

THE ALLOCATION OF
INVESTORS' ORDERS AND
INEFFICIENT MARKET COMPETITION:
A PROPOSAL

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ALLEN FERRELL*

An issue that has increasingly occupied the attention of the Securities and Exchange Commission is “payment for order flow.” This is the practice whereby securities markets compete for orders placed by brokers by providing side payments to brokers in return for brokers promising to send them investors’ orders. Does this create inefficient nonprice competition between securities markets? The paper argues that it does, that all the proposed solutions (including the SEC’s disclosure requirements) miss the mark, and that the problem is really a result of the SEC’s regulation of the prices at which investors’ orders must be filled. Remove this regulatory bar (with a few wrinkles) and the problem would be resolved without the need for the current cumbersome and expensive regulatory apparatus.

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I. INTRODUCTION

Among the most intractable and pressing issues in securities regulation today concerns the widespread practice by securities markets of paying brokers to route investors' orders to them for execution.¹ In a typical "payment for order flow" arrangement, a securities market will pay a broker anywhere from one to three cents for each buy or sell order the broker sends to it.² These "kickbacks" have angered numerous market entities, large and small: from the New York Stock Exchange (NYSE),³ which has watched as competing markets have captured a substantial and increasing portion of its equity trading; to individual investors who have filed lawsuits alleging that they paid too much for stock purchases or received too little from stock sales due to the

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¹ See, e.g., Grundfest, J., *Securities Regulation*, in III NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW 410, 417 (1998) (in the course of summarizing the major issues in securities regulation, characterizing the practice of paying for order flow as a "subject of much debate"); Coffee, J., *Order-Flow Payments Get New Scrutiny*, NAT. L.J. 16 (July 19, 1993) (discussing the "high-stakes" debate over order flow payments, a practice that "affects most investors and is rapidly fragmenting the securities markets"); SEC, Payment for Order Flow, Exchange Act Release No. 34,902 (Oct. 27, 1994) ("The practice of paying for order flow has generated much debate and controversy regarding the potential benefits and harm to public investors and whether receipt and retention of payment for order flow comprises a broker's duties to its customer. Congress has shown continuing interest in the resolution of that controversy."); see generally Note, *The Perils of Payment for Order Flow*, 107 HARV. L. REV. 1675-92 (1994).

² It should be emphasized from the outset that, through vertical integration, brokers and dealers can enter into economically equivalent arrangements without the need for cash transfers. A broker can, and often does, route its orders to an affiliated dealer. The broker-dealer through internal routing can internally capture any profits that would have been transferred from the dealer to the broker if they were not integrated. The incentive of a broker to have orders routed to an affiliated dealer is generally the same, and has the same adverse consequences, as that of brokers with "payment for order flow" arrangements. Accordingly, although the discussion is often cast in terms of brokers and non-affiliated dealers, it is also applicable to broker-dealers who internally route orders.

³ See, e.g., *Among NYSE's Growing Challenges: Fighting Regulatory Barriers, Payment for Order Flow*, GLOBAL INVESTMENT TECHNOLOGY (July 12, 1993); Vise, *A Broker and the Angry Exchanges: Bernie Madoff's Stock Buying Rivalry Irks NYSE, AMEX*, WASH. POST. F1 (April 14, 1993); Letter from Andrew M. Klein, Esq., Schiff Hardin & Waite, to Jonathan G. Katz, Secretary, SEC (July 5, 1990) (on file with the SEC) (complaining on behalf of the NYSE about the provision by competing dealers of side payments to brokers).

corrupting influence of these side payments on their brokers.⁴ Concerns over payment for order flow have been intensifying, in part, thanks to studies documenting that small investors' orders, which constitute the bulk of the orders that are routed as a result of these arrangements, are often filled by dealers at prices inferior to those available on the NYSE and other exchanges.⁵

Not surprisingly, regulators and legislators have not ignored this practice – far from it. For example, an entire section of the Securities and Exchange Commission's (SEC) MARKET 2000: AN EXAMINATION OF CURRENT EQUITY MARKET DEVELOPMENTS study,⁶ the SEC's first comprehensive analysis of the securities markets and their regulation since the early 1970s, is devoted solely to questions relating to order flow payments and whether investors are receiving "best execution" of their orders.⁷ Order flow payments have also been the subject of Congressional hearings,⁸ an industry roundtable discussion hosted by the SEC,⁹ as well as SEC releases and regulations.¹⁰

Defenders of order flow payments have not stood idly by as others have attacked the practice. Defenders have tapped into popular anti-regulatory logic to argue that these side payments are the product of healthy free-market competition between securities markets for

⁴ See, e.g., *Newton v. Merrill Lynch*, 135 F.3d 266 (3rd Cir. 1988) (en banc); *Dumont v. Charles Schwab*, Civ. A. No. 96-2865, 1998 La. App. LEXIS 811 (La. App. 1998); *Gilman v. BHC Securities*, 104 F.3d 1418 (2d Cir. 1997); *Orman v. Charles Schwab*, 688 N.E.2d 620 (Ill. S.Ct. 1997); *Thomas v. Fidelity Brokerage*, 977 F.Supp. 791 (W.D. La. 1997); *Shulick v. PaineWebber*, 700 A.2d 534 (Pa. Super. 1997); *Eirman v. Olde Discount Corp.*, 697 So.2d 865 (Fla. Dist. Ct. App. 1997); *Guice v. Charles Schwab*, 674 N.E.2d 282 (N.Y. 1996), cert. denied, 117 S.Ct. 1250 (1997); *Dahl v. Charles Schwab*, 545 N.W.2d 918 (Minn. S.Ct. 1996); *Gilman v. Wheat*, 896 F.Supp. 507 (D. Md. 1995); *Thomas v. Charles Schwab*, Civ. A. No. 95-0307, 1995 U.S. Dist. LEXIS 12007 (W.D. La. 1995); *Dumont v. Charles Schwab*, Civ. A. No. 95-0606, 1995 U.S. Dist. LEXIS 5992 (E.D. La. 1995).

⁵ These studies include: Petersen, M. and D. Fialkowski, *Posted versus Effective Spreads: Good Prices or Bad Quotes?*, 35 JOURNAL OF FINANCIAL ECONOMICS 269, 287 (1994); Lee, C., *Market Integration and Price Execution for NYSE Listed Securities*, 48 JOURNAL OF FINANCE 1009, 1034 (1993); and Blume, M. and M. Goldstein, *Differences in Execution Prices among the NYSE, the Regionals, and NASD*, Working Paper no. 4-92 (White Center for Financial Research, University of Pennsylvania) (1992).

⁶ U.S. Securities and Exchange Commission, Division of Market Regulation, MARKET 2000: AN EXAMINATION OF CURRENT EQUITY MARKET DEVELOPMENTS, Washington D.C.: U.S. Government Printing Office (1994) (hereinafter MARKET 2000)

⁷ See MARKET 2000, *Best Execution*, Part V. For a discussion of "best execution," see *infra* Part V(B).

⁸ See Oversight Hearing on the Future of the Stock Market Focusing on Inducements for Order Flow Before the Subcomm. on Telecommunications and Finance of the House Comm. On Energy and Commerce, 103d Cong., 1st Sess. (May 26, 1993); cf. Letter from Congressman John D. Dingell, Chairman of the House Comm. on Energy and Commerce to SEC Chairman Richard C. Breeden (March 6, 1992) (suggesting that order flow payments should be banned).

⁹ See SEC Roundtable on Commission Dollar and Payment for Order Flow Practices, SEC File No. 4-348 (July 24, 1989).

¹⁰ See, e.g., SEC, *Internalized/Affiliate Practices, Payment for Order Flow and Order Routing Practices*, Exchange Act Release No. 34,903 (Oct. 27, 1994); SEC, *Payment for Order Flow*, Exchange Act Release No. 34,902 (Oct. 27, 1994); SEC, *Payment for Order Flow*, Exchange Act Release No. 34,3026 (October, 1993); cf. Remarks by Chairman Arthur Levitt, Economic Club of Chicago 2 (April 24, 1996) ("[This practice] strikes at the heart of the relationship between a broker and customer, because [it] violate[s] the understanding on which it rests. . . . Brokers can act in only one capacity at a time.")

investors' orders.¹¹ They believe that investors, and not regulators, should be the ultimate judge of whether a broker who routes orders to a particular market for execution is offering an attractive service. As in any competitive industry, they argue, brokers will cater to the preferences of their customers or risk losing business to a competitor. The logic of this position sounds right. Who would want to argue that a car manufacturer that received from its muffler supplier an annual rebate on its purchases in the form of a cash payment is thereby placed in a conflicted position? Presumably any rebate would be passed along to the car manufacturer's customers in the form of lower prices. Applied to the payment for order flow context, the same reasoning suggests brokers will use payments from securities markets to lower their commission rates. On this view, the real danger lies in the NYSE and other exchanges exploiting the current controversy to impose new, burdensome regulations on their increasingly successful competitors.¹²

Against the backdrop of these differing points of view, this paper will argue that the conflict of interest brokers face as a result of these side payments is a serious problem to which there exists a fairly simple solution that has yet to be considered. In order to understand the nature of the problem, and the solution this paper will propose, it might be helpful to consider a market analogous, for relevant purposes, to the brokerage market. Suppose a condominium owner wishes to sell her condominium and knows that she can get at least its "listed price." Perhaps with some effort, a buyer who is willing to pay more than the listed price could be found. There are any number of reasons why such a buyer might exist: the buyer might have a pressing need for the particular type of condominium being offered, or the listed price (for whatever reasons) might understate the condominium's true market value. Of course, such a buyer might not exist. But in order to capitalize on the possibility of finding a buyer willing to pay more than the listed price, the condominium owner could hire an agent, with experience in these matters, who will conduct a search for these buyers. The dilemma facing the owner is that it might be extremely difficult, if not impossible, to know whether the agent has done a thorough

¹¹ See, e.g., NASD Response to the SEC's MARKET 2000 Concept Release, 1992 Notice to Members 67 ("[P]ayment for order flow appears to contribute to competition and innovation and to reduce customer costs"); NASD, A Report to the Board of Governors, INDUCEMENTS FOR ORDER FLOW 25 (1991) (arguing that payment for order flow is a "natural phenomenon of competition and not to be interfered with lightly by regulation"); Grundfest, J., *Securities Regulation*, in III NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW 410, 417 (1998) (suggesting that "[g]iven the competitiveness of the brokerage industry [] it would be hard to argue that the end result of these controversial [side payments] in and of themselves cause consumers to pay prices that are 'too high.'").

¹² See, e.g., SEC, *Angering the Big Board, May Approve 'Preference' Trades*, WALL ST.J. C1 (Mar. 29, 1996) (quoting David Colker, CEO of the Cincinnati Stock Exchange, as saying "What the brouhaha is really about is competition. They believe they should be the only exchange, and frankly they feel threatened by the electronic nature of our system.")

job. Maybe the agent was extremely diligent but there happened to be no buyers willing to pay more than the listed price. On the other hand, perhaps the agent did find a buyer willing to pay a small premium over the listed price, but there existed a large number of buyers willing to pay a much larger premium who could have been found with a minimum amount of additional effort on the agent's part. It is hard to know without the owner re-doing the job the agent was hired to do in the first place.

An investor wishing to sell a security faces a dilemma not unlike that of the condominium owner.¹³ A securities broker, like the real estate agent in the analogy, acts as an investor's agent in finding the securities market, the buyer, offering the highest price.¹⁴ There are often many markets to which a broker could potentially send an order. Much like buyers of condominiums, different markets might, and often do, offer different prices. The analog to a condominium's listed price in the securities context is the National Best Bid or Offer price (NBBO), a price that is publicly disseminated over the Consolidated Quotation System (CQS) or the NASDAQ Quotation Dissemination Service (NQDS).¹⁵ The NBBO is based on the various bids (and offers) at which securities markets publicly indicate they are willing to purchase (and sell) securities.¹⁶ Under current law, a broker must ensure that an investor receives at least the NBBO. However, for a variety of reasons, the best bid disseminated by the CQS or NQDS will often not be the best price an investor can actually receive.¹⁷ In other words, a securities market will often place a lower bid price on the CQS than the actual price investors would receive if their orders were sent there. An investor placing an order with a broker, much like the condominium owner, really has no way of knowing whether the broker has actually found the best price as opposed to just the NBBO.

Indeed, a securities investor confronts in some ways a more serious problem than the condominium owner. The condominium owner usually does not have to encounter a marketplace in which her agent, along with others, are systematically offered kickbacks by buyers who wish to avoid have particular condominiums being sold to other buyers who may be willing to pay higher prices. A securities investor should worry. In "payment for order flow" arrangements, a broker will usually promise, in return for the cash payments, to send all small "nonprofessional"

¹³ While the discussion is cast in terms of sales, the same analysis applies to purchases.

¹⁴ This is an over-simplification. Investors sometimes care about other aspects of execution services besides locating the market offering the best price, such as how quickly the transaction is completed. The impact of these additional considerations, discussed in Part II(A), on the paper's analysis will be addressed in Part VI(C)(1).

¹⁵ See *infra* Part V(A)(1) for a more complete description of the NBBO, CQS and NQDS.

¹⁶ These are the prices that are reported in the newspapers and over the internet.

¹⁷ These reasons are discussed in Part V(A)(2)

orders, *i.e.*, orders placed by relatively unsophisticated investors, to a particular dealer who will then automatically fill these orders at the NBBO, regardless of the opportunities available on other markets. The securities investor's problem is further aggravated by the fact that many small investors are probably not even aware that a broker has a range of choices of where to send an order. It would be as if the condominium owner believed that the buyer found by her agent is the only buyer that exists.

The failure of brokers to act as loyal agents of investors has three adverse effects on efficiency. First, auction markets, such as the NYSE, are in large part institutionally incapable of offering side payments to brokers and are, therefore, systematically disadvantaged by such nonprice competition. In order to receive payments, brokers will avoid sending orders to auction markets even if they offer investors, as they often do, the best prices. Second, even if all markets were capable of offering side payments, there would nevertheless be a distortion in where any given order was routed. Only if securities markets could adjust quickly enough the size of their side payments to reflect the full amount they were capable of rebating, at that exact moment in time, would such a distortion cease. While there could conceivably be an equilibrium where this happens, there is no reason to believe that this happy state of affairs will be the norm, especially in an environment as fluid and fast-paced as that of the securities markets. Third, there is a distortion in whether an investor will place an order in the first place. Investors will not have the necessary information to make informed adjustments in their holdings, whether this consists of buying or selling stock. In particular, there will be socially excessive trading if traders do not realize the full true costs of trading, such as the opportunity cost of foregone auction market prices.¹⁸

Putting aside the distortions that order flow payments create, there are powerful distributional concerns implicated as well. It is overwhelmingly small investors, not sophisticated market participants, that have suffered from inferior prices received as a result of order flow payments. While it is true that a significant percentage of individual investors' funds are invested through pension plans and mutual funds, a very substantial portion of investment still takes place in the form of individual investors purchasing and selling stocks through brokers.¹⁹ This is likely to remain true for the foreseeable future.²⁰

¹⁸ For more details on the efficiency consequences see Part IV(A).

¹⁹ See MARKET 2000, *Introduction and Executive Summary*, p.7 (reporting that the number of shareholder accounts increased from 25 million in 1975 to 51 million in 1990). The percentage of U.S. equities held by institutions representing individual investors, predominantly mutual funds and pension plans, has leveled off, in recent years, at roughly 50%. See Scam, L., *Institutional Share of U.S. Equities Slips*, WALL ST. J. C1 (Dec. 8, 1993).

The efficiency and distributional consequences that result from payment for order flow jeopardizes the two fundamental goals of securities regulation: ensuring that the securities industry is both efficient and that it treats all investors – small as well as large – fairly. Unfortunately, the current regulatory regime intended to align investors’ and brokers’ interests is flawed. So are the reform proposals that have commonly been advanced.²¹ There is, however, a straightforward solution, yet to be advanced, which would completely remove a broker's temptation to place its interests over those of its customers in routing orders.

The solution to the problem is this: If a broker could choose to provide a small investor with whatever the NBBO was at the time of order execution, irrespective of the price that was actually received, the conflict of interest created by order flow payments would be resolved. To see how this proposal would work, consider two alternative ways the agent of the condominium owner could be compensated. The agent might charge a flat percentage of whatever the sales price of the condominium happens to be, say 5%, or she could charge a certain percentage of the listed price, say 2%, and keep for herself any amount the buyer was willing to pay above the listed price. The first payment schedule could very well lead to a lackluster search by the condominium owner’s agent. After all, the agent would only enjoy 5% of the gains that result from exerting additional effort to find a buyer willing to pay more than the listed price. Under the latter payment schedule, however, the agent would have the proper incentive to find the buyer offering the highest price. Failure to do so would only come at the agent’s expense. This would hold true regardless of the extent of the owner’s knowledge of possible buyers or whether a buyer could offer the agent a kickback to sell the condominium to him rather than someone else. In economic terms, the misalignment of incentives has been removed since the agent internalizes all the effects of its choices at the margin. This is the standard way agency problems are resolved.

Allowing brokers to credit small investors with just the NBBO at the time of execution, call it the NBBO pricing option, is equivalent to the “2% of the listed price / everything above that to the agent” payment schedule mentioned before. Such a scheme, which would likely run afoul of current law, would ultimately redound to the advantage of investors. The brokerage industry is highly competitive and there is little doubt that investors, small and large alike, are aware of the size of the commission rates brokers charge.²² Any benefits brokers received as a

²⁰ On-line discount brokerage firms, used predominately by individual investors, have experienced explosive growth in the last few years.

²¹ The current regulatory regime will be examined in Part V and the popular reform proposals in Part VII.

²² See *infra* Part III(A).

result of finding superior prices would be passed along to investors in the form of lower commission rates.

Under the proposal outlined in this paper, a securities broker could choose which payment schedule – the current one or the NBBO pricing option – it wished to use for small orders. Small investors who are confident that they can monitor brokerage selection of securities markets could select a broker who did not use the NBBO pricing option. And for investors who are not as confident of their ability to make an intelligent choice, or even aware that such a choice exists, they could select a broker based just on its commission rate, as many currently do, and still be assured that their broker has their best interests in mind. Brokers who are able to offer the lowest commission rates will tend to be the ones utilizing the NBBO pricing option. The SEC should help investors, who do not want to base their decision solely on commission rates, by gathering and releasing statistics that indicate how effective a job brokers are doing in finding the best possible prices – a step that, incidentally, should be taken regardless of whether the proposal in its entirety is adopted or not.

