE’s designation of only one specialist per stock. \textit{See} SRO Concept Release, supra note 373, at 6.


processed almost 4 percent of orders in NYSE-listed securities. The case is much more pronounced for Nasdaq securities. According to the June 2000 SEC Special Study on ECNs and After-Hours Trading, ECNs have approximately 30% of the total share volume and 40% of dollar volume in Nasdaq securities. Back in 1993, ECNs only had 13% of share volume of Nasdaq securities and 1.4% in listed securities. This increase in ECNs’ share volume demonstrates that the provision of niche services and structural diversity meet customer preferences other than best price.

Furthermore, a centralized marketplace like then SEC Chairman Arthur Levitt’s proposal for a central limit-order book, or CLOB, where all limit orders would be displayed, is often viewed in the U.S. as potentially detrimental to market competition because some market centers depend on providing anonymous trading services and other niche services that would be harmed by CLOB.

C. Cons of Fragmentation

The first arguments against fragmentation and in support of concentration are investor protection arguments. Concentration in stock exchanges, it is argued, would better protect investors by assuring best execution. Also, investors would be better protected by the improved economic efficiency from consolidation of order flow, which would facilitate price discovery and liquidity, etc., and thus improve economic efficiency. However, these arguments are based on the assumption that exchanges provide better transactions in terms of price, transparency, etc. Stock exchanges may be the better markets, especially since they are required to invest significantly in their organizational structures in order to arrive at accurate prices.

436 See Note 9, supra, about the terms ECN, ATF and MTF.
437 See Macey & O’Hara, supra note 144, at 46.
440 Id. at 17.
441 See Ferrarini, supra note 65, at 584.
442 “Price discovery refers to the dynamic processes by which equilibrium prices are found in a non-costless market-place.” See Roberta A. Schwartz, Equity Trading II: Integration, Fragmentation, and the Quality of Markets, in THE EUROPEAN EQUITY MARKETS: THE STATE OF THE UNION AND AN AGENDA FOR THE MILLENNIUM, 65 (Ben Steil ed. 1996).
443 Id.
The other main arguments are that fragmentation would result in less order interaction and information free ride. Many market centers do not have enough order flow for efficient price discovery. The regional exchanges and ECNs depend on the NYSE for price discovery and improve on them with price or services, so there is no incentive for them to invest in accurate price discovery processes. Meanwhile, the NYSE is disadvantaged by its responsibility to maintain its price discovery mechanisms and infrastructure.\textsuperscript{445} With orders being transacted at multiple points, there is a loss of market depth leading to a reduction of liquidity, increase in bid-ask spreads and impeded price discovery.\textsuperscript{446} A contributor to the increase in multiple transaction points is order internalization, which can be opaque and can become “dark pools.” Before Regulation NMS was adopted, there were two theoretical disadvantages to order internalization:\textsuperscript{447} (i) member firms might overreach in upstairs market-making and internalize orders, and (ii) order internalization would fragment specialist trading\textsuperscript{448} into smaller markets.\textsuperscript{449} Under Regulation NMS and MiFID, order internalization is permitted and could potentially prevent captive customer orders from interacting.\textsuperscript{450}

\textbf{D. Tools for Combating Effects of Fragmentation}

A number of tools have been proposed for fighting fragmentation effects of reduced liquidity and increased difficulty in evaluating the quality of order execution, such as the best execution rule, pre-trade and post-trade transparency rules and market linkages.\textsuperscript{451}

\begin{footnotesize}
445 \textit{Id.}
446 \textit{See} Beny, \textit{supra} note 34, at 419.
447 \textit{See} note 39, \textit{supra}, for a definition of internalisation.
448 Specialists in U.S. securities markets are “member[s] of an organized exchange who have two primary functions. First, the specialist maintains an orderly market in assigned securities by acting as a dealer: buying and selling from his or her inventory of securities to offset temporary imbalances in the number of buy and sell orders. Second, the specialist facilitates the execution of limit, stop, and stop limit orders by acting as a broker. This is done by maintaining a limit order book and executing these orders as they are triggered,” \textit{See} WILLIAM SHARPE \textit{et al.}, \textit{INVESTMENTS}, 44 \textit{et seq.} (2\textsuperscript{nd} ed. 1995). The NYSE prevents fragmentation of its listed stock by assigning a single specialist for each security. The SEC chose not to promote the traditional specialist system as a tool for combating fragmentation as this system can be fraught with conflicts of interest and abuse and belongs to the slower manual market model.
449 \textit{See} Seligman III, \textit{supra} note 39, at 125.
450 \textit{Id.} at 429.
\end{footnotesize}
1. **Best Execution Rule**

How should “best execution” be defined? Ironically, it is in fragmented markets that the obligation for best execution becomes more complex to define, implement and review.\(^{452}\) There is an impression that under Regulation NMS, the SEC defines best execution as best price. This is an oversimplified view. In common law countries, best execution standards are included in the flexible common law concept of fiduciary duty.\(^{453}\) The broker-dealer’s common law obligation of best execution to its customers is unclear yet flexible and broad, covering multiple criteria including best price.\(^{454}\) The SEC has made it clear that Regulation NMS’s price priority does not reduce broker’s fiduciary duty of best execution.\(^{455}\)

The EU, on the other hand, chose to legislate the criteria of best execution in order to cover civil code Member States lacking a codified best execution rule. MiFID’s best execution rule lies on a multi-criteria comparison of transactions, taking into account a collection of costs (such as: price of the instrument and costs such as commissions) as well as the quality of execution (such as speed, probability of settlement and clearing, the size, the nature of the order and any other relevant criterion).\(^{456}\) In sum, MiFID legislated into EU regulation the different criteria of the common law duty of best execution.

