Much Ado About Order Flow

How should regulators respond to "side" payments made by markets to brokers?

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In the last quarter of a century, there has been a remarkable — and much needed — shift in public policy towards deregulation in a host of areas. The wholesale revision and discarding of unnecessary regulations has occurred in industries ranging from trucking and airlines to the production and distribution of natural gas. Equally important (although not as widely appreciated), there has been a noticeable increase in the reluctance to impose new regulatory requirements on various sectors of the American economy.

How have the securities markets fared in the move toward deregulation? Few industries would appear to be more competitive, fast moving, and innovative than today's financial markets. Yet, during the last 25 years, there has been a marked increase in the regulation of the very structure of those markets. The regulatory initiatives are almost wholly removed from traditional concerns over fraud, misrepresentation, and nondisclosure in the financial markets. Rather than protecting the uninformed and naive, the new frontier in securities regulation is concerned with shaping the internal structure of securities markets and the relationship between those markets. In other words, regulators are now in the business of mandating how securities markets should be set up and how competing markets should interact with each other. As a result, the Securities and Exchange Commission routinely needs to address such issues as what prices securities markets can charge other markets for data (such as stock quotations), what types of nonprice competition between securities markets will be permitted, and which systems should be in place for routing investors' orders between securities markets.

Among the many practices now under SEC scrutiny is that of some markets offering "side" payments to brokers in exchange for brokers routing investors' orders to them. The practice is referred to as "payment for order flow." The payments range from cash (usually in the range of one to three cents for each stock trade routed) to in-kind payments, such as overlooking settlement errors for which the broker would normally be liable.

The practice of paying for order flow has exploded in the last 15 years and, as a result, the SEC has become increasingly concerned over whether investors are being well served by brokers who receive them. To put things more crassly, the SEC is worried that order flow payments are the equivalent of kickbacks to brokers in return for not sending investors' orders to the securities market offering the most competitive price.

Given the competitive landscape of securities trading and our nascent knowledge of market microstructure, regulators who are examining the practice of order flow payments would be well served to adopt the Hippocratic Oath's injunction of "First, do no harm." In operational terms, competition between securities markets should be presumed to resolve market microstructure issues satisfactorily, unless compelling evidence suggests otherwise. In the case of payments for order flow, the evidence suggests that the practice may benefit investors by making it easier for them to judge broker performance. What is more, the practice may indicate the need for less SEC regulation of securities markets, not more. To understand why that may be the case, we must examine why order flow payments occur and what effects they have on brokers and investors.

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DIFFERENT MARKETS

Most investors' orders (especially those from individual investors) are routed to securities markets through brokers. In return for a commission, a broker will either buy or sell securities on the investor's behalf. For many stocks, especially the more actively traded New York Stock Exchange (NYSE) and NASDAQ securities, there are a number of trading venues that the broker can choose from for execution of an investor's order. There are the NYSE and American Stock Exchange, regional exchanges, proprietary trading systems (such as Instinet), foreign exchanges, and competing NASDAQ dealers. For instance, for many NASDAQ securities, there often are upwards of 11 competing dealers to which a broker can send an investor's order for execution, as well as a number of proprietary trading systems that create markets in NASDAQ securities.

Auction and dealer markets Perhaps the most fundamental choice facing a broker is whether to send an investor's order to an auction market or a dealer market. Auction and dealer markets represent two very different ways of structuring a securities market. Both types of market have long co-existed, often offering execution services in the same security at the same time. An auction market is a market in which investors' orders are matched according to that market's trading rules. An investor wishing to sell 100 shares of IBM, for instance, might end up selling his shares in an auction market to another investor who wishes to buy 100 shares of IBM. In a dealer market, however, investors do not trade with each other but with a dealer that maintains its own portfolio of stocks. A security's "spread" — the difference between the offer and bid price — compensates a dealer for its intermediation services.

In practice, the distinction between auction and dealer markets often becomes blurred. The NYSE, which is considered the paradigmatic auction market, also provides intermediation services through the institution of the NYSE specialist. Similarly, the NASDAQ marketplace is not a pure dealer market, given the ability of investors to display their limit orders — orders for which investors have specified a price at which they are willing to sell or buy stock — in dealers' quotations. As a result, investors' orders, as in auction markets, can directly interact without dealer intermediation. Nevertheless, the distinction remains an extremely important one. The NASDAQ market, in comparison to the NYSE, provides for far more dealer intermediation.

NYSE vs. NASDAQ Competition between auction and dealer markets — NASDAQ and the NYSE in particular — has been fierce. As E*Trade's recent high profile decision to switch from being listed on the NASDAQ to the NYSE vividly demonstrates, the two markets compete relentlessly on listing companies. Less appreciated by the public, NASDAQ dealers and the NYSE also compete on attracting order flow. For many of the most actively traded NYSE securities, brokers have the option of routing investors' orders not to the NYSE, but to a NASDAQ dealer who makes a market in that security. That is the so-called "third market" in NYSE-listed securities. And NASDAQ is not the only dealer competitor to the NYSE. Dealer specialists on the regional exchanges, broker-dealer firms internalizing order flow (i.e., firms that own brokers and dealers, thus enabling trade execution to occur without the orders ever going out to an open market), and dealers on foreign exchanges all represent competitive threats to the NYSE. As one would expect, dealer and auction markets also compete fiercely with each other for order flow.