Besides removing the conflict of interest created by order flow payments, and the associated adverse efficiency and distributional consequences, the proposal has other benefits. Other areas of potential divergence between brokers' and investors' interests, in particular how much expense should ideally be incurred by a broker in attempting to locate and route an order to the securities market capable of providing the best price, will also be effectively resolved. As a result, some of the complicated current regulatory structure that has been erected to deal with these problems could be discarded with the proposal's implementation. Finally, an important side-effect of the proposal would be to reduce inter-market fragmentation of securities trading.²³

The preceding discussion of the problem of broker opportunism has obviously left important points in need of further explanation and elaboration. Part II of the paper provides the details necessary for understanding the institutional framework in which investors, brokers, and securities markets operate. Parts III and IV will then, respectively, examine the conflict of interest that can arise when a broker acts as an investor's agent in deciding where an order should be sent for execution and the adverse consequences this has. The current regulatory attempts to address this problem, and their shortcomings, will be dealt with in Part V. Part VI will provide a further explanation of the proposal and address possible criticisms, while Part VII will take a critical look at the most popular competing reform proposals.

²³ See *infra* Part VI(B).

II. INSTITUTIONAL FRAMEWORK

A. *The Role of Brokers*

Although by no means are all orders channeled to securities markets through brokers,²⁴ most trades, especially smaller ones, begin with an investor placing an order with a broker who then ensures that the order is executed.²⁵ In return for a commission, a broker acts as an investor's agent in selecting which securities market to send the order, whether the order is to buy or sell stock, for execution. For many stocks, especially if it is among the more actively traded NYSE-listed stocks, there will be a number of markets to choose from. A broker, for instance, might very well have the following choice of markets:

- (1) the NYSE
- (2) one of the five regional exchanges²⁶
- (3) the "upstairs" market²⁷
- (4) an over-the-counter dealer who trades in the particular stock²⁸
- (5) a proprietary trading system such as Instinet²⁹
- (6) a foreign exchange such as the London Exchange³⁰
- (7) act as a dealer by filling the order itself (internalization)
- (8) internally crossing investors' orders (agency crosses)

²⁴ For example, institutional investors have increasingly secured execution by trading directly with each other or by internally crossing orders between different accounts under their control – so-called “fourth market” trading.

²⁵ See Mahoney, P., *Technology, Property Rights in Information, and Securities Regulation*, 75 WASH. U. L.Q. 815, 825 (1997).

²⁶ The regional exchanges are the Boston Stock Exchange (BSE), the Philadelphia Stock Exchange (PHLX), the Chicago Stock Exchange (CHX), the Cincinnati Stock Exchange (CSE), and the Pacific Stock Exchange (PSE).

²⁷ The "upstairs" market consists of brokers, representing buyers and sellers, who privately negotiate and arrange trades with each other.

²⁸ Over-the-counter dealers who trade exchange-listed securities are collectively referred to as the third market. This market consists of approximately fifty over-the-counter dealers who trade in about 400 of the most active NYSE- and American Stock Exchange (AMEX)-listed securities. Most over-the-counter dealers who make markets in non-exchange listed securities, *viz.* NASDAQ securities, do so by placing quotations (bids and offers) on the NASDAQ system. NASDAQ is directly regulated by the National Association of Securities Dealers (NASD).

²⁹ Proprietary trading systems, often used by institutional investors, are sophisticated automated execution systems usually sponsored by a broker-dealer. See generally MARKET 2000, Appendix IV; see also Nyquist, P., *Failure to Engage: The Regulation of Proprietary Trading Systems*, 13 YALE LAW AND POLICY REVIEW 281, 301-304 (1995). The SEC has recently mandated that these systems provide increased access, by brokers and others, to its quotations. See Exchange Act Release No. 37619A (Sept. 6, 1996).

³⁰ The London Stock Exchange is easily the most popular foreign exchange for NYSE-listed stock trades. Approximately 7% of volume in NYSE-listed securities occurs in foreign markets.

There is no easy answer to the question of where a broker should send an order. Which market will offer the best price for an order will often depend on an order's particular characteristics, such as whether the order is so large that the trade is unable to clear at the current market price (liquidity costs) or the extent to which potential contra-parties view the trade as motivated by private information about the stock's likely future value (perceived informational content of an order). For instance, the "upstairs" market is typically used for executing large orders in order to minimize the cost of liquidity.³¹ Another example is the use of proprietary trading systems that allow traders to mask the size of their trade until a contra-party is found, a feature that can be beneficial if large trades are viewed by market participants as more likely to be informationally motivated.³²

Important as it is, price is not the sole factor a broker needs to consider. There are some investors who place primary importance on establishing their desired positions quickly. There are any number of reasons why an investor might be willing to pay a premium, in the form of an inferior price, for the provision of immediate liquidity. An investor might want to take advantage of a temporary divergence in prices for the same asset in different markets,³³ is attempting to put in place an intermarket hedge where even a delay of a few seconds in establishing one of the requisite positions can be very costly,³⁴ or may simply want to avoid being exposed to the risk that the security's price will change while the best possible contra-party offer is being sought out.³⁵

Brokers handling orders placed by this type of investor can turn to various markets to satisfy the need for immediate liquidity. Brokers can send orders to dealers who can immediately fill them by trading against their own account, although such trades will often have to settle for a lower price as compensation to the dealer for providing this service. Automated systems have been developed which facilitate the ability of investors to quickly execute trades at

³¹ One estimate places the average size for floor-facilitated trades at 19,520 shares and 38,600 for upstairs-facilitated trades. See Madhavan, A., and M. Cheng, *In Search of Liquidity: Block Trades in the Upstairs and Downstairs Market*, 10 REVIEW OF FINANCIAL STUDIES 175, 186 (1997).

³² See Easley, D., and M. O'Hara, *Price, Trade Size and Information in Securities Markets*, 19 JOURNAL OF FINANCIAL ECONOMICS 69-90 (1987) (finding that larger trades are more likely to be informationally motivated).

³³ See Wagner, W., *A Taxonomy of Trading Techniques*, in THE COMPLETE GUIDE TO SECURITIES TRANSACTIONS (1989), for trading strategies which depend on quickly establishing positions in different markets.

³⁴ See generally Grossman, S., and M. Miller, *Economic Costs and Benefits of the Proposed One-Minute Bracketing Regulation*, 6 J. OF FUTURES MARKETS 141-66 (1986) (discussing intermarket hedges using futures)

³⁵ The greater the volatility of the security's price and the less diversifiable the risk of an adverse price move is, the larger the demand for immediate liquidity. See Grossman, S., and M. Miller, *Liquidity and Market Structure*, 43 JOURNAL OF FINANCE 617, 618 (1988). For instance, the Intermarket Trading System, through which orders can be routed for execution from one market to another, is sometimes by-passed during periods of high volatility given the

the best available dealer price. NASDAQ's Small Order Execution System (SOES), for example, allows brokers to have trades of up to 1,000 shares automatically routed to the dealer offering the best posted quotation for execution, unless the trade can be crossed with a superior limit order stored in the SOES Limit Order File.³⁶

A broker more concerned with getting the best price for an investor, on the other hand, can send an order to one of the exchanges, which are generally considered more time-consuming than using a dealer but often offer better prices. Brokers can also rely on floor traders to handle an order with instructions that vary depending on an investor's need for immediacy. Floor traders are sometimes given almost complete discretion in deciding when, and even if, an order is executed, depending on the trader's sense of the market (so-called "not held" orders). Brokers can also attempt to get the best possible price, although at the expense of immediacy, by utilizing various new trading structures. The Arizona Stock Exchange, for example, batches orders over time for simultaneous execution at a single price.

Price and the need for immediacy do not exhaust the list of factors that a broker should consider in deciding how to handle and route orders. Perhaps the most important among these additional factors is the cost savings that accrue from having uniform procedures for handling large numbers of small orders. It is often simply not worth catering placement and execution services to meet each small investor's individual preferences. Indeed, it might not be economical for a broker to always get the best possible price for a particular order due to the cost of routing each order based on which market will offer the best price at a particular point in time.³⁷ The impressive number of small orders that are routed for execution by automated handling systems operated by the exchanges, systems that are typically designed to receive smaller orders electronically from brokers and route them to the exchange floor for execution, is a powerful testament to the cost effectiveness of these systems.³⁸

Perhaps the best example of this is the NYSE's SuperDOT system. This system accepts market orders up to 30,099 shares and limit orders up to 99,999 shares from member firms and

relatively slow speed at which orders are executed. See Seligman, J., *THE TRANSFORMATION OF WALL STREET* 533 (1982).

³⁶ A limit order is an order where an investor has specified a limit on the price at which the order can be executed, while a market order has no specified price. Payments for order flow are almost exclusively made only for market orders. See, e.g., Stoll, H., *MARKET 2000: The Causes and Consequences of the Rise in Third Market and Regional Trading*, 19 IOWA J. CORP.L. 509, 515 n.9 (1994)

³⁷ See SEC, Order Execution Obligations, Exchange Act Release No. 34-37619A, p.51 (September 6, 1996) ("[T]he Commission has recognized the practical necessity of automating the handling of small orders."); SEC, REPORT ON THE PRACTICE OF PREFERENCING (1997) ("Where no practical means exists for a broker-dealer to route on an order-by-order basis, it must establish automatic defaults for the routing of retail order flow.")

routes them directly to the exchange floor where the specialist, the exchange-designated dealer in a security, attempts to get the best price for the order.³⁹ The SuperDOT system handles approximately 85% of all NYSE trades accounting for 33% of NYSE share volume.⁴⁰ Larger orders needing more specialized treatment are typically not set through the SuperDOT system, but are instead handled by floor brokers who can provide tailored execution services.⁴¹ The other exchanges have similar small order-handling systems, all with completely automated execution unlike SuperDOT, available for their members.⁴² Small orders for stocks traded on NASDAQ are typically handled by similar systems; either SOES or small-order handling systems, usually good for orders up to 2000 shares, operated by over-the-counter dealers.⁴³

Besides avoiding the costs of providing more individualized treatment, these automated systems result in other savings as well. They enable brokers to avoid the errors in handling that would inevitably occur if the process was not automated. Manual handling of large numbers of trades can result in a significant number of errors as the "back-room" crisis in the late 1960s amply demonstrated.⁴⁴ Small-order handling systems also minimize exchange service fees. Specialists participating in SuperDOT, MAX, P-Coast, and PACE generally do not charge commissions for handling small orders that are routed to them through these systems.⁴⁵

³⁸ See SEC, THE OCTOBER 1987 MARKET BREAK 7-15 ("Automated order routing and execution systems provide the primary means of executing the vast majority of small-sized trades both for listed and [over-the-counter] stocks.").

³⁹ The specialist does not handle the order if the NYSE price is the best price being offered by the other exchanges and over-the-counter dealers and the spread is 1/8 of one point. Orders in these cases are automatically executed at the NYSE price. *Id.* at 7-18.

⁴⁰ NYSE FACT BOOK 24 (1995).

⁴¹ See Sofianos, G. and I. Werner, *The Trades of NYSE Floor Brokers*, NYSE Working Paper 97-04, p.26 (1997).

⁴² AMEX has the PER system, handling market orders up to 300 shares; CHX has the MAX system, handling market orders up to 399 shares; PSE has the P-Coast system (formerly SCOREX), handling market orders up to 599 shares; PHLX has the PACE system, handling market orders up to 599 shares; BSE has the BEACON system, handling market orders up to 2,500 shares; and CSE has the NSTS system handling orders of any size. See generally Becker, Sakach, Herring, *Broker-dealer Order Execution Duties*, 744 PLI 288-291 (1991).

⁴³ NASD has recently asked permission from the SEC to replace SOES with a new system called NAqcess, which would also provide for automated routing and execution of small orders. See Exchange Act Release No. 37302 (June 11, 1996).

⁴⁴ Trading volume surged in the late 1960s overwhelming the ability of broker-dealers to manually handle these trades. As a result, numerous errors occurred. See generally Loss, L., and J. Seligman, 5 SECURITIES REGULATION 2482-86 (1990).

⁴⁵ See Seligman, J., *Another Unspecial Study*, 50 BUS. LAW. 485, 503 (1995). The SEC recently approved NYSE's application to waive all transaction fees for all SuperDOT system orders between 100 to 2,099 shares, except for nonmember competing dealer orders. The transaction fees for those orders, however, were reduced to almost nominal amounts. See Exchange Act Release No. 3272 (June 4, 1996). Member firms are also not charged for pre-opening SuperDOT market orders of up to 30,099 shares.

In short, there are a number of factors that will go into what constitutes the appropriate market for a particular order.⁴⁶ The most important considerations typically are:

- (1) price
- (2) the need for immediacy
- (3) costs of providing individualized treatment
- (4) reliability of the routing and execution system
- (5) exchange service fees

The moral of all this is simple: whether a broker has chosen the appropriate market for a particular order can be very difficult to ascertain, especially by an outside observer, given all the various, and sometimes competing, considerations involved.

B. The Securities Markets

1. Differences in Market Structure: Auctions and Dealers - Among the most important decisions a broker must make is whether to send an order to an auction or dealer market for execution. In an auction market, investors trade with each other by submitting an order to a broker who then, acting as the investor's agent, brings the order to a centralized location, historically a physical floor, to interact with other investors' orders. Investors' buy and sell orders are matched on the exchange floor according to a complex set of trading rules.⁴⁷ On the NYSE, for example, market orders are filled, depending on who offers the best price, by either the specialist, floor traders (the "crowd") who represent other investors' orders or trade on their own accounts, or the specialist's electronic book which stores investors' limit orders until they can be executed. In dealer markets, on the other hand, investors trade not with each other but with a dealer who maintains its own portfolio of stocks. Dealers maintain a "spread," the difference

⁴⁶ While important, clearance and settlement practices are not discussed as almost all trades are processed by the National Securities Clearing Corporation -- a clearinghouse jointly owned by the NYSE, AMEX and the NASD. *See* Office of Technology Assessment, *ELECTRONIC BULLS AND BEARS* 181 (1990) (NSCC handles 95% of all equity trades in the United States). Moreover, the choice of a clearance and settlement method is rarely thought of as implicating an investor-broker agency problem.

⁴⁷ There are two general types of trading rules: price priority rules which ensure that limit orders offering the best possible price are filled first and secondary trading priority rules which specify the sequence in which orders submitted at the same price are to be filled. The NYSE's secondary trading rules consider both an order's size (size priority) and when it was placed on the exchange (time priority) in determining when it will be executed. *See generally* Schwartz, R., *RESHAPING THE EQUITY MARKETS* 35-43 (1991) (describing NYSE's order handling and execution rules).

between the price the dealer is willing to sell the stock (the offer) and the price the dealer is willing to buy (the bid), as compensation for their intermediation.⁴⁸

While important, the distinction between auction and dealer markets often gets blurred in practice. The NYSE is not a pure auction market as it relies on specialists, as do the other exchanges, who have an affirmative obligation to trade against their own account when necessary to balance out temporary mismatches in supply and demand for a particular stock.⁴⁹ On the other hand, the SEC has recently required NASDAQ dealers, as well as specialists, to display the price and full size of customer limit orders in their quotations when these orders represent an improvement over the dealer's quotation.⁵⁰ Investors' orders routed to NASDAQ, as in an auction market, can now directly interact without dealer intermediation.

2. Competition between Auction and Dealer Markets - Competition between auction and dealer markets for investors' orders is fierce. While auction markets have historically handled the bulk of equity trading in the United States, this is no longer true. Although the NYSE has many competitors, easily its most potent competitors for order flow has increasingly come from dealers; whether it is NYSE member firms who internalize investors' orders by trading against them on their own account,⁵¹ specialists on the regional exchanges,⁵² or third

⁴⁸ The spread is not an exact measure of the cost of dealer intermediation since, among other reasons, dealers will not usually simultaneously purchase and buy stocks.

⁴⁹ Every NYSE-listed stock has a specialist unit assigned to it who is responsible for ensuring a "fair and orderly" market in the stock. 17 C.F.R. 240.11b-1(a)(2)(ii) (1998). In 1995, principal trading by NYSE specialists was 8.6 percent of total reported purchases and sales. NYSE FACT BOOK 19 (1995). Specialists also serve an important brokerage role in handling investors' orders.

⁵⁰ See generally SEC, Order Execution Obligations, Exchange Act Release No. 34-37619A (September 6, 1996).

⁵¹ NYSE Rule 390, along with its even stricter predecessor, have long barred NYSE member firms from becoming over-the-counter dealers, or internally crossing customer orders, in NYSE-listed stocks. See NYSE Rule 390, 2 NYSE GUIDE (CCH) P2390 (adopted March 31, 1976). However, member firms since the Multiple Trading Case of 1940, 10 S.E.C. 270 (1941), have been free to send orders for execution to regional exchanges either as principal or agent and, since March 31, 1976, can send orders for execution to non-affiliated over-the-counter dealers. Member firms are also free to trade as principal or agent on any foreign stock exchange at any time and in any foreign off-exchange market when the NYSE is closed. See generally Hasbrouck, J., G. Sofianos, and D. Sosebee, *New York Stock Exchange Systems and Trading Procedures*, NYSE Working Paper No. 93-01 (1993) (providing a detailed discussion of Rule 390).

Perhaps most significantly, Rule 390 does not apply to any stock listed on the NYSE after April 26, 1979. See Exchange Act Release No. 16888 (June 11, 1980) (adopting Rule 19c-3). Stocks exempt under Rule 19c-3 constitute more than half of all NYSE-listed stocks and account for approximately half of the NYSE's volume. Over-the-counter trading of 19c.3 stocks, after a slow start, has increased markedly since 1988. See Davis, J., and L. Lightfoot, *Fragmentation versus Consolidation of Securities Trading: Evidence from the Operation of Rule 19c-3*, 41 JOURNAL OF LAW AND ECONOMICS 209, 212-213 (1998)

⁵² Specialist dealer activity is very common on the regional exchanges -- indeed, some have characterized these exchanges, see, e.g., Stoll, H., *Principles of Trading Market Structure*, 6 JOURNAL OF FINANCIAL RESEARCH 75, 75 (1992), due to the large volume of specialist trading, as essentially dealer markets. As a percentage of total reported purchases and trades, the extent of specialist dealer participation on the regional exchanges in 1996 was as follows: Boston Stock Exchange: 36.2%; Chicago Exchange: 23.8%; Cincinnati Stock Exchange: 40.8%; Philadelphia Stock

market dealers. Regardless of whether a company decides to list its stock on an auction market, dealers can still compete for orders in that stock.⁵³

The differences in the market structure of auction and dealer markets have important consequences for how these markets compete for order flow. To a significant extent, auction markets are institutionally incapable of providing side payments to brokers for routing orders to them. Nor can brokers, by and large, internalize order flow by vertically integrating with exchange specialists. This is due to the simple fact that auction markets are characterized by the matching up of investors' orders without dealer intermediation. There is simply no dealer who participates in almost every trade and can, therefore, share with a broker the profits arising from order execution.⁵⁴ While there are exchange dealers, such as floor traders and specialists, they participate in only a minority of all exchange trades.⁵⁵ As James Shapiro, an economist for the NYSE, explained, "Under current conditions, it is hard to see how an auction market, like the NYSE, can compete effectively by paying for order flow, for the simple reason that neither the exchange nor the specialists on the floor earn the entire spread, as off-exchange dealers do. The spread is dissipated among customers. . . . [I]t would be impossible for NYSE specialists to pay as much for order flow as 'pure' dealers do."⁵⁶

Dealer markets, in sharp contrast, make extensive use of side payments to attract order flow. As of 1993, according to SEC estimates, between fifteen and twenty percent of all orders in NYSE-listed stocks was routed pursuant to cash for order flow arrangements.⁵⁷ Even this figure does not tell the full story. Cash payments are not the only kind of side payments dealers can offer brokers in exchange for order flow. Dealers also offer brokers soft-dollar payments, such as sharing investment research or providing clearance services, in exchange for order flow. Sometimes the consideration for routed order flow is order flow itself. A broker-dealer will send

Exchange: 30.2%; and the Pacific Stock Exchange: 39.2%. See SEC, REPORT ON THE PRACTICE OF PREFERENCING 23 (1997).