The difficulty with both MiFID’s best execution rule and the common law duty of best execution is the complexity in measuring compliance. Although the SEC expressed that the price priority of the Order Protection Rule does not reduce broker-dealer’s duty of best execution, the Order Protection Rule has an explicit requirement for best price. The interaction between best price requirement and the fiduciary duty of best execution will most likely lead broker-dealers to focus mainly on satisfying

\(^{452}\) *Id.* at 253.


\(^{454}\) “Unlike pornography, which while difficult to define is known when it is seen, best execution is easily defined but is often unrecognisable. This reflects the difficulty that the term “best execution” does not connote a single execution attribute, such as price, but rather attaches to a vector of execution components. These certainly include the trade price, but they also involve the timing of trades, the trading mechanism used, the commission charged, and even the trading strategy employed.” *See Norman Poser, BROKER-DEALER LAW & REGULATION* § 2.03[B], at 2-58 (3d ed. 2001).

\(^{455}\) *See* Proposed Regulation NMS, *supra* note 25 at 11137.

\(^{456}\) *See* Buisson, *supra* note 348, at 242.
the best price requirement.\textsuperscript{457} This is also true for European intermediaries. For questions of liability, it is much easier to demonstrate and provide an audit trail for satisfying best price than for the other criteria. Some European supervisors have even expressed that they can only evaluate the criteria of price, indicating the direction of supervision philosophy.

2. \textit{Transparency Rules}

Transparency rules are considered necessary tools in fighting market fragmentation. The debate surrounding transparency is discussed in Section II of this Part.

3. \textit{Market Linkages}

It is argued that if the correct and necessary information were obtained in a fragmented market, then market access and linkages would be able to properly exploit the information. Investors could search for the best price through linked markets and then have their orders executed there. Thus, according to the SEC, market connectivity is a necessary condition in achieving market integrity in a fragmented market.\textsuperscript{458} Nevertheless, systems such as ITS and NASDAQ’s SuperMontage have proven ineffective.\textsuperscript{459}

\textbf{E. Fragmented Markets: U.S. Approach & Experience}

The U.S. has a longer experience with fragmented markets beginning with the legalization of internalization as early as 1980.\textsuperscript{460} Although a universal message switch (or CLOB) was never adopted, the SEC approved the implementation of ITS, which provided the SEC with its first opportunity to pressure member exchanges to

\textsuperscript{457} Some argue by adopting Regulation NMS’s trade-through protections, the SEC failed to take into account the fiduciary agency problem. Judicial courts will not ignore this and will hold intermediaries liable for failing to meet the fiduciary duty of best execution. \textit{See} Cai, \textit{supra} note 434, at 35-37.
\textsuperscript{458} \textit{See} Proposed Regulation NMS, \textit{supra} note 25, at 11129.
\textsuperscript{459} \textit{See} Jeanmart, \textit{supra} note 220, at 261.
\textsuperscript{460} \textit{See} Off-Board Trading Restrictions Release, \textit{supra} note 35.
adopt rules prohibiting “trade throughs.” However, ITS never became an important system due to the limited number of participating exchange members and small number of NYSE or AMEX-listed securities. Thus, the ITS trade-through rule did not apply to ATSs and, more importantly, did not apply to NASDAQ-listed securities. In the end, SEC’s trade-through protection through ITS made little impact on achieving market integrity, and the differing treatment between exchanges and ATSs only showed the SEC’s ambivalence toward the fragmentation/consolidation debate. In the end, the SEC adopted Regulation NMS’s trade-through rule because it believed that a best price requirement would promote liquidity because limit order traders, who are mostly uninformed traders and, traditionally, the greatest creators of liquidity, would be assured that they can get the best price and more order information than market order traders who are informed traders. The Trade-Through Rule was the most controversial part of Regulation NMS and was later renamed the Order Protection Rule (Rule 611).

The original proposed Trade-Through Rule contained two proposed exceptions: an informed consent opt-out and an automated facility exception. However, there were concerns about how easily a customer’s informed consent could be obtained and that the automated facility exception would worsen fragmentation problems of reduced liquidity and price discovery. In the end, the SEC reproposed the Trade-Through Rule, which proposed to protect only quotations “immediately accessible” through automatic execution and replaced the general customer opt-out with a number of more specific exceptions. Furthermore, trade-through protection may be extended to depth of book quotations. Finally, as part of the reproposed rule, the trade-through protection with its best price requirement to disclose all bids and offers of a market center’s order book was to be applied to all market participants.

461 “Trade-throughs” are executions of orders on one exchange when a superior quotation exists on another market. Id. at 95.
463 See Cai, supra note 434, at 33.
464 See Reproposed Regulation NMS, supra note 176.
trading in both NYSE and Nasdaq-listed stocks. Reproposed Regulation NMS was later adopted as Regulation NMS with very few changes.

This dramatic rule change indicates that the SEC essentially agrees with the NYSE on the importance of best price. Ironically, this very rule also threatens its dominance by protecting only “immediately accessible” automated quotes but not manual order quotes from the NYSE floor. Thus automated markets would be allowed to trade through NYSE’s non-automated trading floor. These pressures forced NYSE on October 6, 2006, to launch its “Hybrid Market,” which still conserved auction representation while giving customers the option of electronic execution. This halfway transition highlights the fact that the NYSE will have to resolve issues with its powerful specialist system before it can fully automate. Regardless, the Order Protection Rule’s best price protection may lead to undesired consequences, and some have argued that it would be safer to have simply stayed with the flexible common law fiduciary duty of best execution.

Since not all Member States have a common law fiduciary duty of best execution, the EU has introduced this principle through MiFID as a tool for fighting the effects arising from the elimination of ISD’s concentration rule. However, as discussed earlier, market fragmentation reduces the ability to achieve best execution. MiFID is potentially very weak on this point. Collecting, treating and reporting of market data are to be determined by market forces. It shall be interesting to see what solutions will emerge and to evaluate if they are sufficient. Meanwhile, Regulation NMS will require reporting by all market centers to the CTA Plan and CQS.

467 See Cai, supra note 434, at 23.
469 See generally Linda Lerner, New York Stock Exchange to Automate Within Limits, 23 Int’l Fin. L. Rev. 21 (2004).
470 See Cai, supra note 434, at 5.
Nevertheless, data consolidation, despite facilitating price discovery, may not necessarily improve liquidity because universal best price does not satisfy the diverse needs of all market participants.\(^{471}\)

**SECTION II. TRANSPARENCY V. FRAGMENTATION DEBATE**

**A. DEFINITION OF TRANSPARENCY**

A closely inter-related issue to the fragmentation/consolidation debate is transparency disclosure. The primary principle of all securities regulations, more so than in prudential regulation for banks, is transparency disclosure.\(^{472}\) It is generally assumed among securities regulators that transparency disclosure improves the functioning of the market. IOSCO defines market transparency as “the degree to which information about trading (both past and prospective) is made publicly available on a real-time basis.”\(^{473}\) Marco Pagano and Ailsa Roell define transparency as “the degree to which the size and direction of current order flow are visible to the competing market makers involved in setting prices.”\(^{474}\) Another author defines it as the availability of information on order flow, especially order flow imbalances.\(^{475}\)

Trade transparency can be divided into two types: pre-trade transparency and post-trade transparency.\(^{476}\) Pre-trade transparency is the publication of information, such as quotes, before a trade.\(^{477}\) Post-transparency is the publication of information, such as price and quantity, after the trade.\(^{478}\) It is understood that pre-trade information can assist in price discovery and post-trade information can assist in

\(^{471}\) Id. at 29.
\(^{472}\) See Chiu II, supra note 261, at 737.
\(^{476}\) See Beny, supra note 34, at 436.
\(^{477}\) Id.
\(^{478}\) Id.
maintaining market integrity. Besides quotes, price and quantity, the scope of transparency disclosure can include order type and size distribution of limit orders. 479

Studies have shown the more transparent a market is the smaller the bid-ask spread. 480 It is believed that transparency makes markets fairer and more efficient by facilitating the price discovery process and the monitoring of best execution. 481 The transparency debate usually surrounds how much to disclose and how quickly one must disclose. 482

Some authors argue that transparency is not the cure-all believed by most regulators and there can in fact be too much transparency or, at least, transparency that is not useful for investors. In insufficiently deep markets, too much transparency may lead to greater price sensitivity and volatility, which adversely affects liquidity. 483 Thus, transparency is mostly beneficial when a market is sufficiently large and liquid. 484

However, a fragmented market is inherently thin unless it is sufficiently integrated information-wise and access-wise. Transparency rules won’t succeed in a fragmented market without an efficient market-data infrastructure linking all trading venues. 485 Thus, in a fragmented market, transparency and market access are integrally linked. The upshot is that the quality of trade transparency is impaired by fragmentation in trades. Large amounts of fragmented information can only be useful if information has been correctly identified, collected and consolidated to a point that the raw data becomes efficiently useful for the end-user. Such collection and treatment of data is costly and must be paid by someone along the production-consumption chain. Furthermore, the problem of cost is further exacerbated by the risks of information free-riding.

Some even argue there is no proof that best price, which requires consolidated transparency, leads to improved liquidity. 486 Too much transparency resulting in

480 See Pagano & Roell II, supra note 474, at 598.
481 See Beny, supra note 34, at 436-37.
482 Id. at 436.
483 See Madhavan, supra note 475, at 267.
484 Id.
485 See Lannoo I, supra note 298, at 3.
asymmetric information may even impede immediacy and liquidity.\textsuperscript{487} Hence, there is the general principle in the U.S. that supports as wide a distribution as possible of all the information that exists. Under this principle, all this information would be useless without equal access. Yet, economists believe an informationally efficient market is impossible to achieve\textsuperscript{488} and efforts to increase information disclosure could be a waste of resources.

Although a perfectly efficient information market is impossible to achieve, the U.S. and the EU are experimenting on how to achieve one that is at least sufficiently informationally efficient. Transparency disclosure is the most obvious governance tool for managing a fragmented market. If investors and market constituents were informed of relevant trades quickly enough to utilize the information, it should not matter whether the markets are physically linked and where the trades occur. Thus, the real question in a fragmented market is how much data will need to be consolidated in order to have information of sufficient quality?\textsuperscript{489} Both the U.S. and the EU try to solve this issue but have chosen different approaches.

\textbf{B. U.S. Transparency}

The U.S. market structure is a dual system of auction and dealership markets. According to Pagano and Roell, “the implicit bid-ask spread in a transparent auction is tighter than in a less transparent dealership market.”\textsuperscript{490} To address this disparity, U.S. regulators have looked at how to make all market centers equally transparent and accessible.

The Advisory Committee appointed to study the issue of market information dissemination in its 2001 report to the SEC stated as one of its six conclusions that price transparency and consolidated market information are core elements of the U.S.

\begin{flushright}
\textsuperscript{487} See Beny, supra note 34, at 438-39. Beny argues that a weakness of too much transparency is asymmetric information. Dealers will always lose profit in trading with better-informed traders, so they charge a higher ask price and a lower bid price than what they believe to be the true market price. The bid-ask spread, in turn, becomes the trading fee, which uninformed traders are willing to pay for immediate execution. See also, Hans R. Stoll, \textit{Inferring the Components of the Bid-ask Spread: Theory and Empirical Tests}, 44 J. Fin. 115, 132 (1989).


\textsuperscript{489} See Lannoo I, supra note 298, at 1.

\textsuperscript{490} See Pagano & Roell II, supra note 474, at 598.
\end{flushright}
The majority of the Advisory Committee members recommended to the SEC to replace the old single consolidator model with a new system of competing consolidators, in which each market center is permitted to sell its data to competing consolidators, who would then sell to vendors and subscribers. The SEC considered the Advisory Committee’s recommendation as well as a hybrid model proposed by Nasdaq as a compromise but chose to adopt neither over concerns about the potential of unequal access. In the end, they chose to keep its single consolidator model.