⁵³ The Unlisted Trading Privileges Act of 1994, Pub. L. 103-389, 108 Stat. 4081 (1994) (codified as amended at 15 U.S.C. s 78 1(f) (1994)), makes an exchange's application for unlisted trading privileges, privileges thereby allowing an exchange to trade stock which is listed on another exchange, automatic. See 15 U.S.C. s 78 1(f) (1994). Before this the SEC had perfunctorily approved such applications. For instance, out of the 568 stocks eligible for trading on the Cincinnati Stock Exchange, 562 are listed on either the NYSE or AMEX. Nor can an exchange or even an issuer prevent third market trading in listed stocks. See generally Amihud, Y., and H. Mendelson, *A New Approach to the Regulation of Trading Across Securities Markets*, 71 N.Y.U. L. REV. 1411, 1411-1426 (1996).

⁵⁴ This is overstatement as investors' orders, due to the SEC's new order execution obligations, can now directly interact. As one would expect, the size of side payments offered by dealers for order flow has apparently decreased. See *New Rules on NASDAQ Pinch Firms*, WALL ST. J. C1 (Sept. 9, 1997).

⁵⁵ See ft. ___ for figures on the extent of specialist participation on the exchanges

⁵⁶ Shapiro, J., *U.S. Equity Markets: Recent Competitive Developments*, in GLOBAL EQUITY MARKETS: TECHNOLOGICAL, COMPETITIVE, AND REGULATORY CHALLENGES 26 (1995).

⁵⁷ See SEC, Payment for Order Flow, Exchange Act Release No. 34-33026, p.7 (October 6, 1993)

order flow to another broker-dealer for execution in return for that broker-dealer returning the favor. Profit-sharing agreements can also operate as an inducement for routing order share. Some regional specialists have entered into "joint venture" agreements whereby the specialist agrees to share a portion of its profits with a broker in return for the broker routing orders to it.⁵⁸

As important as these transfers, monetary or otherwise, are to dealer markets in attracting order flow, focusing exclusively on them would be misleading. Dealers that are vertically integrated with brokers can have orders routed to them, without having to make any payments, by merely having its brokerage division send orders to it for execution. Side payments are unnecessary since such transfers would function only to transfer value from one division of the firm to another. The broker-dealer will internally capture any profits that would have been transferred from the broker if they were not integrated. In other words, internally routing order flow can be the economic equivalent of a payment for order flow arrangement.

Vertical integration can be achieved in a variety of ways. Partly as a result of NYSE Rule 390's limitations on NYSE members' ability to provide over-the-counter dealer services, many member firms in the last twenty-five years have acquired regional specialists to whom they send orders. With the exception of the Cincinnati Stock Exchange, the Boston Stock Exchange and the Pacific Stock Exchange, all the exchanges assign only one specialist to a security. A broker who sends order flow to an exchange where it owns the only specialist assigned to the stock can be assured that, to the extent there is specialist participation in the exchange's trades, orders it sends to the exchange in that stock will be internalized. Moreover, both the Cincinnati Stock Exchange and the Boston Stock Exchange, which do not have monopoly specialists, have implemented SEC approved "preferencing" programs whereby a broker can substantially improve the probability that an affiliated specialist on one of those exchanges will fill any orders that are routed there.⁵⁹ A dealer "preferenced" by a broker will typically receive the broker's orders for execution instead of competing exchange dealers so long as it offers a price that is as good as its competitors.⁶⁰ While "preferencing" is often a way for a broker-dealer to internalize

⁵⁸ See SEC, REPORT ON THE PRACTICE OF PREFERENCING Table II-4 (Joint Venture Specialist Units on the Primary and Regional Exchanges) (1997).

⁵⁹ See Exchange Act Release No. 37046 (March 29, 1996) (order permanently approving Cincinnati Stock Exchange's preferencing program); Exchange Act Release No. 37045 (March 29, 1996) (order permanently approving Boston Stock Exchange's preferencing program). For a general description of how these preferencing programs work, see SEC, REPORT ON THE PRACTICE OF PREFERENCING (1997).

⁶⁰ These preferencing programs have proved very popular. See Battalio, R., J. Greene and R. Jennings, "Do Competing Specialists and Preferencing Dealers Affect Market Quality?" forthcoming *Review of Financial Studies* (reporting that 7% of all orders in September, 1994, for a set of actively traded NYSE-listed securities, were internalized on the Cincinnati Stock Exchange). After the introduction of the Boston Stock Exchange's preferencing program in July, 1994, the Exchange's trading volume doubled. *Id.*

order flow, exchange specialists can also pay a broker for preferencing it,⁶¹ much as over-the-counter dealers make payments for order flow. Brokerage firms not only have the option of internalizing order flow through the use of affiliated regional specialist units, but also, due to exchange rule changes on the NYSE and AMEX in 1986, can acquire specialist units on the national exchanges.⁶² Since 1986 a number of national exchange specialist units have been acquired by large brokerage firms.⁶³ Of the NYSE's 38 specialist units, ten are affiliated with broker-dealers making markets in 1061 of the 3308 securities traded on the NYSE. Six out of AMEX's 13 specialist units are affiliated with broker-dealers accounting for 403 out of the 896 securities traded on the AMEX. These broker-dealers often have systems that automatically direct order flow to an affiliated specialist.⁶⁴ Finally, brokerage firms can internalize order flow by sending orders overseas, the so-called "fax market", for execution by a foreign dealer subsidiary.

III. BROKERS' CONFLICT OF INTEREST

In order to place in sharper focus the nature of the relationship between brokers and investors and where it can go awry, brokers will be thought of as offering a product, placement and execution services, to potential customers, investors wishing to buy or sell stock.⁶⁵ The price of this product is the broker's commission rate, while its quality can be thought of as how good a job the broker does in selecting a securities market. A broker offers a low quality product if the broker can obtain better prices for investors' orders than it does but, for whatever reason, chooses not to do so.

⁶¹ See Exchange Act Release No. 37046 (removing previous SEC imposed restriction preventing Cincinnati Stock Exchange preferencing dealers from making cash payments for order flow); Exchange Act Release No. 37045 (removing SEC imposed restriction preventing Boston Stock Exchange preferencing dealers from making cash payments for order flow).

⁶² See Exchange Act Release No. 22396 (Sept. 11, 1985) (describing pre-1986 NYSE and AMEX rules which severely limited the brokerage activities of member firms who owned specialist units).

⁶³ See Neal, R. and D. Reiffen, *The Effect of Integration between Broker-Dealers and Specialists*, in THE INDUSTRIAL ORGANIZATION AND REGULATION OF THE SECURITIES INDUSTRY 83 (listing acquisition of four NYSE specialist units by large brokerage firms between 1987 and 1989).

⁶⁴ See SEC, REPORT ON THE PRACTICE OF PREFERENCING 25 (1997).

⁶⁵ The notion that financial markets can be viewed as offering a product is not new. See, e.g., Mulherin, Netter, and Overdahl, *Prices are Property: The Organization of Financial Exchanges from a Transaction Cost Perspective*, 34 JOURNAL OF LAW AND ECONOMICS 591 (1991); Macey, J., and H. Kanna, *The Stock Exchange as a Firm: The Emergence of Close Substitutes for the New York and Tokyo Stock Exchanges*, 75 CORNELL L. REV. 1007 (1990); Fischel, D., *Organized Exchanges and the Regulation of Dual Class Common Stocks*, 54 U. CHI.L.REV. 119, 123 & n.10 (1987); Carlton, D., *Futures Markets: Their Purpose, Their History, Their Growth, Their Successes and Failures*, 4 J. FUTURES MARKETS 237 (1984).

With this conceptualization, the question reduces to this: Under what circumstances will brokers only offer a low-quality product to customers who want, and are willing to pay for, higher quality? If this does occur, an agency problem exists. Brokers' interests would then be different from, *i.e.*, conflict with, those of its customers. The literature on agency problems demonstrates that an agency problem can exist, even in a competitive market, when three conditions are present: (A) some customers, although aware of price, do not monitor the quality of a product; (B) sellers can roughly distinguish between monitoring and non-monitoring customers; and (C) providing quality is costly.⁶⁶ In such a market, high quality products will tend to be under-supplied as the provision of quality will not receive a sufficient premium in the marketplace to warrant the cost. The larger the number of non-monitoring customers; the greater the ability to distinguish between monitoring and non-monitoring customers; or the more costly quality is, the higher the likelihood that non-monitoring customers will not be provided the high quality products they might want.

All three conditions are satisfied in the market for placement and execution services to an extent sufficient to create a substantial divergence between brokers' and investors' interests. To show this, each step will be examined in turn.

A. Investors' Ability to Monitor Brokers

The market for placement and execution services is highly competitive. There is no question that brokers compete fiercely with each other for business.⁶⁷ Securities markets, in turn, compete strenuously with each other for the order flow brokers' control. The competition for order flow between auction and dealer markets is one illustration of this. Auction and dealer markets compete among each other as well.⁶⁸ As global competition for equity trading continues to intensify, competition will only increase.

⁶⁶ See generally Akerlof's seminal article *The Market for 'Lemons': Qualitative Uncertainty and the Market Mechanism*, 84 QUARTERLY JOURNAL OF ECONOMICS 488-500 (1970). In Akerlof's model of the used car market, potential buyers do not know the quality of a used car and, as a result, purchase price becomes independent of quality. Problems of this kind appear in numerous contexts.

⁶⁷ The REPORT OF THE COMMITTEE ON COMPENSATION PRACTICES (1995), a study of the brokerage industry, noted that "intense competition" between brokers has created a buyers' market for brokerage services. *Id.* at 17. Brokerage industry concentration, even after substantial consolidation in the late 1970s, is fairly low. See Jarrell, G., *Change at the Exchange: The Causes and Effects of Deregulation*, 27 J. L. & ECON. 273, 302-03 (1984); see also Stein, C., *Discount Brokerages a Tough Business*, BOSTON GLOBE C1 (Sept. 18, 1997).

⁶⁸ Barriers to entry into the dealer business are minimal. The most rigorous requirement for entry into the market making business is the NASD requirement that a dealer must maintain a minimum net capital of \$25,000, or \$2,500 for each security in which they make a market, whichever is less. See Amihud, Y., T. Ho, and R. Schwartz, MARKET

This competition has been reflected in the substantial reduction in overall commission revenues since the abolition in 1975 of fixed commissions. In the last twenty years, NYSE members' securities commissions, for instance, have declined from approximately 50% of total revenues to only 15%.⁶⁹ The downward pressure on commission rates is not surprising since they tend to be well-advertised and easy to compare. Rates typically consist of flat fees for trades up to a certain size and a cent or two for each share traded above that level.⁷⁰

Evaluating the quality of competing brokerage products, on the other hand, is often far more difficult. While it is true that investors can easily judge brokers along certain dimensions, such as how easy it is for an investor to access account information, determining whether an order has received the best possible price is far more involved.⁷¹ It may very well be prohibitively expensive for many small investors to acquire the necessary expertise and information to make a meaningful judgment about whether a broker has sent their orders to the appropriate market.⁷² Indeed, many small investors are probably unaware that they are uninformed.⁷³

It is true that there are firms, albeit few in number and small in size, whom investors can turn to for brokerage evaluation.⁷⁴ Unfortunately, these companies use substantially different methodologies in evaluating and comparing brokerage services. Whose approach is the best is a matter of considerable dispute.⁷⁵ In any event, these firms tend to cater to institutional investors and their special trading needs.

Besides using third party evaluations, another standard way for uninformed customers to compensate for their inadequate monitoring is to free-ride off of those who do monitor. In other words, simply buy the same product, at the same price, that monitoring customers do. This is, however, unlikely to be a successful strategy for small investors in this context. What might

MAKING AND THE CHANGING STRUCTURE OF THE SECURITIES INDUSTRIES 3, 44 (1985). A typical NASDAQ security has an average of eleven competing dealers. See www.NASD.com

⁶⁹ Shapiro, J., *U.S. Equity Markets: Recent Competitive Developments*, in GLOBAL EQUITY MARKETS: TECHNOLOGICAL, COMPETITIVE, AND REGULATORY CHALLENGES 24-25 (1995).

⁷⁰ Broker commission rates are easily available on-line. Alternatively, some brokers charge a flat fee for managing an investor's account, including buying and selling stock, for a period of time instead of a fee based on the size of an investor's trades. See, e.g., REPORT OF THE COMMITTEE ON COMPENSATION PRACTICES (1995) (contrasting transaction-based and account-based brokerage fees).

⁷¹ See generally *supra* Part II(A).

⁷² An investor cannot monitor whether she has received the best possible price by merely checking the prices reported on the CQS or NQDS as the NBBO will often not be the best possible price. See *infra* Part V(A)(2).

⁷³ As a general matter, investors have the option of directing a broker to send their orders to a particular market. This option is hardly ever utilized.

⁷⁴ These include companies such as the Plexus Group.

constitute the optimal handling of orders placed by sophisticated traders, who are likely to monitor brokerage quality, will often not be the same for the orders of smaller, less informed investors. It is striking the extent to which the ideal handling of an order so often depends on factors correlated with an investor's likely sophistication; such as trade size, an order's perceived informational content, the need to quickly establish a position, or the opportunity cost of using automated routing and handling systems.⁷⁶ Moreover, a small investor might very well have to incur substantial costs in order to determine whether she is in fact receiving the same services as monitoring investors, who often require fairly individualized treatment.

The lack of monitoring by small investors is more than mere speculation. Small orders have been routinely routed to securities markets offering inferior prices. One study analyzed the prices all orders, broken down by trade size, in 500 NYSE-listed stocks received in 1988 and 1989.⁷⁷ The study found that in 1988 traders who placed orders for less than 400 shares and had their orders routed to a non-NYSE securities market received, on average, 1.07 cents less per share than similarly sized orders sent to the NYSE. For small orders routed to third market dealers, the disparity between NYSE prices and prices received was even larger, at 1.51 cents per share. The data from 1989 is similar: for orders less than 400 shares non-NYSE securities markets offered, on average, prices lower by 1.22 cents per share while third market dealers' prices were lower by an average of 1.58 cents per share.⁷⁸ Disturbingly, it is smaller orders that have been increasingly sent by brokers to non-NYSE securities markets, often in exchange for cash payments.⁷⁹

In contrast, the relative performance of the NYSE and non-NYSE securities markets for orders larger than 400 shares was very different. The overall disparity in 1988 for orders in the 500-900 share range was -.22 cents per shares, non-NYSE securities markets actually offered slightly better prices, while in 1989 the difference was .45 cents. Non-NYSE securities markets performed even better when executing trades in the 1000-1900 share class.⁸⁰

⁷⁵ See Harris, L., *Consolidation, Fragmentation, Segmentation, and Regulation*, in GLOBAL EQUITY MARKETS: TECHNOLOGICAL, COMPETITIVE, AND REGULATORY CHALLENGES 269, 286 & n.12 (1995).

⁷⁶ See generally *supra* Part II(A).

⁷⁷ See Lee, C., *Market Integration and Price Execution for NYSE Listed Securities*, 48 JOURNAL OF FINANCE 1009-1038 (1993).

⁷⁸ *Id.* at 1022 (Table IV).

⁷⁹ The NYSE estimates that approximately 35 percent of all orders, smaller than 3,000 shares, in NYSE-listed securities are routed to non-NYSE securities markets, in particular third market dealers, as measured by share volume. In contrast, only 20 percent of the total volume in NYSE-listed stocks is routed to non-NYSE securities markets. See Cochrane, J., *U.S. Equity Market Competitiveness*, NYSE Working Paper (1993).

⁸⁰ Lee, *infra*, at *id.*. Third market dealers, while doing substantially better in the 500-900 share class range, did not perform as well as other securities markets. The disparity between third market dealers and the NYSE was .76 cents

This failure to monitor brokerage quality is consistent with growing empirical evidence that non-institutional investors often do not have even a basic understanding of how financial markets work. Consider just a few of many possible examples. Individual investors tend to increase their purchases of mutual funds due to recent good performance, even though this is a very poor indication of future returns.⁸¹ Similarly, commodity funds are sold to individual investors on the basis of exceptional return performance before issuance, although commodity funds often fail to deliver similar results after they become public.⁸² These examples do not necessarily indicate that these investors are irrational but rather might constitute a rational response to the cost of acquiring information.⁸³ Whatever the reason, uninformed behavior is far from uncommon.

B. Brokers' Ability to Identify Investors Unable to Monitor

A lack of monitoring by uninformed investors is not a sufficient condition for the existence of an agency problem. A number of investors will undoubtedly find monitoring worthwhile, at least partially, especially if they trade often or in large amounts.⁸⁴ Brokers will have to be able to identify, at least roughly, into which group an investor falls. To the extent that they cannot but still offer a product of inferior quality, they run the risk of losing the business of investors who do monitor. The greater the ability to identify non-monitoring investors the greater the incentive to reduce the quality provided to these investors as a way of cutting unnecessary costs.

As it turns out, brokers are often readily able to identify which category an investor likely falls into. Besides observing the characteristics of an order, such as trade size, brokers and

per share in 1988 and 1.23 cents per share in 1989. Data gathered on years after 1989 strongly indicates that third market dealers have improved their overall performance vis-à-vis the NYSE. See Huang, R. and H. Stoll, *Competitive Trading of NYSE Listed Stocks: Measurement and Interpretation of Trading Costs*, 5 FINANCIAL MARKETS, INSTITUTIONS & INSTRUMENTS 49-50 (1996).