Under the Market Data Rules (Rules 601 & 603), market centers are permitted to distribute their own data independently but will still be required to provide their best quotations and trades for consolidated distribution through the joint industry Plans. The rules also amended the three joint industry Plans, introducing a complex allocation formula of revenue generated by market data fees for the nine SROs participating in the Plans. The goal of the amendments is real-time access by all investors to best current quotes and most recent trades in NMS stocks during the trading day. All market centers provide information to be consolidated into a continuous stream of data to be distributed to the public. Such a system of consolidated information will most likely provide accurate data, but the risk in having a single entity is the lack of competition. The lack of competition and flexibility inherent in a single consolidator model will hinder innovation and development of higher quality information.

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491 See Advisory Committee Report, supra note 172, at § III(A)(1)(3).
492 Id. at § VII(C).
493 Regulation NMS, supra note 1 at 37559.
494 The three joint industry plans are the Consolidated Tape Association Plan, the Consolidated Quote Plan and the Nasdaq/UTP Plan. The Nasdaq/UTP Plan collects, consolidates and disseminates quotes and trade information for Exchange-listed Nasdaq/National Market System Securities and for Nasdaq/National Market System Securities Traded on an Unlisted Trading Privilege Basis. The participants in the Nasdaq/UTP Plan are Amex, CHX, NASD, and Phlx. The BSE is a limited participant.
495 The nine participating SROs are NYSE, NASD/Nasdaq, PCX, NSX, Amex, BSE, CHX, Phlx and CBOE.
496 Regulation NMS, supra note 1, at 37557.
497 See Lannoo I, supra note 298, at 5.
498 Id.
C. The Other Path: the EU

In abolishing the concentration rule, MiFID also abolishes the market data that a concentration rule would generate. In attempting to create a level playing field, MiFID is subjecting all market centers to the same transparency rules in order to counterbalance the effects of fragmentation and prevent systematic internalizers from becoming “dark pools” that would threaten the liquidity and efficiency of the process of price formation. All these market centers must provide information, but the EU has placed its confidence in the market forces of the competing consolidators model.

MiFID requires all market centers, i.e. regulated markets, MTFs and systematic internalizers, to disclose the price, volume and time of the trades “as close to real time as possible” and “on a reasonable commercial basis.” Furthermore, Member States must remove any obstacles that may prevent consolidation and publication of the information at the European level.

Most importantly, the MiFID’s competing consolidators model commercializes information and recognizes the market centers’ proprietary rights in their information. A significant part of exchange revenues comes from selling market data. Trading venues can publish through exchanges or MTFs, through third-party distributors, or through proprietary arrangements.

MiFID’s implementing regulation has harmonized post-trade disclosure for all trading venues. Six pieces of information must be published: trading day, trading time, instrument identification, price, quantity and quantity notation, and venue. The time limit for post-trade publication is three minutes with delays permissible for large transactions. The information is considered publicly available through an exchange, an MTF, the third-party facilities, or proprietary arrangements.

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499 Id. at 1.
500 See Buisson, supra note 348, at 240.
501 See Lannoo I, supra note 298, at 2. Art. 45 MiFID.
502 Id. Art. 30 MiFID.
503 Id. Art. 28 MiFID.
504 Id. Recital 34 MiFID.
505 Id. See Table 3 in the Annex for stock exchange revenues from trading relative to revenues from information sales. It is clear that revenues from market data are significant.
506 Id. Art. 28.3 MiFID.
507 Id. See MiFID Implementing Regulation, supra note 183.
508 Id. Article 27 MiFID.
509 Table 1 of Annex I, MiFID Implementing Regulation.
510 Article 29 MiFID. A deadline of up until the end of the second trading day following trade date. Instead of the absolute trade size, it is the ratio of the ticket size to the average daily turnover in the share that determines eligibility for deferred publication. See Lannoo I, supra note 298, at fn. 5.
when proper policies and procedures have been implemented, consolidation of data with similar data from other sources are facilitated, and the information is available to the public on a non-discriminatory basis and at a reasonable cost.\textsuperscript{511}

As Karel Lannoo has pointed out, the challenge will be the creation of a market data infrastructure linking all the trading venues in real time through accurate, complete and simultaneous information flows.\textsuperscript{512} Accordingly, he has identified three main questions that must first be resolved: how much to consolidate, how to publish, and how to distribute.\textsuperscript{513} So far CESR has chosen to issue only guidelines and recommendations on data quality, publication arrangements, availability of transparency information, and publication standards.\textsuperscript{514} For data consolidation, CESR proposed that internalizers and OTC securities traders use only one primary publication channel and that data consolidators who are the primary publication channel for that trade should “flag” it in order to distinguish between primary and secondary publication.\textsuperscript{515} This is closer convergence with the U.S. single consolidated system. As for the time limit, CESR guidelines expressed that although the time limit for publication is three minutes, publication should be much faster and publication close to the three-minute deadline should not occur on a regular basis. Furthermore, the provision of trade data should not be bundled with other services.\textsuperscript{516}

Unlike the U.S., the EU, in choosing a property rights approach to market data dissemination, is leaving the transparency decision to the market not to the regulators.\textsuperscript{517} However, there are serious risks concerning data quality. Without high quality of information, best execution will be difficult to achieve. Definitely, there will be great demand for commercial disseminators of market data, whether they be data vendors,\textsuperscript{518} market centers, financial institutions, IT companies, ratings agencies, financial media or even search engines like Google.\textsuperscript{519} Some investment banks have

\textsuperscript{511} Id. at 2-3. Article 32 MiFID.
\textsuperscript{512} Id. at 3.
\textsuperscript{513} Id.
\textsuperscript{515} Id. CESR Recommendation No. 1.
\textsuperscript{516} Id. CESR Guideline No. 9.
\textsuperscript{517} See Ferrarini, supra note 65, at 582.
\textsuperscript{518} See Table 4 of the Annex for a comparison of revenues of the 3 largest data vendors versus 3 stock exchanges’ information division. Even before MiFID, it is already clear that the market for market data is highly profitable.
\textsuperscript{519} See Casey & Lannoo I, supra note 81, at 1.
already chosen to take advantage of this opportunity to sell the market data they generate themselves rather than pay a third-party vendor.\footnote{In September 2006, nine investment banks (ABN Amro, Citigroup, Credit Suisse, Deutsche Bank, Goldman Sachs, HSBC, Merrill Lynch, Morgan Stanley and UBS) created Project Boat, a venue for consolidating pre-trade data information in order to coordinate quotes for their internalisation services and for consolidating post-trade data for commercialisation. \textit{See} Casey & Lannoo I, supra note 81, at 2.}

\section*{D. Regulation NMS and MiFID: Effects of Transparency Rules}

Regulation NMS and MiFID are both trying to change the market infrastructure in order to create a level playing field for all market players. However, they were both adopted with the assumption that an electronic and continuous negotiating market was the most appropriate market type. The rules turned the main characteristics of an electronic trading market into requirements of today’s markets, requiring acceptable limit orders to be distributed and market orders to be non-discretionary.\footnote{See Ben Steil, \textit{Réglementer les marchés financiers de demain (Regulating the Financial Markets of Tomorrow)}, 82 Revue d’économie financière, 153, 153-4 (2006) [hereinafter “Steil II”].} The problem with non-discretionary electronic markets is that large institutional orders must be cut into little pieces representing maybe only 1\% of its real size, executed perhaps over several days, in order to avoid a strong impact on the market.\footnote{\textit{Id.} at 155.}

Institutional block orders represent a significant part of the total volume of trades,\footnote{Up to 30\% for some major stock exchanges. \textit{Id.}} and new markets have developed to address institutional needs for anonymity. These innovative and efficient markets will become obsolete with Regulation NMS and MiFID.\footnote{\textit{Id.} at 155.}

Thus, some argue that there should be a reduction in pre-trade transparency rules because a universal order book may not permit an optimal execution of all transactions, especially institutional block transactions.\footnote{\textit{Id.} at 155. Liquidnet is such an example. It restricts liquidity and trading to a pre-selected group of investors. Potential counterparties are not divulged except only to concerned buyers and sellers, so institutions are more inclined to reveal their real order size. (The SEC has included some exceptions to the Sub-Penny Rule and exempted Liquidnet from Regulation ATS’s Fair Access Rule, allowing Liquidnet to continue operating. \textit{See} Blume II, supra note 246, at 10.)} In the end, MiFID and Regulation NMS’s pre-trade transparency requirements will reduce the importance of post-trade transparency and will force the next generation of innovative systems to change or perhaps disappear.\footnote{\textit{Id.} at 153-4.}
V. LONG-TERM EFFECTS ON MARKET PARTICIPANTS

Firms see both MiFID and Regulation NMS as compliance and IT exercises, but these rules will have real effects on market infrastructure. Both regimes are trying to create a level playing field for all negotiating venues. Regulation NMS will be subjecting SROs, internalizers and ATSs, whose primary category is ECNs, equally to regulation. MiFID created a new term for ATSs: multilateral trading floors (“MTFs”), and defines an ensemble of rules that places MTFs, internalizers and regulated markets in a common framework of competition. Thus this Section will primarily use ECNs to refer to ATSs and MTFs. This Part discusses some of the changes that these market constituencies will or may be undergoing.

A. STOCK EXCHANGES

Competition among stock exchanges and now also with ECNs and internalizers has intensified due to three main factors: decrease in regulatory barriers to competition, technology and globalization. Under the pressure of competition, many exchanges have turned into for-profit firms. Most stock exchanges are SROs and must absorb the additional cost of self-regulation. How does this affect the governance and structure of stock exchanges?

U.S. system is a dual system of quote and order-driven markets with an integrated post-trade system and equities markets that are distinct from OTC derivatives markets. Whereas, the EU system has a more or less hybrid London Stock Exchange and mostly electronic order-driven continental exchanges, a fragmented and costly post-market system and stock exchange mergers with OTC systems. Despite these basic differences, they face similar issues. Stock exchanges are undergoing radical changes due to the trends of globalization in competition, demutualization and

527 See Casey & Lannoo I, supra note 81, at 5.
528 See Buisson, supra note 348, at 239.
529 For example, in France, the self-regulatory powers of Euronext are very limited and are subject to the strict control of the AMF. See Pierre de Lauzun & Ruben Lee, La gouvernance des infrastructures de marché – interview à deux voix (The governance of market infrastructure – interview with two), 82 Revue d’économie financière 189, 193 (2006).
mergers between exchanges and ATSs.\footnote{Id. at 8-12.} In regulation, the traditional public utilities view of “stock exchanges as public goods” is beginning to be replaced by the new “exchange as firm” approach, reflecting the reality of an industry already populated by demutualized exchanges.\footnote{See Tables 1 and 2 in Annex.}

1. Market Center Competition

Regulation NMS and MiFID are now placing ATSs and internalizers on equal footing with exchanges. The competition among market centers will only increase for listings and orders.\footnote{See Fleckner, supra note 7 at 2571-74.} Due to the regulatory framework, listing still remains the exclusive domain of stock exchanges.\footnote{Art. 40.1 MiFID; Art. 35 MiFID Implementing Regulation.} In listing, competition is fierce between exchanges before listing but dramatically weakens after the company has listed.\footnote{See Fleckner, supra note 7, at 2572.} U.S. stock exchanges are losing listings in foreign companies most likely due to stricter U.S. regulations but also due to the fact that non-U.S. companies no longer need to list in the U.S. in order to reach U.S. investors.\footnote{Id. at 2573.}