⁸¹ See Patel, J., R. Zechauser, and D. Hendricks, *The Rationality Struggle: Illustrations from Financial Markets*, 81 AMERICAN ECONOMIC REVIEW 232, 234 (1991) (finding that above a certain threshold, every one percent change in equity returns induces a 6 percent change in the rate of investment in mutual funds by households); Sirri, E. and P. Tufano, *Competition and Change in the Mutual Fund Industry*, Harvard Business School Working Paper #93-040 (similar results).

⁸² See Elton, E., M. Gruber and J. Rentzler, *New Public Offerings, Information and Investor Rationality: The Case of Publicly Offered Commodity Funds*, 62 JOURNAL OF BUSINESS 1-16 (1989).

⁸³ Cf. Brennan, M., *The Individual Investor*, 18 JOURNAL OF FINANCIAL RESEARCH 59, 62 (1995) ("Most of these types of behavior [] would be considered irrational for a well-informed investor . . . However, they are not irrational for the individual investor who lacks expert knowledge.")

more sophisticated investors often have long-standing personal relationships and common interactions.⁸⁵ Involved discussions between brokers and institutional investors over commission rates, as well as other matters, are frequent occurrences.⁸⁶ Order flow arrangements between dealers and brokers typically include an agreement that brokers will not send the dealer "professional" orders -- an agreement obviously premised on the ability of brokers to segregate orders based on investors' sophistication.

C. Cost of Quality

The final question is whether providing quality is costly? If it is then brokers will tend to provide only low quality products, *i.e.*, routing investors' orders to securities markets which are not necessarily offering the best price, regardless of non-monitoring investors' wishes.⁸⁷

There are various costs that a broker must incur in attempting to route a particular order to the market offering the best possible price. First, there is the costs of searching for the market offering the best possible price. Checking the prices offered by all the different markets conducting trading in any given security, and routing individual orders based on this information, may be a time-consuming task if done for every order.⁸⁸ Automatically routing small orders to a particular securities market, irrespective of the price being offered, can minimize these costs. Moreover, routing orders to some markets can incur various handling fees.⁸⁹ Proprietary trading systems, for instance, often charge a fee for using their systems.⁹⁰

Most importantly, the securities market offering the best price will not necessarily be the market offering the largest side payment. Indeed, the ability to offer a large side payment can be the direct result of profits arising from executing orders at an inferior price. When this occurs,

⁸⁴ Perhaps some investors will not know whether the broker achieved the best possible price for their orders but will know if quality falls below a certain level, while others can determine whether a broker has provided best execution only a percentage of the time.

⁸⁵ Indeed, it is often a broker's statutory obligation to know her investor and the "suitability" of an investment given the investor's needs.

⁸⁶ See Kandel, E., and L. Marx, *Payments for Order Flow on NASDAQ*, forthcoming *Journal of Finance*.

⁸⁷ See Leland, H., *Quacks, Lemons and Licensing: A Theory of Minimum Quality Standards*, 86 *JOURNAL OF POLITICAL ECONOMY* 1328 (1979) (demonstrating that in markets where prices are costlessly observed but customers cannot monitor quality, quality falls to the lowest possible level if quality is at all costly).

⁸⁸ See Garbade, K., and W. Silber, *Best Execution in Securities Markets: An Application of Signaling and Agency Theory*, 37 *JOURNAL OF FINANCE* 493, 496-97 (1982) (describing divergence of brokers' and investors' interests in incurring search costs).

⁸⁹ See *supra* Part II(A).

⁹⁰ Even under the new order execution requirements, proprietary trading systems will be able to charge for access, although these fees will be SEC reviewed.

brokers who route orders to the securities market offering the best price will incur the opportunity cost of these foregone side payments.⁹¹ This represents a real cost to the broker regardless of whether a side payment is in the form of cash, a nonmonetary benefit or internally captured dealer profits.

Since the provision of quality is often costly, brokers will tend to offer only low quality products to small investors. In turn, this implies that securities markets, when they can, will attempt to attract the order flow brokers' control not by competing on providing the best price but on providing the largest side payments. This has three distinct adverse consequences on efficiency as well as worrisome distributional effects.

IV. ADVERSE CONSEQUENCES OF THE CONFLICT OF INTEREST

A. Efficiency Consequences

1. Penalization of Certain Types of Securities Markets - As the discussion in Part II(B)(2) emphasized, auction markets are, to a significant extent, institutionally incapable of offering side payments to brokers. Nor can they, for the same reasons, enable broker-dealers to accomplish the economic equivalent through internalization of order flow. Dealer markets, on the other hand, suffer from no such handicap. Through order flow arrangements, dealers are able to clear small orders at the lowest bid or highest offer legally permissible – the NBBO – and rebate a portion of the profits in the form of side payments to the brokers who routed the orders there in the first place.⁹² Given this difference in market structure, small orders are more likely to be routed by brokers in search of side payments to dealer markets, irrespective of the prices available on the NYSE.⁹³ The inability of auction markets to translate their often superior prices into side payments to brokers creates a distortion in where orders are routed. Any given order will not necessarily be sent to the securities market that values that order the most.

The statistics paint a troubling picture for the NYSE. Its dealer competitors have been increasingly successful in attracting order flow in NYSE-listed stocks from the NYSE, especially in small orders. As a percentage of all the transactions in NYSE-listed stocks, the third market's share has increased from 2.39% in 1976 to 10.77% in 1995. For the regional exchanges, their

⁹¹ One should keep in mind that order flow payments often constitute 15% to 20% of a broker's revenues.

⁹² See SEC, REPORT TO THE CONGRESS: IMPACT OF PREFERENCING ON SECURITIES MARKETS 47 (1997). For an explanation of the requirement that investors receive at least the NBBO, see *infra* Part V(A).

⁹³ It is important to remember that the regional exchanges are more akin to dealer markets than the NYSE given the high rate of specialist participation in these markets. See *ft.* at ___.

percentage of NYSE-listed stock transactions has risen from 11.53% in 1976 to 19.01% in 1995. The third market's and regional exchanges' increases in NYSE-listed trading as measured by share volume is far less impressive implying that many of the orders increasingly being sent to them are small in size.⁹⁴ In contrast, the percentage of transactions in NYSE-listed stocks occurring on the NYSE dropped from 86% in 1976 to 70.22% in 1995.⁹⁵ As of 1996, the NYSE had only 47% of market share for orders less than 1000 shares.⁹⁶ Some observers have even predicted that if current trends continue within a decade less than half of all trades in NYSE-listed stocks will occur on the NYSE.⁹⁷

The effectiveness of the NYSE's dealer competitors is troubling as several studies have documented that the NYSE often offers prices significantly better than the NBBO.⁹⁸ One study, already mentioned earlier, examined transactions in 500 NYSE-listed stocks over a two year period.⁹⁹ Prices received in non-NYSE transactions, as compared to trades conducted on the NYSE, were inferior, on average, by 0.69 cents per share in 1988 and 0.98 cents in 1989. Third market dealers, for all order sizes, executed trades at prices inferior to those obtained on the NYSE.¹⁰⁰ Another study analyzed every trade in NYSE-listed stocks occurring in 1989.¹⁰¹ It found that NYSE executions enjoyed an average price improvement over non-NYSE trades of 0.79 cents per share.¹⁰² A third study examined prices received by 40,865 market orders electronically routed to securities markets by three large retail brokerage firms on April 25, 1991

⁹⁴ NYSE FACT BOOK 24 (1995). For the same time frames, the third market's percentage of the share volume of trading in NYSE-listed stocks increased from 4.48% to 7.94%, while the regional exchanges' percentage actually decreased from 10.06% to 9.96%. *Id.* 1976 is a natural point of reference as this was the first year fixed commission rates were abolished. Before 1976, institutional traders utilized the third market and regional exchanges where it was easier to avoid fixed commission rates.

⁹⁵ AMEX has also suffered from third market competition, with its trading volume in its listed stocks declining from 94% in 1981 to 79% in 1992. *See* Coffee, J., *Mysteries of the National Market System*, N.Y. L.J. 5 (Jan. 23, 1992).

⁹⁶ *See* Lightfoot, L., P. Martin, M. Petersen, and E. Sirri, *Preferencing and Market Quality on U.S. Equity Exchanges*, NBER Working Paper, Table I (1997).

⁹⁷ *See* Coffee, J., *Order Flow Payments Get New Scrutiny*, NAT. L.J. 16 (July 19, 1993). The NYSE's share of NYSE-listed stock trading has stabilized somewhat since these predictions.

⁹⁸ *See* *cites in ft. ___*.

⁹⁹ *See* Lee, C., *Market Integration and Price Execution for NYSE-listed Securities*, 48 JOURNAL OF FINANCE 1009 (1993).

¹⁰⁰ *Id.* at 1022

¹⁰¹ *See* Blume, M. and M. Goldstein, *Differences in Execution Prices among the NYSE, the Regionals, and NASD*, Working Paper no. 4-92 (White Center for Financial Research, University of Pennsylvania) (1992).

¹⁰² *Id.* at 2-4.

and August 20, 1991.¹⁰³ It found that similarly sized orders in the same stock received an average of 3.5 cents per share more on the NYSE as opposed to the regional exchanges.¹⁰⁴

The general ability of auction markets to often offer better prices than dealers is not surprising. One of the advantages of an auction market is its ability to directly cross market orders thereby avoiding the spread dealers charge.¹⁰⁵ All three studies just referred to attributed the NYSE's superior performance, in large part, to the percentage of trades executed within the NBBO spread. Roughly 62 percent of all NYSE trades in 1988 and 1989 that occurred when the NBBO spread was one-quarter, for instance, were executed within the spread as compared to approximately 38 percent for third market trades.¹⁰⁶ It should be noted that the NYSE's lead in executing trades within the spread is probably not as significant as when these studies were conducted given the increasing use of price improvement programs by third market dealers.¹⁰⁷ Studies of spreads on the London Exchange, a dealer market, for stocks listed on continental auction markets have reached similar conclusions, finding that auction markets often provide superior prices.¹⁰⁸

In contrast to auction markets, dealers are normally the contra-party to orders sent to them for execution and, accordingly, will maintain a spread to cover the costs of their intermediation services. A dealer will have to, for example, unwind stock positions acquired as the result of trading against its account, incurring the risk that the price of the stock will decline during the interim. These inventory risks are especially acute when orders are placed by investors with private information or the stock's price is volatile. There are also costs incurred in maintaining a continuous presence in a market, such as committing capital and monitoring

¹⁰³ See Peterson, M. and D. Fialkowski, *Posted Versus Effective Spreads: Good Prices or Bad Quotes?*, 35 JOURNAL OF FINANCIAL ECONOMICS 269 (1994).

¹⁰⁴ *Id.* at 287.

¹⁰⁵ For instance, suppose a dealer's offer is \$10 1/4 and its bid is \$10. Two buy and sell market orders for the same number of shares could be crossed on an auction market at \$10 1/8 with both parties enjoying price improvement over the dealer's prices of 1/8. If a dealer's offer was \$10 1/8 and its bid \$10, the market orders could be crossed at either \$10 or \$10 1/8 with one investor enjoying price improvement of \$1/8 and the other being no worse off.

¹⁰⁶ See Lee, *supra*, at 1030.

¹⁰⁷ Many third market dealers implemented price improvement algorithms in 1990 and 1991. Madoff Investment Securities, for instance, installed its MISSION price improvement system in late 1990.

¹⁰⁸ See, e.g., Schmidt, H., and P. Iverson, *Automating German Equity Trading: Bid-Ask Spreads on Competing Systems*, 6 JOURNAL OF FINANCIAL SERVICES RESEARCH 373-397 (1993); Roell, A., *Comparing the Performance of Stock Exchange Trading Systems* in THE INTERNALIZATION OF CAPITAL MARKETS AND THE REGULATORY RESPONSE (eds. Fingelton and Shoemaker) (1992)

trades.¹⁰⁹ And, of course, a dealer will need to make a competitive return on its expenditures, otherwise it would not be worthwhile to continue to stay in business.

If small investors desire the best possible price, and not the immediacy dealer intermediation provides, they are being forced to pay for a service they do not want as a result of the inability of auction markets, as a general matter, to offer side payments. Auction markets, even if they provide the best execution for small investors' orders, are penalized for their inability to compete with their dealer competitors on this basis. The increasing portion of small trades in exchange-listed securities diverted to dealers, and their execution at inferior prices, underscores the seriousness of the problem.

2. *Distortion in Where a Given Order is Sent Even Among Securities Markets Capable of Offering Side Payments* - Building on the analogy of the condominium owner who relies on an agent to find a buyer willing to pay the largest amount over and beyond the condominium's listed price, suppose that all the potential buyers can offer bribes to the agent. Further suppose that the agent and the potential buyers will have numerous interactions, over a long period of time, over the terms of sale of other condominiums whose owners the agent will also represent. The question is: Should the condominium owner be concerned if her agent has promised a particular buyer that all the condominiums the agent is responsible for are always sold to him at the listed price? And throw in the fact that the agent receives from the buyer a cash "gratuity" for the promise as well as an annual vacation at the buyer's beachhouse.

Most owners would be concerned. Somehow the explanation that she will enjoy a lower commission rate as a result of these bribes would fail to comfort. Yet the same argument has often been made in the securities market context. Investors, some say, are the ultimate beneficiaries of any side payments brokers receive given the competitive nature of the securities industry. Securities markets will compete away any profits they make in executing small investors' orders by offering larger and larger side payments to brokers, while brokers will compete with each other by offering lower and lower commission rates.¹¹⁰

Despite the competitive nature of the securities industry, order flow arrangements will result in inefficiencies, even in a situation where all securities markets can offer side payments, if the size of the side payments securities markets offer brokers cannot be adjusted as quickly or as precisely as securities quotations. Under these conditions, the size of a securities market's side

¹⁰⁹ See generally Amihud, Y., T. Ho and R. Schwartz, MARKET MAKING AND THE CHANGING STRUCTURE OF THE SECURITIES INDUSTRIES 45 (1985) (describing various dealer costs)

payment would be a less accurate indicator of which market a broker should send orders to than the prices securities markets would quote if they did not have to compete in trying to offer the largest side payments. As a result, any given order is less likely to be routed to the appropriate market than it would be in the absence of side payment competition.

In terms of the condominium analogy, the distortion created by the arrangement between the real estate agent and the buyer is that, for any given condominium, another buyer might value the condominium more than the buyer providing the gratuity and vacation. If part of the arrangement is that all condominiums are automatically sold to that buyer, regardless of the offers of others for any given condominium, there is a distortion in the selection of the buyer. Condominiums will not necessarily be sold to the buyers who value them the most. The ability of higher-valuing buyers to offer larger bribes does little good if the agent is already committed to selling the condominium to someone else. Moving one step back, and analyzing the situation at the point where the agent has not entered into one of these arrangements, there is still a distortion if it is easier to locate the buyer willing to pay the highest price for the condominium in a situation where buyers compete on price rather than on providing the largest gratuity or the most desirable vacation. It seems likely that it would be more difficult and time-consuming for an agent to compare the relative value of various types of bribes and for buyers to precisely adjust the value of their bribes to reflect how much they are willing to pay for any particular condominium than to compare and adjust bids.

Order flow arrangements often have the same troubling characteristics. It is not uncommon for brokers to enter into various types of long-term arrangements with particular dealers, such as “joint venture” agreements,¹¹¹ making it more difficult for an outside dealer to successfully compete for the order flow of the broker. More importantly, it is likely to be far easier for a securities market to indicate quickly and accurately the value it places on a particular security at any point in time by adjusting its quotations rather than altering, say, the amount of free investment research services it provides to a particular broker over the course of a year. Indeed, nonprice competition is likely to be of far more concern in the securities context than in the condominium example as valuations placed on securities change at a much quicker pace than condominiums. Moreover, while it is straightforward for a broker to compare quotations, it is likely to be far more difficult to assess the relative value of various types of side payments.

¹¹⁰ For commentators who have made a version of this argument, see *cites in ft.____*.

¹¹¹ *See supra* Part II(B)(2).

This distortion suggests the provision of side payments by securities markets should be of concern not only in the context of exchange-listed securities traded in the third market, which has been the focal point of the debate over order flow payments, but also for securities traded exclusively over-the-counter, like most NASDAQ securities. Worryingly, payments for order flow in NASDAQ securities are commonplace and tend to be larger than payments offered for order flow in exchange-listed securities.¹¹² Interestingly, proprietary trading systems, where no order flow payments occur, have been especially successful in attracting order flow in NASDAQ securities from sophisticated, institutional investors.¹¹³ Any proposed solution to the distortions caused by order flow payments should address this component of the problem.

3. *Distortion in Whether Orders Will Be Placed* - Even if all securities markets could instantaneously and costlessly translate their ability to offer price improvement into side payments, there is still a third distortion caused by these side payments. The more side payments a broker receives, the lower its commission rate is likely to be. The full true cost of trading, as a result, will not be fully reflected in the broker's commission rate.

This is problematic if small investors believe that brokers buy or sell securities on their behalf at market value, while commission rates represent the cost of making that adjustment in their holdings. The fierce competition between brokers on the basis of commission rates suggests that this is so. This belief is mistaken because it ignores the fact that commission rates will not reflect a portion of trading costs, such as foregone auction market price improvement opportunities. If trading costs appear lower than they actually are, socially excessive trading is the likely result. Those that argue that order flow payments are unobjectionable because they reduce commission rates ignore the distortion created by misleading price signals.¹¹⁴

B. Distributional Consequences

Non-monitoring small investors, along with auction markets, bear the brunt of these inefficiencies. The data contained in one study, summarized in Part III(A), suggests that investors who place orders in NYSE-listed stocks for less than 400 shares are the ones that tend

¹¹² See Securities Exchange Act Release No. 34-33026, p.7 n.16 (Oct. 6, 1993).

¹¹³ Proprietary trading systems have captured approximately 20% of all orders in over-the-counter securities and 4% of orders in NYSE-listed securities. See Exchange Act Release No. 34-38672, p.4 (May 23, 1997). A fair number of these proprietary trading systems have auction features enabling investors' orders to cross within posted spreads.

¹¹⁴ See, e.g., NASD, A Report to the Board of Governors, INDUCEMENTS FOR ORDER FLOW 25 (1991).

to have their trades misrouted. It is interesting to note that the average individual investor's order is for 300 shares.¹¹⁵ Order flow payments occur not only for orders in exchange-listed securities but for over-the-counter securities as well. Securities trading in over-the-counter securities is more driven by individual investors and less by institutional ones as compared to exchange-listed securities. Unfortunately, estimating the cumulative impact of these inefficiencies on small investors is highly speculative. Not only would one have to know the foregone price improvement opportunities, but also the losses that occur due to inefficient nonprice competition, see Part IV(A)(2), and excessive trading, see Part IV(A)(3). Whatever the true losses, there is ample cause for concern given the popularity of providing order flow payments.