The real competition among the different types of market centers will be for orders. When placing orders, investors are usually concerned by trading costs and best price, which are often better at stock exchanges. Some investors value other criteria, especially speed, over best price and will go to faster market centers. For example, the NYSE continues to hold on to 80% of trading of its own listed stock, but its market dominance is beginning to slip.\footnote{Id. at 2574.} Also, for block trades, institutions prefer anonymity, which is not permitted in exchanges, so they go to other markets that offer it.\footnote{Id. at 2574.} Nevertheless, stock exchanges will remain the primary centers of liquidity as they already have the advantage of being the most liquid markets. Liquidity will only attract more liquidity. Thus they will have a huge advantage over ATSs and internalizers in attracting orders.\footnote{Id. at 2574.} Furthermore, payment for order flow (PoF) also affects how trades are diverted from exchanges, but with the Regulation NMS’s best price and MiFID’s best execution requirements, PoF would be eliminated.
2. **Demutualization**

Some argue demutualization will lead to a race to the top, believing for-profit firms would be more efficient and more concerned with reputation and providing services. Others fear a race to the bottom as for-profit firms will need to maximize profits and will have a greater variety of conflicts of interest. The greatest source of conflicts of interest comes from exchanges’ self-regulatory powers.\(^{540}\) Exchanges are charged with important responsibilities concerning fair representation of issuers, issuers and investors as directors, the adoption of fee allocations, rules preventing fraud and manipulation, the promotion of an equitable and well-functioning market that also protects the interests of the investor.\(^{541}\) These responsibilities include market surveillance and monitoring of its members and issuers.\(^{542}\) Once demutualized, an exchange should be treated as a firm but still must continue to fulfill its responsibilities. Hence, demutualized exchanges must review and reorganize its organizational structure. They have new conflicts of interests with members, issuers and now shareholders and other stakeholders. Demutualized exchanges also have conflicts with themselves and other competing exchanges listed with them.\(^{543}\) Self-listing poses governance issues for many demutualized exchanges. Many have segregated their regulatory arms from other business units of the exchange. Nevertheless, some argue that demutualization may actually improve exchange governance and lead to advantages over traditional mutual exchanges.\(^{544}\) As Andrea Fleckner points out, public stock exchanges have an easier time raising money, a more streamlined decision-making structure where broker-dealers are no longer the key decision makers, and the ability to reduce fixed costs through mergers with other exchanges.\(^{545}\)

In summary, demutualization is making a great impact on exchange governance and structure. The new market transparency rules of Regulation NMS

\(^{540}\) *Id.* at 2579.

\(^{541}\) *See SRO Governance and Transparency Release, supra* note 375.

\(^{542}\) In the U.S., exchanges are charged with responsibilities conferred to them by Congress and the SEC. *Id.* In the EU, MiFID requires exchanges to monitor the compliance of market participants. Art. 39 MiFID.

\(^{543}\) *See Fleckner, supra* note 7, at 2582-2610, for a description of the different potential conflicts of interests.

\(^{544}\) *Id.* at 2566.

\(^{545}\) *Id.* at 2575-79.
and MiFID will also have an impact on exchanges and their market microstructure. These rules will certainly pressure exchanges to automate and eliminate floor trading. This would certainly threaten NYSE’s mixed manual/automated model and force it to become more like the continuous electronic auction markets of continental Europe.\textsuperscript{546}

\section*{B. ECNs (ATSs/MTFs)}

Competition between exchanges, ECNs and internalizers with its ensuing fragmentation carries with it risks in terms of market efficiency and investor protection.\textsuperscript{547} Firms must adopt efficient policies and procedures to be compliant with the new rules that put them on par with exchanges. ECNs must address two important questions: what should be the extent of the price search, and how to create an efficient, high quality search engine. These issues limit ECNs’ primary advantage of fast execution.\textsuperscript{548} Regulation NMS’s best price requirement and MiFID’s best execution requirement will limit the flexibility of these electronic markets to satisfy investors’ other preferences.\textsuperscript{549} These rules’ pre-trade transparency requirements would make it difficult for specialized markets like Liquidnet to continue block trading or fulfill other complex or innovative trading strategies of the investor.\textsuperscript{550} Not only would these electronic markets lose their advantages, they must also develop equivalent architecture in order to be on par with exchanges, which would be a huge cost burden.

\section*{C. Internalizers}

A similar concern exists for internalizers. “Internalization” is order matching where intermediary firms execute customer orders in-house without exposing the orders to exchange floors or other dealers.\textsuperscript{551} In principle, internalization has not existed in countries with concentration rules, such as France.\textsuperscript{552} With MiFID, a new

\textsuperscript{546} See Cai, supra note 434, at 25.
\textsuperscript{547} See Buisson, supra note 348, at 239.
\textsuperscript{548} See Cai, supra note 434, at 28.
\textsuperscript{549} Id.
\textsuperscript{550} See Blume II, supra note 246, at 8.
\textsuperscript{551} See Seligman III, supra note 39, at 124-125.
\textsuperscript{552} See Jean-Jacques Daigre, La libéralisation de l’exécution des ordres en interne au risque de la fragmentation des marchés (The liberalization of internally executing orders at the risk of market fragmentation), 2 Euredia 285, 285 (2004).
opportunity has been created for the entry of internalizers in these countries. Unlike auction markets, internalizers are governed by price rather than by orders. Their flexibility permits an adaptation in price for the size of the order and the nature of the investors. Pre-transparency rules would restrain this flexibility and would thus threaten internalizers’ niche services. The very existence of these entities is evidence that the uniform best price rule does not satisfy the diverse needs of investors. The internalizers must adopt sufficient policies and procedures of order execution. In the EU, there will be difficulties and significant costs in determining the sufficient extent of the price search and efficiency and quality of the search engine. Furthermore, the compliance costs of the trade transparency rules will be high. For small firms, these costs are strong disincentives in becoming or remaining an internalizer.

In the EU Member States where concentration had been the rule, there will be little incentive for a firm to take on the significant burdens and costs of becoming a systemic internalizer due to the significant pre-trade transparency requirements under Article 27 MiFID, so regulated markets will most likely maintain their privileged positions. In Member States where there was much off-exchange trading, there will be a need to reconsider the current business model. Meanwhile, in the U.S., there will be a large increase in internalization due to the Sub-Penny Rule’s exception to allow broker-dealers to jump ahead of NBBO and make price improvements at smaller increments than a penny.

D. Intermediaries

For intermediaries there will be an increased uncertainty in legal liability. In the U.S., there will be confusion between Regulation NMS’s best price requirement and the common law fiduciary duty of best execution. In the EU, there will be uncertainty on how to measure best execution among the various criteria of price, cost, speed, probability of execution and settlement, size and nature of the order, and

553 Id. at 288.
554 Id. at 289.
555 Id. at 285.
557 Id. at 282
558 See Blume II, supra note 246, at 14.
all other factors relevant to the execution of the order,\textsuperscript{559} as well as the numerous conduct of business rules concerning suitability and customer categorization.\textsuperscript{560} Member States may have an interest in maintaining stricter requirements because level of harmonization in conduct of business rules is not clear.\textsuperscript{561} Furthermore, host State supervision’s residual intervention powers will also add to the confusion.\textsuperscript{562}

E. GENERAL CONSEQUENCES

Regulation NMS and MiFID both have the common goal of creating a more efficient and transparent market system. They use different approaches that may very well lead to similar market structure changes due to the elimination of concentration rules, strengthened transparency, price priority, convergence in supervision, increased market center competition and stronger investor protection rules. Increased burden of compliance costs will threaten small and medium-sized firms.\textsuperscript{563} Furthermore, liquidity will continue to go to developed markets, which will remain centers of price formation, threatening smaller markets, including smaller ECNs.\textsuperscript{564} These cost pressures will lead to an increased trend in consolidation in the exchange and the brokerage industry.\textsuperscript{565} Regulation NMS’s and MiFID’s approval of continuous electronic markets will hurt auction exchanges, floor brokers and traditional market makers. In the end, the market centers that will profit the most will be larger ECNs who are more established with sufficient resources to take advantage of the new rules. Meanwhile, intermediaries will need to address their increased legal liabilities to their customers concerning best price and best execution obligations.

Non-exchange market centers and off-exchange trading will be heavily regulated.\textsuperscript{566} Competition between market centers will increase, which should lower transaction costs. In turn, this should lead to greater trading volume.\textsuperscript{567}

\textsuperscript{559} Art. 21.1 MiFID
\textsuperscript{560} See Tison, supra note 262, at 9.
\textsuperscript{561} Id. at 5.
\textsuperscript{562} Id. at 12.
\textsuperscript{563} See Avgouleas, supra note 70, at 227.
\textsuperscript{564} Id. at 228; Oesterle, supra note 28, at 672.
\textsuperscript{565} See Casey & Lannoo I, supra note 81, at 2.
\textsuperscript{566} Id. at 2.
\textsuperscript{567} Id. However, Blume argues that Regulation NMS may increase transaction costs, leading to more off-shore trading and “dark pools,” or crossing networks. See Blume II, supra note 246, at 15.
Computerized algorithmic trading will become more popular.\textsuperscript{568} Algorithmic trading can handle large numbers of limit orders, which if not exercised immediately can be rapidly cancelled.\textsuperscript{569} Also, algorithmic trading can conduct rapid searches across a number of execution venues and can provide verification of best execution.\textsuperscript{570} In a decentralized market, market linkages will become necessary to connect the fragmented pools of liquidity and for generating consolidated market data of high quality as well as permitting equal market access.\textsuperscript{571} In addition, if trading costs become too high, investors may go abroad and trade through offshore offices, creating “dark pools.”\textsuperscript{572}

In the EU, exchanges will lose their monopoly on market data, which provides a significant source of revenue.\textsuperscript{573} Thus, there will be new business opportunities for collecting, consolidating and distributing market data, as there will be huge demand for high quality consolidated market data in a fragmented marketplace. The legalization of internalization will also provide new opportunities for firms. Furthermore, MiFID provides the freedom to choose the provider of settlement and clearing services, marking the beginning of the death of vertically-integrated exchanges, such as Euronext.\textsuperscript{574} As market structure will be shaped by MiFID and market forces, the EU will need to begin focusing its attentions on its fragmented yet monopolistic and expensive clearing and settlement system.\textsuperscript{575}

In the U.S., accurate consolidated market information will be provided, but many lament the SEC’s new role in determining market microstructure and Regulation NMS’s public goods approach to market data.\textsuperscript{576} The single consolidator model will hinder innovation in providing creative and value-added services. As

\footnotesize
\begin{itemize}
  \item \textsuperscript{568} See Casey & Lannoo I, supra note 81, at 2; Blume II, supra note 246, at 9.
  \item \textsuperscript{569} See Blume II, supra note 246, at 9.
  \item \textsuperscript{570} See Casey & Lannoo I, supra note 81, at 2.
  \item \textsuperscript{571} Id.
  \item \textsuperscript{572} See Blume II, supra note 246, at 15.
  \item \textsuperscript{573} See Casey & Lannoo I, supra note 81, at 1-2.
  \item \textsuperscript{574} Euronext has already decreased its shareholding in its clearinghouse LCH.Clearnet from 41.5% to around 5%. See Euronext Press Release, \textit{LCH.Clearnet and Euronext announce repurchase by LCH.Clearnet of shares held by Euronext to more closely align customer and shareholder interests} (12 March 2007), available at \url{http://www.euronext.com/fic/000/019/595/195950.pdf}.
  \item \textsuperscript{576} See generally Blume II, supra note 246.
\end{itemize}
Regulation NMS covers only equities unlike MiFID, which covers all traded products, Regulation NMS will probably lead to a concentration in the trading of equities, which further hinders innovation.\textsuperscript{577} If trading costs become too high in trading equities, investors, besides having the option of going offshore, could choose to trade in derivatives or swaps with characteristics similar to equities.\textsuperscript{578}