V. THE CURRENT REGULATORY REGIME AND ITS SHORTCOMINGS

There are different types of regulatory responses to markets characterized by significant numbers of customers who do not monitor the quality of a product. One approach attempts to directly attack the underlying problem by reducing the cost to customers of acquiring and/or acting on information concerning quality. Subsidizing the production of information or mandating its public dissemination are two common ways of accomplishing this. This can increase efficiency because private production and use of information can result in sub-optimal amounts due to the public goods character of information. Informed investors confer a positive externality on uninformed investors who are able to free ride off their monitoring activities.¹¹⁶ Another popular regulatory response involves mandating, at least where the parties have not reached an agreement to the contrary, minimum standards of quality.

The current regulatory regime employs both approaches in attempting to ensure that orders are handled with investors' interests in mind despite the lack of monitoring by small investors. There are requirements that brokers provide information detailing their receipt of order flow payments as well as minimum standards of brokerage quality. There are three main components of the current regulatory regime: the Intermarket Trading System's (ITS) trade-through prohibitions (basically requiring that securities markets offer prices at least as favorable

¹¹⁵ See MARKET 2000, Study II, p.2.

¹¹⁶ See Tirole, J., THE THEORY OF INDUSTRIAL ORGANIZATION 107, 113 (1988). Underproduction of information may also occur if the information has value for more than just a producer's customers. See Easterbrook, F., and D. Fischel, *Mandatory Disclosure and the Protection of Investors*, 70 VA. L.REV. 669, 685-87 (1984).

as the NBBO for exchange-listed securities); brokerage "best execution" obligations; and disclosure requirements. These requirements, and their shortcomings, will be examined in turn.

A. The ITS Trade-Through Prohibitions

In order to understand the ITS trade-through prohibitions, and why they are inadequate to the task, their role in the SEC's "national market system" must first be understood.

1. The National Market System - The SEC in its letter transmitting the INSTITUTIONAL INVESTOR REPORT to Congress in 1971,¹¹⁷ and Congress in the 1975 amendments to the Securities Exchange Act of 1934,¹¹⁸ called for the establishment of a "national market system" for securities. While never a particularly clear concept, a national market system would basically "hold together in some fashion what might otherwise be an unduly fragmented market in multiply-traded common stocks."¹¹⁹ The national market for securities would, it was hoped, facilitate:

- (i) economically efficient executions;
- (ii) fair competition among brokers and dealers, among exchange markets, and between exchange markets and markets other than exchange markets;
- (iii) public availability of quotation and transaction information;
- (iv) an opportunity to obtain best execution; and
- (v) an opportunity to obtain execution without dealer intervention to the extent consistent with economically efficient executions and opportunity to obtain best execution.¹²⁰

All these goals are jeopardized by the provision of order flow payments and order flow internalization. Facilitating price competition between securities markets (iii) and the opportunity to obtain best execution (iv) are, perhaps, the ones most obviously implicated by a broker's incentive to maximize its side payments at the expense of finding the best possible price for an investor's order. This incentive, as well as the resulting distortion on an investor's

¹¹⁷ SEC, INSTITUTIONAL INVESTOR REPORT, H.R. Doc. No.64, 92 Cong., 1st Sess. xxiv-xxv (1971)

¹¹⁸ Securities Acts Amendments of 1975, Pub. L. 94-29, 7, 89 Stat. 97 (1975).

¹¹⁹ Cohen, M., *The National Market System -- A Modest Proposal*, 46 GEO. WASH. L.REV. 743, 747 (1978).

decision about whether to place an order in the first place, also damages the goal of ensuring economically efficient executions (i). Finally, the systematic penalization of auction markets created by this form of nonprice competition can hardly be said to encourage fair competition between securities markets (ii) or an opportunity to obtain execution without dealer intervention (v). The question is what regulatory safeguards does the NMS structure erected by the SEC provide against these dangers?

The core components of the national market system, as it has evolved in the last twenty-five years, are three electronic communications systems connecting various securities markets in different ways: the Consolidated Tape, the Consolidated Quotation System (CQS), and the Intermarket Trading System (ITS). The Consolidated Tape disseminates within 90 seconds securities transaction information, whether the trades occur on an exchange or over-the-counter, for practically all exchange-listed securities.¹²¹ Supplementing the Consolidated Tape are several reporting systems operated by NASDAQ which also report in real time last sales information for almost all the over-the-counter securities, *i.e.*, securities not listed on any exchange.¹²²

The CQS, on the other hand, publicly disseminates the best bid and offer (NBBO), derived from the quotations exchanges and over-the-counter dealers provide, for essentially all exchange-listed securities.¹²³ Exchanges are required to furnish the quotations and sizes, the number of shares that a quotation is good for, that member brokers and dealers indicate they are willing to trade at.¹²⁴ The NASD, just as the exchanges, reports the highest bid and lowest offer, along with their associated quotation sizes, offered by over-the-counter dealers for these securities.¹²⁵ A broker or dealer who indicates it is willing to trade a security at a given price is normally obligated to execute orders at that price up to the reported quotation size.¹²⁶ Supplementing the CQS, the NASDAQ Quotation Dissemination Service (NQDS) publicly disseminates quotations, including the highest bid and lowest offer, for NASDAQ securities: *i.e.*,

¹²⁰ 15 U.S.C. s 78k-1(a)(1).

¹²¹ The Consolidated Tape reports trading in all NYSE-listed securities, AMEX-listed securities, and solely listed regional securities that substantially meet AMEX listing requirements.

¹²² For details on these reporting systems, see Part 4630-4640 to the NASD MARKETPLACE RULES.

¹²³ *See* MARKET 2000, Appendix III, p.3.

¹²⁴ *See* 17 C.F.R. s 240.11Ac1-1(b)(1)(i) (1998).

¹²⁵ *Id.* at s 240.11Ac1-1(b)(1)(ii). There some narrow exceptions to this general requirement.

¹²⁶ *Id.* at s 240.11Ac1-1(c)(2).

NASDAQ/National Market System securities and NASDAQ Small-Cap securities.¹²⁷ And just as with their CQS quotations, over-the-counter dealers must stand by these quotations.¹²⁸

The ITS, on the other hand, is a market-to-market routing system. The ITS enables orders to be transferred for execution from one securities market, including all the exchanges, to another based on who is offering the best price as reported on the CQS. The ITS links over-the-counter dealers, through the ITS interface with the NASD's Computer Assisted Execution System (CAES), with the exchanges. The CAES, in turn, is an automated execution system that enables over-the-counter dealers to transfer orders in exchange-listed securities between each other for execution. All third market dealers are required to be members of the CAES and, hence, are also linked to the exchanges.¹²⁹ The ITS/CAES interface, though, is limited to "Rule 19c.3" securities which means that orders cannot be transferred for execution between an over-the-counter dealer and an exchange through the ITS if it is for a stock listed on the NYSE before April 26, 1979.¹³⁰ However, third market dealers who wish to have access to the ITS for non-19c.3 securities can become a member of an exchange. For instance, Madoff Investment Securities, by far the largest third market dealer, is a member of the Cincinnati Stock Exchange. Among the exchanges, orders can be transferred for execution between each other through the ITS for the vast majority of exchange-listed securities, whether they are 19c.3 securities or not.¹³¹

Under ITS rules, a securities market offering a price inferior to the NBBO for a security traded on the ITS must either match that price for any orders it receives or send a "commitment to trade" to the market posting the best price. If the commitment is accepted, then the order is executed on that market.¹³² Each ITS market, in compliance with ITS requirements, has adopted "trade-through" rules which prohibit securities markets from executing an order at a price worse

¹²⁷ The only major class of over-the-counter securities left are over-the-counter bulletin board securities which tend to be the smallest and most illiquid securities.

¹²⁸ See 17 C.F.R. s 240.11Ac1-(c)(1)(2); (10); *see also* MARKET 2000, Appendix III, p.2 n.10.

¹²⁹ See SEC, Self-Regulatory Organizations: Order Approving A Proposed Rule Change by National Association of Securities Dealers, Inc. Requiring Participation in the Intermarket Trading System by Third Market Makers, Release No. 34-34280 (June 29, 1994).

¹³⁰ This is likely to change soon. See SEC, Proposed Rulemaking Pursuant to Section 11A of the Securities Exchange Act of 1934 to Amend the ITS Plan to Expand the ITS/CAES Linkage to All Listed Securities and to Eliminate the Unanimous Vote Provision, Exchange Act Release No. 34-40260 (July 24, 1998).

¹³¹ Securities that can be traded over the ITS include NYSE- and AMEX-listed securities, securities admitted to unlisted trading privileges on the NYSE or AMEX, and securities listed on a regional exchange or admitted to unlisted trading privileges on a regional exchange which substantially meets NYSE or AMEX listing requirements. See MARKET 2000, Appendix II, p.1 n.2.

¹³² Commitments to trade are automatically accepted and executed by over-the-counter dealers, through the CAES, and the Cincinnati Stock Exchange, which is a fully automated market.

than the price quoted on the CQS by an ITS participant market -- over-the-counter dealers with respect to 19c.3 stocks and the exchanges -- without first attempting to have it executed by the market offering the superior price.¹³³ Nevertheless, trade-throughs still occur, although infrequently.¹³⁴

There are some structural limitations to the ITS which hamper its effectiveness. Most importantly, the NBBO reported on the CQS is not necessarily the best ITS price for purposes of the ITS trade-through prohibitions. This is due to the fact that third market dealers with respect to non-19c.3 securities are not considered a ITS participant market. So, for instance, if a third market dealer in a non-19c.3 security posts the highest bid on the CQS, an exchange will not be considered as having violated the ITS trade-through prohibitions if it executes an order at a lower bid.¹³⁵ Nor are proprietary trading systems, at least as of now, considered a ITS participant market. The fundamental question however, putting aside these limitations which could be remedied by an extension of the ITS network, is whether a guarantee of the NBBO is sufficient protection for investors' orders.

2. Why a Guarantee of the NBBO is Insufficient - Many commentators had initially thought that the combination of the CQS and the ITS, with its routing system and trade-through prohibitions, would result in securities markets having both the ability and the obligation to always get the NBBO for investors' orders in listed securities. Security markets, in turn, would compete for the order flow that brokers' control by revealing on the CQS the highest bid and lowest offer for a security that they could possibly provide. This has not happened. The failure of the national market system to facilitate quote competition is reflected in the SEC's finding that the implementation of the ITS system had no "statistical effect on the quality [as measured by spreads and volatility] of the primary market" prices.¹³⁶ Spreads between ITS and non-ITS

¹³³ See, e.g., NYSE Rule 15A, NYSE GUIDE (CCH) P2015A; CSE Rule 14.9; NASD 5262. The trade-through rules do not apply when the size of the bid or offer traded through was for less than 100 shares, certain block transactions, or when the broker was unable to avoid the trade-through due to extenuating circumstances such as "unusual market conditions."

¹³⁴ See SEC, A REPORT ON THE OPERATION OF THE INTERMARKET TRADING SYSTEM: 1978-1981, 35-37 (1982) (finding that 0.40 percent of all trades occurring on July 31, 1981 and 0.54 percent of all trades occurring on October 23, 1981 were trade-throughs). A more recent study found that third market dealers traded at prices inferior to the best quotation available on AMEX a total of 504 times between January 9 and February 28, 1991. See Mayer, M. and B. Leigh, *Does Off-Board Trading Compromise Execution Quality? The Evidence From on High and Down Low*, AMEX Research Department, p.5 (May 20, 1991).

¹³⁵ See Hasbrouck, J., G. Sofianos, and D. Sosebee, *New York Stock Exchange Systems and Trading Procedures*, NYSE Working Paper #93-01, p.25 (1993)

¹³⁶ SEC, Directorate of Economic and Policy Analysis, A MONITORING REPORT ON THE OPERATION OF THE ITS SYSTEM: 1978-1981 (June 1982), p.40; see also Davis, J., *The Intermarket Trading System and the Cincinnati*

stocks do not differ in any systematic fashion. Exchanges competing for NYSE-listed securities execute anywhere from 34.7% (CSE) to an incredible 92.1% (PHLX) of their dollar trading volume when neither its posted bid or offer is the NBBO.¹³⁷

There are a number of reasons why security markets have been generally unwilling, or even unable, to compete for order flow through posting competitive quotations on public forums such as the CQS. Indeed, some of these reasons, in particular *b* and *c*, also explain why over-the-counter dealers have refused to post the best prices they are capable of providing for public dissemination by the NQDS for NASDAQ securities.

a. Crossing Market Orders – One of the main reasons, already referred to in Part IV(A), why the NBBO may not reflect the actual price available on the NYSE, as well as other auction markets, is the ability of auction markets to directly cross market orders at prices within the NBBO spread. In a study of all transactions on the NYSE in September of 1993, 28% of all trades in NYSE stocks occurred between the NYSE's posted bid and offer. When the NBBO was greater than the minimum tick of 1/8, 66% of all NYSE trades occurred within the spread.¹³⁸ Whether a market order will be crossed is very difficult to predict as this will depend on the other orders that happen to be routed to the exchange floor at a particular point in time.

b. Monitoring Costs – Another reason is due to the risk a dealer or a specialist runs of being "picked off" if it posts a price on the CQS or NQDS which it is then obligated to stand by. If market conditions change, and the trader is unable to change its quotation quickly enough, the trader might very well have to buy (sell) stocks for more (less) than they are worth. The ITS routing system enables other market traders to take advantage of outdated, or even ill-advised from the outset, quotations as they have the choice whether to match the NBBO or transfer the order to the trader offering the best price. If the current NBBO is off-base for some reason the trader who posted the quotation will attract unwanted order flow from those taking advantage of the error. On the other hand, if the NBBO accurately reflects market conditions then competing

Experience, in Amihud and Schwartz, MARKET-MAKERS AND THE CHANGING STRUCTURE OF THE SECURITIES INDUSTRY 274 (1985); Shapiro, J., *U.S. Equity Markets: Recent Competitive Developments*, in GLOBAL EQUITY MARKETS: TECHNOLOGICAL, COMPETITIVE, AND REGULATORY CHALLENGES 21 (1995) ("Despite the Commission's quotation-based model of the National Market System, the competition that has actually materialized in the listed equity market has little to do with quotations.")

¹³⁷ See Blume, M., and M. Goldstein, *Quotes, Order Flow and Price Discovery*, 51 JOURNAL OF FINANCE 221, 235 (1997).

¹³⁸ See Shapiro, J., *U.S. Equity Markets: Recent Competitive Developments*, in GLOBAL EQUITY MARKETS: TECHNOLOGICAL, COMPETITIVE AND REGULATORY CHALLENGES 22 (1995)

markets will likely choose to match the NBBO for a particular order and retain the business for itself. In short, there is a "winner's curse" associated with competing for order flow through posting quotations on the CQS and NQDS.

This is more than a theoretical possibility. The NASD conducted a study of its SOES system which automatically routes small orders for execution to the NASDAQ dealer offering the best price. The study revealed that 29 firms inundate the system with heavy trading at points when these firms thought the best posted price was too generous. Not surprisingly, NASDAQ dealers, in order to protect themselves, widened their spreads.¹³⁹ The Cincinnati Stock Exchange, which automatically executes orders at the NBBO, has experienced similar problems.¹⁴⁰

Underlying these problems is the basic inability of a reporting system, which relies on simple combinations of quotations and sizes, to capture all the trading interest that exists at any given point in time.¹⁴¹ Traders who are willing to trade under a specific set of circumstances but not others will often be unable to satisfactorily qualify their quotations on the CQS or NQDS. Even if a reporting system could qualify quotations in these potentially infinite number of ways, it would be prohibitively expensive for a trader to always specify its trading interest in such detail. The very existence of brokers, who must exercise their judgment as to how an investor's order should be handled, underscores the costs to a trader of providing exact specifications of how its trading preferences vary under different conditions. Indeed, the impressive size of the "upstairs" market can be attributed in large part to the high cost of expressing trading interest on an exchange floor, despite exchanges being a far more flexible forum for expressing trading interest than the CQS.¹⁴²

¹³⁹ See NASD Department of Economic Research, *IMPACT OF SOES ACTIVE TRADING FIRMS ON NASDAQ QUALITY*, Exchange Act Release 32,313 (1993). Subsequently, the NASD promulgated a rule, approved by the SEC, which limits the ability of "professional traders" to use the SOES. See NASD Notice to Members, NTM 91-67 (Oct. 16, 1991). The London Exchange has long avoided requiring that a dealer's quotation must be "firm" vis-à-vis other dealers.

¹⁴⁰ See Huang, R. and H. Stoll, *Competitive Trading of NYSE Listed Stocks: Measurement and Interpretation of Trading Costs*, 5 *FINANCIAL MARKETS, INSTITUTIONS, AND INSTRUMENTS* 47 & n.33 (1996).

¹⁴¹ In addition to the inherent limitations of any reporting system, there is a specific regulatory rigidity to the CQS system, gradually being phased out, which has attracted considerable attention. This is the requirement that spreads must be in quoted in increments of an 1/8. To the extent that traders cannot express their trading interest in 1/8 increments, the CQS will be a deficient forum for communicating this interest. If a trader, for instance, were willing to offer a spread less than 1/8, the CQS would be unable to reflect this.

¹⁴² See Grossman, S., *The Informational Role of Upstairs and Downstairs Trading*, 65 *THE JOURNAL OF BUSINESS* 509-528 (1992).

c. Informationally Motivated Order Flow - Ill-advised or outdated quotations are not the only way traders can be picked off. There is the chance that the order flow attracted by a superior price on the CQS or NQDS is from investors with private information about a security's likely future value. Other traders have an incentive not to match the NBBO for orders they think are information-based, instead sending them to the trader posting the NBBO for execution. Market participants, whether they are floor brokers, specialists, or over-the-counter dealers have various ways of sorting out whether orders are informationally motivated or not and adjust their prices accordingly.¹⁴³ Making these kinds of judgments about order flow being transferred over the ITS or SOES is much more difficult. In any event, it will often be too late by this point because the securities market will often have to stand by their quotations.

d. Raising Competitors' Costs - Some have also argued, somewhat more controversially, that the NYSE does not always post its best prices on the CQS as a way of raising its competitors' costs. In order for the NYSE's competitors to attract order flow in NYSE-listed stocks from sophisticated traders, the argument goes, these traders will have to be assured that they are receiving prices at least as good as those available in the primary market. If the NYSE is able to conceal its true price, competitors will have to incur the cost of ascertaining the NYSE's actual prices. Regional specialists have reported that they are forced to incur the cost of submitting their own orders to the NYSE to uncover the NYSE's real prices, prices which are not available on the CQS.¹⁴⁴ A study of NYSE specialists' practices revealed that they fail to display on the CQS approximately one-half of all limit orders that are superior to the best CQS quotation.¹⁴⁵

B. Duty of "Best Execution"

The SEC has explained that a broker has "a duty to seek to obtain best execution for customer orders, which is understood to mean that a broker-dealer must obtain the most

¹⁴³ See Baker, K., *Trading Location and Liquidity: An Analysis of U.S. Dealer and Agency Markets for Common Stocks*, 5 FINANCIAL MARKETS, INSTITUTIONS, & INSTRUMENTS 22, 60 & n.190 (1997).

¹⁴⁴ See McNish, T. and R. Wood, *Competition, Fragmentation, and Market Quality*, Authors' Reply to Discussants, in THE INDUSTRIAL ORGANIZATION AND REGULATION OF THE SECURITIES INDUSTRY 87 (1996).

¹⁴⁵ See McNish, T. and R. Wood, *Hidden Limit Orders on the NYSE*, 21 JOURNAL OF PORTFOLIO MANAGEMENT 3: 19-25 (1995) (study examining specialist handling of limit orders placed in 118 NYSE-listed securities).

favorable terms available under the circumstances for a customer's transaction."¹⁴⁶ Of course, everything hinges on what exactly a broker can and cannot do "under the circumstances." The only guidance the SEC has provided, beyond this statement, is a non-exhaustive list of factors with uncertain weight.¹⁴⁷ Other formulations of the duty of "best execution," whether given by the courts,¹⁴⁸ exchanges,¹⁴⁹ the NASD,¹⁵⁰ the common law of agency¹⁵¹ or commentators¹⁵² are almost as amorphous. Given the complicated nature of choosing the appropriate market, this is not surprising.¹⁵³ This imprecision in the definition of the duty is reflected, despite it being a

¹⁴⁶ MARKET 2000, *Best Execution*, Study V, p.1. "Best execution," as used by the this paper, as in the MARKET 2000 study, refers to the full set of legal obligations, whether derived from the shingle theory, the common law agency duty of loyalty, general fiduciary principles or federal statutory antifraud provisions, a broker owes an investor when choosing a market.

¹⁴⁷ "While price is the predominant element of the duty of best execution . . . the Commission has stated that among the factors to be considered by a broker-dealer in satisfying its best execution obligations are: the size of the order; the trading characteristics of the security involved; the availability of accurate information affecting choices as to the most favorable market in which execution might be sought; the availability of technological aids to process such data; the availability of economic access to the various market centers; and the cost and difficulty associated with achieving an execution in a particular market center." See SEC, SECOND REPORT ON BANK SECURITIES ACTIVITY: COMPARATIVE REGULATORY FRAMEWORK REGARDING BROKERAGE-TYPE SERVICES 97-98, n.233, as reprinted in H.R. Rep. No. 145, 95 Cong., 1st Sess. 233 (Comm. Print 233).

¹⁴⁸ See, e.g., *In Re Merrill Lynch*, 911 F.Supp. 754, 768 (1995) ("Fairness includes a duty of best execution, but the term itself eludes definition").

¹⁴⁹ New York Stock Exchange Rule 123A.41, 2 NYSE GUIDE (CCH) P2123A ("A broker handling a market order is to use due diligence to execute the order at the best price or prices available to him under the published market procedures of the Exchange"); American Stock Exchange Rule 156(a), 2 AMEX GUIDE (CCH) P9296 (same).

¹⁵⁰ NASD Rules of Fair Practice, NASD MANUAL (CCH), Rule 2320(a) P4121 ("In any trades for or with a customer, a member and persons associated with a member shall use reasonable diligence to ascertain the best inter-dealer market for the subject security and buy or sell in such a market so that the resultant price to the customer is as favorable as possible under prevailing market conditions. Among the factors which will be considered by the Business Committees in applying the standard of "reasonable diligence" in this area are (1) character of the market for the security, e.g. price, volatility, relative liquidity and pressure on available communications (2) size and type of transaction (3) the number of primary markets checked (4) location and accessibility to the customer's broker/dealer of primary markets and quotation services.")

¹⁵¹ "[A]n agent employed to buy or sell is subject to a duty to the principal . . . to be loyal to the principal's interests and to use reasonable care to obtain terms which best satisfy the manifested purposes of the principal." Restatement (Second) of Agency, s 424 (1958).

¹⁵² See, e.g., Wagner, W. and M. Edwards, *Best Execution*, 49 FINANCIAL ANALYSTS JOURNAL 65, 69 (1993) (defining best execution for institutional investors as the "procedure most likely to flow the maximum investment decision value into portfolios"); Lipton, D., *Best Execution: The National Market System's Missing Ingredient*, 57 Notre Dame Law 449 (1982) (arguing that a well-enforced duty of "best execution" is the national market system's "missing ingredient," but failing to provide a definition of what "best execution" actually means); ADVISORY COMMITTEE ON THE IMPLEMENTATION OF A CENTRAL MARKET SYSTEM: SUMMARY REPORT 13 (1975) ("Best Execution requires that the best possible price be obtained for the customer in the execution of an order under all circumstances."); see also Midwest Stock Exchange, Inc., POLICY STATEMENT ON THE OBJECTIVES, DEVELOPMENT AND GOVERNANCE OF A NATIONAL MARKET SYSTEM 33 (1976) (proposing a best execution requirement which would read: "A broker is subject to use reasonable care, consistent with high standards of professional skill and integrity, to obtain the best price for a customer in the execution of his order.")

¹⁵³ For a discussion of the difficulty in providing a more precise, enforceable definition of "best execution," see generally Macey, J., and M. O'Hara, *The Law and Economics of Best Execution*, 6 JOURNAL OF FINANCIAL INTERMEDIATION 188 (1997). It is for much the same reasons that the SEC decline to adopt a Universal Message Switch, a routing system that would have automatically sent orders to the specialist or over-the-counter dealer posting the best quotation. The SEC sided with commentators who pointed out that numerous considerations went into what was the "best" market for an order that such a switch would not take into account: the size of the order, execution and

"cornerstone of market integrity,"¹⁵⁴ in it having few legal consequences outside a rather circumscribed set of circumstances. Outside these well-defined circumstances, the SEC, the NASD, and the courts, at least until recently, have been loathe to second-guess how a broker weighed all the relevant, and often competing, factors that go into a judgment as to what constitutes "best execution" for an order.

The well-recognized situations where a broker's handling of an order violates its duty of "best execution" fall into five general categories: (1) failing to obtain even the NBBO for an order (an occurrence which is already partially protected against through the ITS trade-through prohibitions) (2) failure to consummate transactions in a reasonable period of time¹⁵⁵ (3) engaging in unauthorized transactions¹⁵⁶ (4) unnecessarily using a second party, usually a second broker, in executing an order¹⁵⁷ (5) failing to disclose potential conflicts of interest, such as whether the broker was also acting as principal in a trade.¹⁵⁸ Beyond these specific circumstances, the SEC has limited itself to periodically issuing largely hortatory statements explaining that brokers "must at least make periodic assessments of the quality of competing markets to assure that it is taking all reasonable steps under the circumstances to seek out best execution of customers' orders."¹⁵⁹ Attempts to further regulate brokerage handling of orders by invoking state law, mainly state common-law agency principles, have, to date, failed.¹⁶⁰ In other words, where an investor's order is routed is basically a broker's call.

clearing costs, reliability of the displayed quotation, and the possibility of getting a price better than the best posted quotation. See SEC, STATUS REPORT ON THE DEVELOPMENT OF A NATIONAL MARKET SYSTEM, Exchange Act Release No. 15671 (March 22, 1979).

¹⁵⁴ MARKET 2000, *Best Execution*, Study V, p.1.

¹⁵⁵ See, e.g., *In re Ned J. Bowman Co.*, 39 S.E.C. 879 (1960).

¹⁵⁶ See, e.g., *In re First Anchorage Corp.*, 34 S.E.C. 299 (1952).

¹⁵⁷ See, e.g., Exchange Act Release No. 8489 (Jan. 8, 1969).

¹⁵⁸ See, e.g., *In re Harry Marks*, 25 S.E.C. 208 (1947). A broker's disclosure requirements with respect to payments for order flow and routing practices will be examined in detail in Part V(C).

¹⁵⁹ Exchange Act Release No. 15671 (March 22, 1979; see also Exchange Act Release No. 15296 (June 6, 1979); Exchange Act Release No. 16590 (February 19, 1980); Exchange Act Release No. 17583 (February 27, 1981); Exchange Act Release No. 26870 (May 26, 1989); Exchange Act Release No. 34902 (October 27, 1994).

¹⁶⁰ See *Orman v. Charles Schwab*, 688 N.E.2d 620 (1997) (concluding that the comprehensive nature of federal regulation regarding practice of order flow payments preempted state agency and contract law claims challenging the practice); *Gilman v. BHC Securities*, 104 F.3d 1418 (2d Cir. 1997) (dismissing class action for breach of contract and breach of state fiduciary duties for lack of subject-matter jurisdiction); *Thomas v. Fidelity Brokerage*, 977 F.Supp. 791 (W.D. La. 1997) (same); *Schulick v. PaineWebber*, 700 A.2d 534 (Pa. Sup.Ct. 1997) (concluding that Pennsylvania common law cause of action claims for breach of contract and fiduciary duty preempted by federal law); *Guice v. Charles Schwab*, 674 N.E.2d 282 (N.Y. 1996), cert. denied, 117 S.Ct. 1250 (1997) (concluding that challenge to brokers' acceptance of payments for order flow based on New York common-law agency principles preempted by federal law); *Dahl v. Charles Schwab*, 545 N.W.2d 918 (Minn. 1996) (concluding that Minnesota agency law principles and state anti-fraud statutes preempted by federal regulation of payments for order flow); but see *Thomas v. Charles Schwab*, Civ. A. No. 95-0307, 1995 U.S. Dist. LEXIS 12007 (W.D. La. 1995) remanded to state court

The Third Circuit's recent unanimous en banc opinion in *Newton v. Merrill Lynch*, 135 F.3d 266 (1998), could be read as a substantial extension of the duty of "best execution" beyond these traditional categories. In this case, a class action suit was brought by an investor contending that various broker-dealers who over a two year period automatically executed investors' orders at the NBBO had violated their obligation to provide "best execution" since superior prices were available on other markets. While admitting that the broker-dealers had handled the orders in a way that had "never been held to be fraudulent by any court or regulator," the court concluded that the district court's grant of summary judgment in favor of the broker-dealers was inappropriate given that a "reasonable trier of fact could conclude that the defendants misrepresented that they would execute the plaintiffs' orders so as to maximize the plaintiffs' economic benefit."¹⁶¹ The court's reasoning casts a seemingly long shadow over any contestable decision made by a broker in handling an investor's order. Anything that a trier of fact, *i.g.*, a jury, might consider a broker's failure to "maximize [a] plaintiff[']s economic benefit" is potentially a violation of the duty of best execution.

The impact of *Newton*, however, is unlikely to be as sweeping as some of its reasoning might suggest for several reasons. First, it is unclear whether future courts will read *Newton* so broadly. Conceivably courts will limit *Newton* to situations where a broker-dealer consistently automatically executes orders at the NBBO over a substantial period of time even when better prices were often available with a minimum of effort. There would be powerful reasons for such a cautious approach. Allowing best execution claims to proceed in more complicated situations, such as where a broker routinely has orders executed at the NBBO after having attempted to achieve a better price in at least some limited manner, could prove unworkable. The ability of juries to make consistent and reasonably accurate judgments about such matters as whether checking another securities market for quotations "would have added substantial expense and delay to the execution of [investors'] orders"¹⁶² is dubious. Indeed, this is one of the reasons why the Ruder Committee, a committee created by the NASD to look into payment for order flow issues, suggested that the duty of best execution should presumptively be considered satisfied when orders are cleared at the NBBO.¹⁶³

(federal court lacks subject matter jurisdiction because Congress has not expressly preempted state regulation of payment for order flow).

¹⁶¹ 135 F.3d at 274.

¹⁶² *Id.* at 272 (one of the factors that a trier of fact might have to decide).

¹⁶³ *See* NASD, A Report to the Board of Governors, INDUCEMENTS FOR ORDER FLOW 28 (1991).

Second, central to the court's conclusion that there was a material issue of fact as to whether there was a violation of best execution was its belief that "a trier of fact could infer that the defendants' acceptance of the orders was reasonably understood as a *representation* that they would not be executed at the NBBO price when better prices were reasonably available elsewhere."¹⁶⁴ Of course, if the broker had made a different representation before acceptance of an order, there could be no misrepresentation. To avoid liability, brokers would just have to inform investors beforehand of contestable practices. In fact, for the most contestable practice of brokers, acceptance of order flow payments, there are mandated disclosure requirements, some of which are triggered before any transactions occur.¹⁶⁵

C. Disclosure of Payments for Order Flow

In response to the concern that investors are often not receiving the best possible price for orders diverted by brokers to dealers, a fear not laid to rest by the ITS trade-through prohibitions and the duty of best execution, the SEC adopted rules requiring the disclosure of various items of information by brokers who receive order flow payments for all securities whether they be exchange-listed or over-the-counter.¹⁶⁶

1. The Disclosure Requirements - The payment for order flow disclosure rules require brokers to provide information on three occasions: opening of a new account, annually, and trade confirmations. When an investor opens a new account, the broker must disclose in writing whether it receives order flow payments, a detailed description of the nature of the compensation received, and the policies for determining where to route investors' orders that are the subject of payment for order flow, including a description of the extent to which orders can be executed at prices superior to the NBBO. This information must be updated and distributed to all the broker's customers on an annual basis.¹⁶⁷ Finally, in each trade confirmation, a broker who

¹⁶⁴ 135 F.3d at 271 (emphasis added).

¹⁶⁵ Indeed, the SEC has specifically explained that as a result of its disclosure rules an investor will have the opportunity to select another broker if she does not approve of a particular broker's payment for order flow practices. *See* 58 F.R. 52934, 52937 (1993). Insofar as the SEC's view matters, as it surely does, it is hard to argue investors are laboring under an implied misrepresentation by a broker concerning payment for order flow practices if they have enough knowledge to select brokers on this very basis.

¹⁶⁶ *See* SEC, Payment for Order Flow, Exchange Act Release No. 34,902 (Oct. 27, 1994). The disclosure requirements apply not only to the most important class of NASDAQ securities, the "NASDAQ/National Market" securities, but also to "NASDAQ Small-Cap" securities and even over-the-counter Bulletin Board securities.

¹⁶⁷ *See* Rule 11Ac1-3(a)(1); (2).

accepts payments for order flow must include a statement to that effect.¹⁶⁸ Payments for order flow are defined as "any monetary payment, discount, rebate or reduction of fee to the extent that the payment, discount, rebate or reduction exceeds the fee charged [by the market for handling the order]" as well as any payments "received other than monetary payment for order flow."¹⁶⁹

Recognizing that internalization of order flow raises the same issues, the SEC has published proposed rule changes that would mandate disclosure of internalized order flow practices as well as requiring greater specificity concerning compensation received for routing order flow to a particular market, such as the range of payments on a per share basis.¹⁷⁰ To date, the proposed rule changes, which would extend and strengthen the newly enacted disclosure requirements, have languished.

2. *The Effectiveness of the Disclosure Requirements* - The disclosure requirements are largely off-target. Even detailed disclosure of payments for order flow and a broker's treatment of purchased order flow would provide an incomplete picture. An investor should not necessarily be concerned with brokerage receipt of side payments *per se* but rather the extent to which the broker is forgoing price improvement opportunities as a result. The disclosed information does not shed any light on the answer to this question. Indeed, an investor ideally would not only know the foregone price improvement opportunities but the cost of capitalizing on these opportunities, such as the size of the search costs and exchange service fees, in order to make a complete analysis.¹⁷¹

The SEC's approach has other serious shortcomings which further undermine the disclosure requirements' effectiveness. First, the disclosure requirements do not apply to internalization of order flow and, therefore, address only a portion of the problem. Second, disclosure is required only when the monetary inducement exceeds a market's service fee. An inducement is an inducement whether it takes the form of a service fee reduction or a cash rebate.

¹⁶⁸ See Rule 10b-10(a)(7)(iii). An investor can receive more detailed information concerning a broker's payment for order flow practices if she requests it.

¹⁶⁹ See Rule 10b-10(e)(10); (11). Non-monetary payments include any "research, clearance, custody, products or services; reciprocal arrangements for the provision of order flow; adjustment of a broker or dealer's unfavorable trading errors; offers to participate as underwriter in public offerings; stock loans or shared interest accrued thereon; discounts, rebates or any other reductions of or credits against any fee to, or expense or other financial obligation of, the broker or dealer routing a customer order that exceeds that fee, expense or financial obligation." Rule 10b-10(e)(9).

¹⁷⁰ See SEC, Internalized/Affiliate Practices, Payment for Order Flow and Order Routing Practices, Exchange Act Release No. 34,903 (Oct. 27, 1994). The proposal would have also required disclosure of a broker's routing practices regardless of whether she receives payment for order flow or internalizes order flow as well as disclosure of order flow payments for orders in standardized options.

Finally, it seems likely that, at the minimum, a significant portion of small investors would fail to actually read, understand and act upon the disclosed information in selecting a broker.¹⁷²

VI. THE PROPOSAL AND POSSIBLE OBJECTIONS

A. *The Proposal and Its Benefits*

To summarize the earlier discussion, the conflict of interest that presently compromises brokers' selection of a securities market arises out of small investors' inability to monitor these decisions by simply comparing commission rates.¹⁷³ If small investors could somehow monitor brokers' choices of securities markets, even if indirectly, the divergence of interests between brokers and investors would cease. Should those interests be harmonized, brokers who route orders to the appropriate securities market would be rewarded with small investors' business. And securities markets, in turn, would compete more by posting competitive quotations than on the basis of who can offer the largest side payments.

Reconciling brokers' and investors' interests is simple to achieve: allow brokers to credit small investors' orders with whatever the NBBO happens to be at the time of execution regardless of the actual price received. Call this the NBBO pricing option.¹⁷⁴ "Small investors' orders" should be defined to include the orders of those investors least likely to be able to monitor anything other than commission rates. One could attempt roughly to identify this group by the size of the orders they place with their brokers; say, orders whose size is 400 shares or less. Empirical evidence indicates that it is for this class of investors that the agency problem is most significant. Investors whose orders exceed this amount, by and large, do not appear to have them routinely misrouted.¹⁷⁵

¹⁷¹ The *Newton* court implicitly realized this when it explained that a trier of fact should consider search costs in determining whether the broker-dealers satisfied their obligation to provide best execution.

¹⁷² It has been argued that release of this information will actually result in the perverse result of sophisticated retail customers steering their orders to brokers who report the highest payments for order flow as "such customers will expect that brokers who obtain greater payoffs from market makers will be in a better position to reduce commissions . ." Shohet, Z., *An Explanation for the Anomalous Pattern of NASDAQ Quotations*, Harvard Law School Olin Working Paper 163, p.44 (1995). It is difficult to see why this would be the case if sophisticated investors, regardless of any disclosure requirements, could just check a broker's commission rate.