\textsuperscript{577} Id. at 15.
\textsuperscript{578} Id.
VI. CONCLUSION

Through its comparative survey of U.S. and EU governance of markets through Regulation NMS and MiFID, respectively, this Article identifies a remarkable number of converging trends, in particular, the reversal of the privatisation of regulation. Through direct regulation, the SEC in taking on the role as the primary architect of U.S. market infrastructure “is, as Marshall Blume puts it, “venturing into uncharted seas.” If anyone were to gain from Regulation NMS, it would be the SEC, who has significantly increased its regulatory powers since the 1975 Amendments, co-opting the self-regulating responsibilities of SROs.

The European Commission and CESR also are winners in this transition. MiFID has extended jurisdiction to investment advice and commodities derivatives as well as commercial disseminators of market data, whomever they shall be. CESR will be developing and solidifying its role in coordinating national supervisors and facilitating regulatory convergence, laying down the foundations for a future consolidated supervisor.

This upward trend in regulatory and supervisory convergence will continue to progress in the EU as well as between the EU and the U.S. As Karel Lannoo has pointed out, the remarkable similarities between Regulation NMS and MiFID present a special opportunity for the U.S. and the EU to explore areas of regulation, supervision, and market activities and services that may be mutually recognized under the Tafara-Peterson “substituted compliance” proposal. The regulatory and supervisory convergence in direct regulation over soft law, rule-based regimes over principle-based regimes, may not only assist in creating trans-Atlantic access for U.S. and EU exchanges and broker-dealers but may one day serve as the foundation for building a fully-integrated trans-Atlantic market.

579 Id.
### Table 1: Demutualizations and Listings of Non-U.S. Stock Exchanges

<table>
<thead>
<tr>
<th>Stock Exchange</th>
<th>Demutualized</th>
<th>Listed</th>
<th>Market Value (billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Deutsche Börse</td>
<td>2000</td>
<td>2001</td>
<td>$13.3</td>
</tr>
<tr>
<td>3. Euronext</td>
<td>1997</td>
<td>2001</td>
<td>$7.2</td>
</tr>
<tr>
<td>4. HK Exchanges and Clearing</td>
<td>2000</td>
<td>2000</td>
<td>$5.3</td>
</tr>
<tr>
<td>6. OMX Group</td>
<td>1993</td>
<td>1993</td>
<td>$2.1</td>
</tr>
<tr>
<td>7. Tokyo Stock Exchange</td>
<td>2001</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>8. TSX Group</td>
<td>2000</td>
<td>2001</td>
<td>$2.9</td>
</tr>
</tbody>
</table>

### Table 2: Demutualizations and Listings of U.S. Stock Exchanges

<table>
<thead>
<tr>
<th>Stock Exchange</th>
<th>Demutualized</th>
<th>Listed</th>
<th>Market Value (billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. American Stock Exchange</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>2. Archipelago Exchange</td>
<td>2004</td>
<td>2004</td>
<td>$2.8</td>
</tr>
<tr>
<td>3. Boston Stock Exchange</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>4. Chicago Stock Exchange</td>
<td>2005</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>5. National Stock Exchange</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Archipelago</td>
<td></td>
<td></td>
<td>$9.2</td>
</tr>
</tbody>
</table>

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581 See Fleckner, supra note 7, at 2561.
582 Id. at 2562.
Table 3. Stock exchange revenues from trading relative to revenues from information sales.\(^{583}\)

<table>
<thead>
<tr>
<th>Ratio</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSE</td>
<td>0.56</td>
<td>0.74</td>
<td>0.75</td>
<td>0.97</td>
<td>1.04</td>
<td>1.18</td>
<td>1.16</td>
<td>1.33</td>
</tr>
<tr>
<td>Euronext</td>
<td>3.37</td>
<td>3.88</td>
<td>2.20</td>
<td>5.22</td>
<td>5.35</td>
<td>5.89</td>
<td>5.85</td>
<td>--</td>
</tr>
<tr>
<td>Deutsche Börse</td>
<td>4.48</td>
<td>5.31</td>
<td>4.66</td>
<td>4.46</td>
<td>5.10</td>
<td>5.12</td>
<td>5.78</td>
<td>--</td>
</tr>
<tr>
<td>Borsa Italiana</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>2.13</td>
<td>1.63</td>
<td>1.83</td>
<td>--</td>
</tr>
<tr>
<td>OMX</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>4.98</td>
<td>3.98</td>
<td>3.25</td>
<td>3.04</td>
</tr>
<tr>
<td>BME</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>6.43</td>
<td>6.38</td>
<td>7.11</td>
<td>--</td>
</tr>
</tbody>
</table>

Table 4. Revenues of the 3 largest data vendors versus 3 stock exchanges’ information divisions\(^{584}\)

<table>
<thead>
<tr>
<th>Euros (million)</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reuters Group PLC</td>
<td>2,284</td>
<td>2,372</td>
<td>2,485</td>
</tr>
<tr>
<td>Bloomberg</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Thomson Financial</td>
<td>1,738</td>
<td>1,897</td>
<td>2,000</td>
</tr>
<tr>
<td>Deutsche Börse</td>
<td>122</td>
<td>130</td>
<td>n/a</td>
</tr>
<tr>
<td>Euronext</td>
<td>87</td>
<td>94</td>
<td>n/a</td>
</tr>
<tr>
<td>LSE</td>
<td>118</td>
<td>128</td>
<td>138</td>
</tr>
</tbody>
</table>

\(^{583}\) See Casey & Lannoo II, supra note 106, at 2.
\(^{584}\) Id.