¹⁷³ Other commentators have focused in particular on a broker's incentive to minimize its expenditures on finding the best price for an order, regardless of an expenditure's marginal return to an investor. See Garbade, K., and W. Silber, *Best Execution in Securities Markets: An Application of Signaling and Agency Theory*, 37 JOURNAL OF FINANCE 2: 493, 496-97 (1982); see also Garbade, K., and W. Silber, *Price Dispersion in the Government Securities Market*, 84 JOURNAL OF POLITICAL ECONOMY 721 (1976).

¹⁷⁴ The NBBO refers to the highest bid or lowest offer quoted for a security – as reported on the CQS for exchange-listed securities and the NQDS for NASDAQ securities, whether it is a NASDAQ/National Market or NASDAQ Small-Cap security.

¹⁷⁵ See *supra* Part III(A).

A broker that follows the NBBO pricing option will have a powerful incentive to route small orders to the securities market offering the best possible price, perhaps a better price than the NBBO, since a failure to do so would come only at its expense. Of course, if the market offering the best possible price for a security also charged high exchange service fees, or if the benefits of the best price were otherwise economically outweighed, the broker might decide that sending the order to another securities market would be preferable. The same outcome might also occur if a broker determined that finding the market offering the best price was too expensive. In any event, brokers employing the NBBO pricing option would have the proper incentive to make the most efficient decision, as they will bear the full consequences, good and bad, that the selection of a particular securities market would entail.

Brokers who utilize the NBBO pricing option and route orders to securities markets offering the best prices would be able, as a result of the option, to offer lower commission rates than they otherwise could. Brokers that were not as effective in selecting the appropriate securities market, perhaps by accepting side payments for routing orders less than the entire price improvement available on another securities market, would have to charge higher commission rates to compensate for their shortcomings. Given the highly competitive nature of the brokerage industry, and the emphasis on low commission rates, this is likely to prove costly.¹⁷⁶ It is telling that discount brokers have been using their sizable order flow payments to help cover the cost of their commission rates.¹⁷⁷

With the resolution of brokers' conflict of interest, due to the availability of the NBBO pricing option, securities markets would no longer be rewarded by brokers for the mere fact that they offered side payments in lieu of better prices. Indeed, to the extent that prices can adjust more quickly and at less cost than side payments – the source of one of the inefficiencies created by the current incentive structure – markets will have a new reason to compete on the basis of price. Posting quotations is likely to be, as a general matter, the fastest and cheapest method for a dealer to signal the exact times at which it is able to offer a price better than those available on its auction market competitors.¹⁷⁸ Increased competition based on who can offer the best prices would also have the beneficial effect of removing the current penalty that auction markets labor

¹⁷⁶ See, e.g., Iversen, W., *On-Line Stock Trading*, FINANCIAL SERVICE ONLINE (January 1998) (“[I]f you’re [commission rate is] at \$8 and somebody else comes out with a \$6 trade, you’re in trouble.”)

¹⁷⁷ Indeed, at least one major brokerage firm is currently considering paying investors for their orders. See *Online Trading Gets More Competitive*, CYBER REVIEW (January 1, 1998) (“Ameritrade Holdings’ Chairman Joe Ricketts was quoted as saying that he was contemplating paying retail investors for their online transactions.”)

¹⁷⁸ See, e.g., Garbade, K., and W. Silber, *Best Execution in Securities Markets: An Application of Signaling and Agency Theory*, 37 JOURNAL OF FINANCE 2: 493, 500 (1982);

under as a result of their inability to offer unproductive side payments. To the extent that order flow payments, or any other broker-securities market arrangement, serve legitimate purposes, such as helping dealers realize economies of scale, rather than exploiting a broker's conflict of interest, they would continue to be offered.¹⁷⁹

If brokers using the NBBO pricing option would properly handle investors' orders so as to offer the lowest possible commission rates to small investors, this solution would appear to only aggravate the third inefficiency resulting from order flow payments identified earlier, namely that investors will not understand the full costs of trading based on merely looking at brokers' commission rates. Wouldn't commission rates become even less reflective of trading costs? The answer to this question will depend on the effect the proposal would have on the NBBO. If securities markets compete more on price and less on side payments, for the reasons previously discussed, the NBBO would become more reflective of the true market value of securities than it currently is. Commission rates would tend to rise as diverting orders to dealers and clearing them at the NBBO became less and less profitable. At the extreme, if the NBBO was perfectly reflective of market value, commission rates would be a very reliable indicator of the full cost of trading.¹⁸⁰ Ironically, brokers efforts to minimize the commissions they charge, under the NBBO pricing option, would provide additional incentives for securities markets to compete on the basis of price rather than side payments.

It seems likely that there will be some number of investors who place small orders (whether the cut-off is 400 shares or some other amount) who will have both the ability and the desire to monitor their brokers directly, instead of relying on a broker who uses the NBBO pricing option. Perhaps such investors have specific execution needs or are sophisticated traders that sometimes trade in small increments. For whatever reasons, if an investor decided that it was worthwhile to incur monitoring costs, despite the availability of merely using brokers utilizing the NBBO pricing option, then she should be able to do so.

Brokers who wish to attract the business of these types of investors could elect not to handle orders pursuant to the NBBO pricing option. In order to effectuate the NBBO pricing option proposal, with its element of investor choice, brokers should have to commit to use, or not

¹⁷⁹ For a discussion of what these legitimate purposes might be, see Part VII(A).

¹⁸⁰ Cf. Grossman, S., and M. Miller, *Liquidity and Market Structure*, 43 JOURNAL OF FINANCE 617, 628 (1988) (explaining that if a dealer merely simultaneously crossed investors' orders, much as a broker using the NBBO pricing option would simultaneously cross an investor's order with the NBBO at the time of execution, the dealer's spread would "simply be a charge by the [dealer] for executing their orders, rather than for providing them liquidity services."). Of course, for the reasons discussed in Part V, the NBBO would only become more reflective of actual market value under the proposal rather than a perfect measure.

to use, the option of clearing small orders at the NBBO for a substantial period of time. That way, it will make it clearer to investors who monitor directly, and not simply through commission rates, how their orders will be handled. The SEC can play a useful role in helping monitoring investors wisely select a broker that does not use the NBBO pricing option. The SEC should require that all brokers provide the Commission with the average price improvement they receive for investors' orders, broken down by order size as well as along other dimensions of relevant interest.¹⁸¹ The SEC, in turn, could then publicly release these statistics in a standardized format indicating how each broker performed, the price improvement achieved by the average broker, and other items of interest to investors.

While worthwhile, disclosure, by itself, will not resolve the agency problem standing alone. It is instructive that most brokers have traditionally charged a flat rate for investors' orders regardless of whether they are limit or market orders, despite the fact that limit orders are more expensive to handle.¹⁸² This is still common, even though new order execution requirements make handling limit orders even more expensive relative to market orders. Many investors apparently prefer considering a single commission rate even at the cost of paying higher prices than they would otherwise have to pay if there were separate commission rates for market and limit orders. Even the most user-friendly disclosure statements are more difficult to understand than comparing commission rates.

Small investors who do not want to, or cannot, monitor brokers' choices of securities markets can safely select brokers based on their commission rates, probably much as they already are doing. Brokers who utilize the NBBO pricing option, and therefore have no incentive to mishandle orders, will tend to have lower commission rates, to the extent that the NBBO is not fully reflective of a security's true market value, than brokers who do not. Any advantages enjoyed by brokers as a result of using the NBBO pricing option will likely accrue to the ultimate benefit of their investors.¹⁸³

The NBBO pricing option, and its disclosure regime, would be a fairly inexpensive solution to the agency problem. The requirement that a broker who uses the NBBO pricing

¹⁸¹ Other useful information could include classification of price improvement statistics by prevailing bid/ask spread and primary listing market as well as data on time of submission, average time to fill, and security size. See Harris, L., *Economics of Best Execution*, University of Southern California Working Paper, p.10 (1997).

¹⁸² See Harris, *infra*, at 8.

¹⁸³ See generally Harris, L., *Consolidation, Fragmentation, Segmentation, and Regulation in GLOBAL EQUITY MARKETS: TECHNOLOGICAL, COMPETITIVE, AND REGULATORY CHALLENGES* 269, 286-290 (1995); see also Battalio, R., and C. Holden, *Why Doesn't Decimal Trading Eliminate Payment for Order Flow and Internalization*, Indiana University Working Paper, pp. 4-5 (1997) (discussing evidence that brokers do lower commissions as a result of order flow payments).

option actually provide the NBBO at the time of order execution is easily verifiable. Nor are the disclosure requirements likely to be very burdensome. Presumably most brokers already keep price improvement statistics for their own self-evaluations.¹⁸⁴ The ITS trade-through prohibitions as well as the application of the duty of best execution to brokerage routing decisions would no longer be necessary. Rather, investor protection would be provided through competition. Securities markets would compete with each other in providing the most attractive execution for the orders investors place with brokers.¹⁸⁵

B. The Problem of Inter-Market Fragmentation

Conflict of interests issues aside, some are likely to still be concerned over the fragmentation of order flow across several different securities markets.¹⁸⁶ There is a school of thought that all order flow in a security should be concentrated in one trading venue.¹⁸⁷ The proposal would only partially address these concerns over order flow fragmentation. It would reduce the problem given that its likely effect is to allow the NYSE to capture more of the order flow in its listed stocks given the greater price improvement opportunities that are usually present there. Fragmentation of order flow in NYSE-listed stocks has been especially significant in the market for small orders. Nevertheless, significant inter-market fragmentation of order flow would undoubtedly still exist after the proposal's implementation.

In considering this concern, it should be pointed out that competition between markets for order flow was anticipated and approved by Congress when it was amending the securities laws in 1975.¹⁸⁸ Securities markets competing for order flow inevitably means inter-market order flow fragmentation. Congress' policy has merit. Concentrating order flow in one market

¹⁸⁴ Current good business practice by brokers normally includes compiling and examining one's price improvement statistics on an on-going basis. See SEC, REPORT ON THE PRACTICE OF PREFERENCING 47 (1997).

¹⁸⁵ See generally Mahoney, P., *Exchange as Regulator*, 83 VA. L.REV. 1453 (1997) (explaining the general benefits resulting from exchange competition).

¹⁸⁶ See Note, *The Perils of Payment for Order Flow*, 107 HARV. L. REV. 1675 (1994) (pointing out that a number of commentators have argued that inter-market fragmentation can reduce liquidity, increase volatility, and impair price discovery). Reducing inter-market fragmentation has been a focal point of securities regulation since at least the SEC's 1972 Statement on the Future Structure of the Securities Markets, 37 F.R. 6286, identifying this as a major concern. Many continue to be concerned. See, e.g., GAO, SEC ACTIONS NEEDED TO ADDRESS MARKET FRAGMENTATION ISSUES (1993).

¹⁸⁷ See, e.g., Peake, Mendelson, and Williams, *Black Monday: Market Structure and Market-Making*, in THE CHALLENGE OF INFORMATION TECHNOLOGY FOR THE SECURITIES MARKETS 159-199 (1989) (arguing for consolidation of all order flow into an electronic auction system). In France, a security may be listed and traded on only one of the seven French exchanges. See Stoll, H., *Principles of Trading Market Structure*, 6 JOURNAL OF FINANCIAL RESEARCH 75, 97 (1992).

center would tend to reduce competitive pressures to innovate. Markets competing for order flow in NYSE-listed securities has had a beneficial effect in forcing the NYSE to adopt new technologies and trading practices. Competing markets have also served investors by catering to the needs of particular types of traders, needs that would not necessarily have been satisfied if there were only one market. Moreover, there is a real limit to the extent to which the SEC, putting aside the question of Congressional intent and regulatory authority, can force order flow into one locale. Investors will still have the option of moving their trades overseas or purchasing stock derivatives through which they can readily replicate stock positions.

More to the point, the debate over the appropriate amount of order flow consolidation is really a much more general debate than the agency problem created by certain forms of nonprice dealer competition for order flow. One can be worried about the agency problem these forms of dealer competition create without having to commit oneself to a particular position on this more general issue. Only specific claims about how nonprice dealer competition for order flow aggravates problems associated with inter-market fragmentation need to be considered in evaluating a proposed solution to the agency problem.¹⁸⁹

There has been one such concern that has often been expressed in the debate over diversion of order flow to dealers. If payment for order flow and internalization are mechanisms for ensuring that dealers trade only against investors without any private information about the likely future value of securities (uninformed investors) and hence capture the most profitable portion of exchange-listed order flow, *i.e.*, "cream-skimming", a proposal which did not address this segregation would be a cause for criticism. Dealer cream-skimming is problematic if auction markets, like the NYSE, can not also segregate informed and uninformed order flow much as they can not provide order flow payments or complete internalization of order flow. The result of an auction market's inability to segregate would be its having to charge a larger spread than a dealer in order to account for the increased probability of trading against an informed investor.¹⁹⁰ The loss of uninformed order flow would force the NYSE, among others, to further increase their spreads making cream-skimming even more attractive. Diversion of uninformed order flow

¹⁸⁸ Congress instructed the SEC to ensure "fair competition *between . . . dealers and between market centers.*" 15 U.S.C. s 78k-1(a)(1)(C) (emphasis added).

¹⁸⁹ See Macey, J., and M. O'Hara, *The Law and Economics of Best Execution*, 6 JOURNAL OF FINANCIAL INTERMEDIATION 188, 206 (1997) (pointing out that "the goal of best execution for the individual order need not be compatible with the broader goal of best execution for the market")

¹⁹⁰ For a succinct presentation of this concern, see Coffee, J., Comment on *Competition, Fragmentation, and Market Quality*, in THE INDUSTRIAL ORGANIZATION AND REGULATION OF THE SECURITIES MARKETS 81-83 (1996).

would beget further segregation in a reinforcing cycle resulting in the continued deterioration in the quality of auction market spreads.

While this is theoretically possible, it is unclear whether this is actually occurring for several reasons. It is worth emphasizing that it is difficult to determine whether small orders are being diverted to dealers due to cream-skimming or because they are placed by small investors who do not monitor execution quality. This is because non-monitoring investor also tend to be uninformed investors. The empirical evidence is mixed as to whether the NYSE's competitors are competing primarily by attracting a "safer" uninformed order flow. Studies have shown that price discovery generally takes place on the NYSE which suggests that informed order flow is primarily sent there for execution.¹⁹¹ More specifically, one study has found that the informational content of orders cleared on the Cincinnati Exchange is significantly lower than orders on the NYSE.¹⁹² On the other hand, as Professor Coffee has pointed out, some empirical research indicates that informed trades are concentrated in medium-sized orders. This is interesting because these sized orders are an area where the regional exchanges have been particularly successful in attracting order flow away from the NYSE through price competition.¹⁹³ Another study found that when Madoff Investment Securities, by far the largest third market dealer,¹⁹⁴ begins to offer payments for order flow in a particular stock, the stock's spread actually decreases.¹⁹⁵ This is the opposite of what one would expect according to the cream-skimming hypothesis.

The contention that dealers are primarily competing by cream-skimming is undercut by the fact that third market trading is concentrated in the 400 most actively traded NYSE- and AMEX-listed securities. It is important to realize that an increase in the probability of informed trading does not have the same importance to a dealer in actively traded stocks as it does for a dealer in less frequently traded stocks. In a heavily traded stock, a dealer is able to offset any

¹⁹¹ See, e.g., Hasbrouck, J., *One Security, Many Markets: Determining the Contribution to Price Discovery*, 50 JOURNAL OF FINANCE 1175-1199 (1995) (between 80 and 90 percent of all price discovery occurs on the NYSE); Harris, F., T. McNish, G. Shoesmith, and R. Wood, *Cointegration, Error Correction and Price Discovery on Informationally Linked Security Markets*, 30 JOURNAL OF FINANCIAL AND QUANTITATIVE ANALYSIS 563 (1995) (similar results).

¹⁹² See Easley, D., N. Kiefer, and M. O'Hara, *Cream-skimming or Profit-Sharing? The Curious Role of Purchased Order Flow*, 51 JOURNAL OF FINANCE 811-834 (1996) (finding that the probability of informed trading on NYSE was 44% higher than on the Cincinnati Exchange).

¹⁹³ See Coffee, J., Comment on *Competition, Fragmentation, and Market Quality*, in THE INDUSTRIAL ORGANIZATION AND REGULATION OF SECURITIES MARKETS 82-83 & n.5 (1996) (pointing out that some empirical research indicates that informed trades are primarily medium-sized orders, where regional exchanges have been very successful).

¹⁹⁴ Trades by Madoff Investment Securities accounted for 10% of all trades in NYSE-listed stocks in 1991. See FORBES, January 6, 1991.

position, whether acquired from informed or uninformed traders, by quickly trading against the constant incoming stream of buy and sell orders. For less frequently traded stocks, a dealer will have to charge a higher spread given the increased length of time it must hold a position acquired from a possibly informed trader. This increases the likelihood of the market incorporating the previously private information during the period the dealer holds the stock resulting in dealer losses.¹⁹⁶ Empirical studies have documented that losses from informed traders are significantly more important in determining dealer spreads for inactively traded stocks as compared to ones with more trading volume.¹⁹⁷ Accordingly, cream-skimming, ensuring that one trades only against uninformed investors, is likely to be a much more profitable strategy in the least frequently traded stocks.

Even assuming that dealers are currently competing by cream-skimming, it is questionable whether exchange specialists and floor brokers cannot similarly offer better prices for orders they believe are uninformed once they are sent to the floor for execution. Some commentators have suggested that specialists also have the ability to discriminate in their pricing, much as over-the-counter dealers, between informed and uninformed orders.¹⁹⁸ If this is true, then under the regime established by the proposal, a broker will not have an incentive to send her uninformed order flow to dealers as opposed to an auction market, such as the NYSE, which can similarly offer prices reflecting an order's likely informational content.

The bottom line is that it is very difficult to tell, at the present time, whether dealers are (a) currently competing through cream skimming and rebating back to brokers part of the profits from this strategy; (b) whether auction market participants, such as specialists and floor brokers, cannot also adjust their prices once an order is sent to an exchange based on its likely informational content. If either of these are not the case, then the proposal would probably adequately deal with a dealer's incentive to trade against only uninformed traders. The present proposal at least partially addresses cream skimming concerns by providing a greater incentive than currently exists to direct small orders, which are often placed by uninformed investors, to auction markets.

¹⁹⁵ See Battalio, R., *Third Market Broker-Dealers: Cost Competitors or Cream Skimmers?*, 52 JOURNAL OF FINANCE 341-352 (1997).

¹⁹⁶ See Grossman, S., and M. Miller, *Liquidity and Market Structure*, 43 JOURNAL OF FINANCE 617, 629 (1988).

¹⁹⁷ See Easley, D., N. Kiefer, M. O'Hara, Paperman, *Liquidity, Information, and Infrequently Traded Stocks*, JOURNAL OF FINANCE 1405 (1996) (finding that infrequently traded stocks have significantly larger spreads than actively traded ones due to informationally motivated trading).

¹⁹⁸ See, e.g., Rock, K., *The Specialist's Order Book*, Working Paper, Harvard Business School (1991); see also Huang, R. and H. Stoll, *Competitive Trading of NYSE Listed Stocks: Measurement and Interpretation of Trading Costs*, 5 FINANCIAL MARKETS, INSTITUTIONS & INSTRUMENTS 35-42 (1996) (providing evidence of this).

C. Other Possible Objections to the Proposal

Perhaps the best way of evaluating any proposal is to consider the most powerful objections to it. There are at least three likely criticisms of the proposal as a solution to the brokers' conflict of interest in selecting a securities market: (1) the proposal presupposes that price is the only consideration; (2) brokers will be forced to shoulder unwanted price risk; and (3) the proposal will actually render the NBBO less reflective of true market value than it already is.

1. Price is Not Everything - As the discussion in Part II(A) pointed out, price is not necessarily everything. In particular, while dealer markets may not always offer the same price improvement opportunities as auction markets, dealers provide a service that markets do not, immediate execution of orders. This enables investors to quickly establish a position at the prevailing market price before it changes. If small investors want immediacy, even at the cost of price improvement opportunities, then the proposed regime will not necessarily be superior. Orders that are currently being filled by dealers might be sent to the NYSE as a result of this proposal, even where investors would prefer to lock-in the prevailing market price.

Several points can be made in response to this concern. The vast majority of small investors probably care primarily about getting the best possible price.¹⁹⁹ The reasons that often lead investors to be willing to pay for immediacy, arbitrage opportunities, intermarket hedging, and short-lived private information concerning a security's future value,²⁰⁰ are typically important for only fairly sophisticated investors who can ensure that they receive the brokerage services that they need. The relative speed of execution, moreover, of small orders routed to dealer and auction markets is often not large. For example, SuperDOT orders are filled, on average, within 24 seconds.²⁰¹ Some dealers' execution of orders are also not immediate. Madoff Investment Securities, for example, exposes market orders to other markets for 30

¹⁹⁹ See, e.g., Black, B., Comment on *Transaction Costs in Dealer Markets: Evidence from the London Stock Exchange*, in *THE INDUSTRIAL ORGANIZATION AND REGULATION OF SECURITIES MARKETS* 173 (1996) ("The SEC could require brokers to offer clients an explicit choice: faster execution or the possibility of a better price. My bet: the vast majority of small investors would opt for a better price.")

²⁰⁰ See *supra* Part II(A).

²⁰¹ This is the time reported by the NYSE. The actual time is probably longer than 24 seconds since the NYSE measures the time between the arrival of an order on the floor and the reporting of the order's execution to the broker. Tellingly, many index arbitrageurs, who usually need to quickly establish their positions, rely on SuperDOT for their trades. See Benveniste, Marcus, Wilhelm, *What's Special about the Specialist?*, 32 *JOURNAL OF FINANCIAL ECONOMICS* 61, 85 n.15 (1992).

seconds, in an attempt to obtain a better price, before executing the order itself.²⁰² Small investors for whom the delay associated with auction market executions is too long always have the option of submitting marketable limit orders. Marketable limit orders are orders whose limit price is the current prevailing market price. By placing such orders, these investors can ensure that they receive the current market price while still enabling the average small market order investor to receive the best possible price for her order.

2. Inefficient Transfer of Price Risk - Another possible objection is that the proposal forces brokers to bear the risk that an order does not receive the expected price improvement instead of the security holder. A broker will have to set its commission rate in light of expected price improvement opportunities which could turn out to be inaccurate. If the broker is not the most efficient bearer of this risk, the proposal could result in sub-optimal shifting of risk.

This is unlikely to be a significant problem. It is improbable that brokers will have to bear much risk as a result of having to set its commission rates before knowing which orders actually receive price improvement over the NBBO. A broker will only have to estimate the average price improvement for a very large number of orders. While it might be uncertain whether a particular order will enjoy price improvement, this does not mean that there is substantial uncertainty as to what the average price improvement will be for hundreds of thousands of orders.²⁰³

Moreover, even if it turns out that brokers are being forced to bear unwanted price risk, there are market mechanisms which will enable them to shift the risk to another party. Indeed, the most obvious example is the typical payment for order flow agreement where a broker is guaranteed the NBBO plus a fixed payment per share.²⁰⁴ In any event, brokers always have the option of not utilizing the NBBO pricing option.

²⁰² For some anecdotal evidence see *Newton*, 911 F.Supp. 754, 765 (D.N.J. 1995) (describing an order that took six minutes to be executed measured from the time it was placed with the dealer while another order took seventeen minutes before it was executed by a dealer).

²⁰³ See Peterson, M. and D. Fialkowski, *Posted Versus Effective Spreads: Good Prices or Bad Quotes?*, 35 JOURNAL OF FINANCIAL ECONOMICS 287 (1994) (providing figures on both the average effective NYSE spread and NBBO price for orders less than 400 shares with 99% confidence intervals of less than half a cent around the mean).

²⁰⁴ This arguably also results in inefficient risk shifting as dealers will have to be compensated, ultimately at the expense of investors, for the risk they are bearing by having to set payments for order flow on the basis of predictions about future NBBO spreads and trading costs. See Shohet, Z., *An Explanation for the Anomalous Pattern of NASDAQ Quotations*, Harvard Law School Olin Working Paper 163, p.24-25 (1995). However, these payment for order arrangements can also allow dealers to realize economies of scale and reduce brokerage search costs. See *infra* Part VII(A).

3. Will Render the NBBO Less Reflective of True Market Value - Given the importance of the NBBO under this proposal, some might be concerned that market participants will have even more of an incentive not to express their actual trading interest on the CQS or the NQDS. Specifically, a broker-dealer who is considering whether to improve upon the NBBO, one might argue, will now have to consider the costs this will impose on its brokerage business as the size of the expected price improvement, which could now be retained by the broker, will be reduced by an improved NBBO. If the broker-dealer as a result of its desire to have the expected price improvement as large as possible decides not to improve on the NBBO, the NBBO will become even less accurate than it already is under this proposal. Investors will end-up with less information about the true value of the securities they hold or wish to buy, a worrisome development.

Perhaps the easiest response to this possibility is to point out that a similar incentive already exists under the present regime. Broker-dealers who automatically execute order flow at the NBBO have an incentive not to improve upon the CQS or NQDS as they will also have to provide the improved NBBO to their customers. This incentive also currently exists for dealers who receive order flow from brokers pursuant to order flow agreements which typically only require that orders are filled at the NBBO.²⁰⁵

This aside, to the extent that non-vertically integrated dealers currently set the NBBO, the NBBO would remain as (in)accurate as it is now. Dealers who are not affiliated with any broker will be unconcerned with the effect improved NBBOs, and hence smaller expected price improvement opportunities, will have on brokerage profits associated with handling small investors' market orders. In addition, whenever a dealer or specialist is handling a limit order, which improves upon its NBBO quotation or size, they have no choice, regardless of what they would want to do, but to reflect the limit order in their posted NBBO price.²⁰⁶

²⁰⁵ Suppose the NBBO is a bid of \$10 and a broker-dealer, whose brokerage division has 800 sell orders each for one share, is considering whether to post a bid of \$10 1/8 on the CQS where the expected price improvement on the NYSE is \$1/2 for small market sell orders. If the broker-dealer under the proposed regime posts the improved price, it will suffer an expected loss of \$100 (1/8 * 800). Under the present system, a broker-dealer who clears internal order flow at the NBBO will suffer the same loss, \$100 dollars, by posting an improved NBBO.

²⁰⁶ See SEC, Order Execution Obligations, Exchange Act Release No. 34-37619A (September 6, 1996). Most price discovery for NYSE-listed stocks takes place on the NYSE suggesting the best CQS quotation often reflects investors' limit orders.

VII. COMPETING REFORM PROPOSALS: A CRITICAL APPRAISAL

A. *Banning Payment for Order Flow*

Banning order flow payments, the most draconian of the three popular reform proposals, has a great deal of support in common-law principles of agency which generally require not only disclosure but a principal's consent before an agent may enjoy any profits arising from the principal-agency relationship.²⁰⁷ Given the difficulty of receiving *ex ante* consent from each investor, this common-law requirement could result in the effective prohibition of the practice.²⁰⁸ For similar reasons, some have argued that payments for order flow are bribes or kickbacks, which are illegal under most state commercial bribery statutes,²⁰⁹ and even RICO.²¹⁰

While it might be easy to prohibit monetary payments, it would be much more difficult to stop nonmonetary payments and impossible to deal with the likely consequence of such a prohibition, increased internalization where no payments need be made. This is already happening under the much more lenient disclosure regime now in place. In response to the SEC's disclosure requirements, Charles Schwab is purchasing dealer subsidiaries apparently so it can state to its customers that it does not accept payments for order flow.²¹¹ Incentives to vertically integrate would be greatly augmented by a flat prohibition on side payments.

Regardless of whether the proposal is practical or not, it ignores the fact that order flow payments can serve legitimate purposes. It encourages brokers to send order flow in bulk, enabling dealers to realize economies of scale in making a market for a security.²¹² Tellingly, order flow agreements almost always specify that the broker, in order to receive any

²⁰⁷ See Restatement (Second) of Agency, s 388 ("Unless otherwise agreed, an agent who makes a profit in connection with transactions conducted by him on behalf of the principal is under a duty to give such profit to the principal.") This principle has been applied to broker "give-ups," a practice whereby a broker shares a portion of its money market commissions with another party in accordance with the money manager's wishes. See, e.g., *Arthur Lipper v. SEC*, 547 F.2d 171 (2d Cir. 1976) (Judge Friendly).

²⁰⁸ See, e.g., *Dahl v. Charles Schwab*, 545 N.W.2d at 925 ("For Schwab to fully comply with these state agency law requirements, it would need to be able to ascertain the exact amounts of these profits in order to seek its clients' consent. [C]ompliance with the potential consent requirement of Minnesota law might put an end to the practice of order flow payments.").

²⁰⁹ See *Frank Evangelist v. Fidelity Brokerage Services, Inc.*, 637 N.Y.S. 2d 392 (N.Y. App. Div. 1996) (alleging violation of state commercial bribe statute); Letter from Andrew W. Klein, Esq., Schiff Hardin & Waite, to Jonathan G. Katz, Secretary, SEC (July 5, 1990) (arguing order flow payments violate various state commercial statutes).

²¹⁰ Payments could be considered part of an illegal "scheme to defraud" small investors.

²¹¹ See Harris, L., *The Economics of Best Execution*, University of Southern California Working Paper, p.8 (March 15, 1996)

²¹² Along these lines, some have argued that payments for order flow, in part, are due to the "pooling efforts of the broker and resides in a flow or group of orders from investors." NASD Letter to Jonathan Katz, Secretary, SEC (August 31, 1990) (File No. SR-NASD-90-22) p.4.

compensation, must route to the dealer a large minimum number of orders, usually at least 100,000 orders a month.²¹³ This practice, for obvious reasons, can also reduce brokerage search costs. Finally, side payments have also served as a way for the NYSE's competitors to get the attention of brokers who have traditionally sent their order flow to the NYSE.²¹⁴ Under the proposal advocated in this paper, it is worth pointing out, dealers could still offer side payments to brokers in order to realize these potential benefits.

B. Decimalization

Perhaps the most popular regulatory recommendation is "decimalization" which would enable markets to quote on the CQS spreads in increments of 1/100 of a dollar instead of the current tick of 1/8.²¹⁵ Supporters of this proposal analogize the minimum tick requirement to a fixed commission regime, *i.e.*, requiring quotations to be stated in rigid increments is a form of price fixing. A minimum tick regime prevents more efficient markets from attracting order flow by offering superior prices within the tick. As was the case with the NYSE's fixed commission regime, various ways of circumventing this artificial constraint have arisen. Payments for order flow is one such avenue. Suppose the spread, as determined by market forces, would be \$1/16 but a dealer is forced to quote in increments of \$1/8. A dealer could offer a spread of \$1/8, the minimum spread it is able to offer, as well as a payment to a broker for order flow of \$1/16. The willingness to make such payments is a direct result of the inability to merely post the spread the dealer would offer in the absence of the minimum tick requirement. Abolish the tick rules, some believe, and the incentive to make payments for order flow will disappear.²¹⁶

Whether decimalization is an unmitigated benefit, as some of its more enthusiastic advocates suggest, is not so clear. A reduction in the minimum tick can, for a variety of reasons,

²¹³ See NASD, A Report to the Board of Governors, INDUCEMENTS FOR ORDER FLOW 15-16 (1991)

²¹⁴ See Coffee, J., *Order-Flow Payments Get New Scrutiny*, NAT. L.J. 16, 18 (July 19, 1993) (explaining that paying for order flow was "probably the only way [Madoff Investment Securities] could gain the attention of the brokerage community").

²¹⁵ See, *e.g.*, Peake, J., *Brother, Can You Spare A Dime? Let's Decimalize the U.S. Equity Markets!*, in GLOBAL EQUITY MARKETS : TECHNOLOGICAL, COMPETITIVE, AND REGULATORY CHALLENGES 302, 328 (1995); Chordia, T., and A, Subrahmanyam, *Market Making, the Tick Size and Payment for Order Flow: Theory and Evidence*, 68 JOURNAL OF BUSINESS 4, 543 (1995); Hart, M., *Decimal Stock Pricing: Dragging the Securities Industry into the Twenty-First Century*, 26 LOY. L.A. L. REV. 843 (1993); Coffee, J., *Will Reform Alter Order-Flow Payments?*, NAT. L.J. 16 (July 26, 1993) ("The best solution may be the most theoretical: a shift to decimal pricing."); Coffee, J., *Brokers and Bribery*, N.Y. L.J. 5 (Sept. 27, 1990) ("[T]he longer-term solution is the 'decimalization' of securities trading.").

²¹⁶ See, *e.g.*, Peake, *infra*, at 328 ("The practice of offering cash inducements for order flow will most probably vanish.")

reduce the liquidity and transparency of a securities market. Empirical studies of markets that have reduced their minimum ticks have documented that there is reason for concern.²¹⁷ It is fair to say that whether decimalization of the U.S. securities markets will have a net beneficial impact is a complicated and contested question. However, whether decimalization will have detrimental side effects is really besides the point. Decimalization, for better or worse, is being phased in.²¹⁸

The relevant question is whether decimalization will eliminate the misalignment of investor and broker interests obviating the need for further regulatory action. The answer to this question is probably no. While the minimum tick rules undoubtedly contributed to the ineffectiveness of the CQS system in reflecting current trading interest, it is certainly not the only factor as the earlier discussion has shown.²¹⁹ Moreover, since dealer markets do not enforce time priority, as auction markets usually do, the size of the minimum tick is much less likely to change dealer practices, especially in NASDAQ securities which tend to be traded only over-the-counter.²²⁰ Interestingly, reduction of minimum ticks in auction markets has not typically resulted in less internalization.²²¹

C. Midwest Stock Exchange's Proposed Rebate Scheme

The Midwest Stock Exchange (now Chicago) in a petition for rulemaking²²² proposed that brokers be required to rebate any payments for order flow they receive to investors' brokerage accounts. The SEC has wisely rejected the proposal.²²³

Crediting investors' accounts with the payments received by a broker would be unworkable. Uniform procedures for estimating the value of nonmonetary payments, such as the sharing of investment research or a dealer ensuring that a broker can participate as an underwriter in an up-coming public offering, would have to somehow be established. Moreover, the rebate

²¹⁷ For a good summary of the issues involved see Harris, L., *Decimalization: A Review of the Arguments and Evidence*, University of Southern California Working Paper (April 3, 1996).

²¹⁸ See *NYSE Approves Plan to Use Decimals*, THE EXCHANGE (June 1997).

²¹⁹ See *supra* Part V(A).

²²⁰ See Harris, L., *Decimalization: A Review of the Arguments and Evidence*, University of Southern California Working Paper p.1 (April 3, 1996) (explaining that the lack of time priority rules in the dealer markets implies that "decimalization is [] unlikely to have much effect on payment for order flow or order preferencing in dealer markets").

²²¹ There was no observed decrease in internalization after the Toronto Stock Exchange reduced its tick. See Porter and Weaver, "Decimalization and Market Quality," Marquette Working Paper (1997); Ricker, "Decimalization," Working Paper (1997). The same is true following the reduction in AMEX's minimum tick. See Ahn, Cao, and Choe, *Tick Size, Spread and Volume*, 5 JOURNAL OF FINANCIAL INTERMEDIATION 5 & n.15 (1996).

²²² See Exchange Act Release No.34-33026 (1993).

²²³ See Exchange Act Release No. 34-34902 (1994).

scheme would run into the difficulty that payments for order flow are often deferred creating the possibility that some investors would no longer have an account with the broker when payments for order flow are actually received. Even assuming these difficulties were surmountable, a broker could circumvent a mandatory rebate scheme, if it wanted to, through internalization. This raises, in turn, the general point that any rebate scheme would have great difficulty in treating even-handily all the different ways dealers can share profits with brokers, whether it is through payments or internalization. To attempt to construct a rebate regime that could do this would be, at best, very burdensome.

Putting aside its administrative difficulties, a rebate scheme would still be a poor solution to the agency problem. The Midwest Stock Exchange's proposal rests on the assumption that payments are not already being "rebated" to investors through lower commissions which is improbable. Erecting a complicated mandatory rebate scheme to displace market forces already at work would likely only create costs without any offsetting benefit. More fundamentally, the proposal suffers from the same basic shortcoming that the current SEC disclosure requirements do. An investor needs to know not only the size of the rebate a broker is offering but the value of the foregone price improvement. If an investor does not have this information, a rebate scheme would do little to encourage brokers to send order flow to auction markets who are incapable of providing the payments that would then be rebated to investors' accounts.

VIII. CONCLUSION

Justice Harlan Fiske, over sixty years ago, famously asserted after the Crash of 1929 that "most of [the financial industry's] mistakes and its major faults will be ascribed to the failure to observe the fiduciary principle, the precept as old as holy writ, that 'a man cannot serve two masters.'"²²⁴ Even if this is an overstatement, there is still more than a kernel of truth to this. While investor sophistication has undoubtedly increased over the last sixty years, the complexity of the securities markets and the choices facing investors' agents has also grown. Agency problems, and their proper regulatory treatment, will continue to constitute an important set of issues in securities regulation.

²²⁴ *Address on the Public Influence of the Bar*, 37 CAL.L. REV. 539, 555 (1949).