ROUTING INVESTORS' ORDERS

To assess possible inefficiencies in brokers' routing of investors' orders to securities markets, we must answer two questions:

- How does a broker decide where to send an investor's order for execution? Or, to ask the same question from a different perspective, how do securities markets compete for investors' orders from brokers?
- Where should a broker send an investor's order for execution?

By answering those questions, we can better analyze the practice of offering payments for order flow.

Where to send an order? A broker's decision on where to send an investor's order depends on how brokers compete for investors' business. To a significant extent, brokers compete on the basis of commission rates. Fortunately, commission rates — even for the smallest of investors — are easy to compare. Since the abolition of fixed rates in 1975, commissions have steadily and dramatically declined. In the last 20 years, NYSE members' securities commissions as a percentage of total revenue have declined by some 70 percent. What is more, competition on the basis of providing the lowest commission rates has intensified in the last few years with the arrival of online brokers. Many online brokers, with great fanfare, charge only a few dollars per trade. As a result, well-established brokers with an impressive client base, such as Charles Schwab and Merrill Lynch, have been forced to slash commission rates to remain competitive.

Price improvement In sharp contrast to commission rates, other aspects of brokerage performance are much more difficult for the typical investor to assess. In particular, it is a daunting task for an investor to determine whether a broker has done the best possible job on his behalf when it comes to trade execution. Indeed, many investors are not even aware that it is possible to improve upon the NBBO (National Best Bid and Offer) prices — the prices that are posted publicly and disseminated by the securities markets (and reproduced in such places as the *Wall Street Journal* and online quotation services).

If an investor wants to know if he received the best possible price for his stock, it is impossible for him to do so merely by checking the NBBO. An investor's order, regardless of which broker happens to handle it, is always filled at a price at least as good as the NBBO at the time of execution. The central issue for measuring a broker's quality of execution is whether he could have achieved a price better than the NBBO price at the time of execution. In other words, was there an opportunity for price improvement over the NBBO?

An investor would need to be tremendously well informed in order to answer that question. For one thing, he would need to know what opportunities for price improvement existed on each security market. Suppose, for instance, the broker sent an investor's order to a dealer for execution. It would be important to know whether the broker could have gotten a better price for the order on, say, the NYSE. To learn that, the investor would need to know, among other things, what the probability was that the order would have received price improvement if it had been sent to the floor of the NYSE.

That is vital information because a significant percentage of orders routed to the NYSE receive price improvement. One study found that, for orders involving less than 400 shares, 60 percent of all NYSE stock trades that occurred when the NBBO spread was one-quarter of a point were executed within the NBBO spread. In contrast, for the same time period and order size, only 38 percent of trades were executed within the spread when sent to the third market. That means that better prices were offered on the NYSE for small investors' orders, when compared to NASDAQ, a significant percentage of the time. Other studies have substantiated those findings, demonstrating that the NYSE, when executing small orders (at least under a broad range of circumstances), often offers prices better than the NBBO or what is available on the NASDAQ market. What is more, other markets may offer price improvement opportunities for a particular security that are better than the NYSE. How can an investor monitor whether his broker is taking advantage of all such opportunities?

Costs Not only will an investor have to assess broker success in obtaining price improvement, but also whether those improvements offset the costs of trading in the various markets. There are several different possible costs that need to be considered in answering that question. Some securities markets, such as several proprietary trading systems, charge access fees for executing investors' orders. Moreover, finding the absolute best price — even in the absence of access fees — for any given order may not be a cost-effective use of a broker's resources and time. Automatically routing orders to a particular securities market, even if it does not always offer the best possible price, may be the best way to handle large numbers of small orders that do not merit individualized treatment.

Payments and commissions Obviously, most individual investors do not form a judgment, let alone an informed one, on the quality of a broker's trade execution. That is not a sign of irrationality or incompetence. Rather, it demonstrates just the opposite; the amount of energy and time necessary to make such a judgment simply is not worth it. Life is, alas, short. Even poor brokerage quality on an order will likely cost an investor, at the most, only a few dollars. Because of investors' inability to monitor brokerage performance, brokers will compete for investors' orders not on the basis of trade execution performance but on other dimensions that investors can, and do, form a judgment.

Probably the single most important of those dimensions is commission rates. Brokers who receive payments for order flow will tend to route orders to whoever offers the largest payments. With that money in hand, the broker will have a powerful incentive to reduce its commission rates because doing so will make it more attractive to investors placing orders. If a broker foregoes some order flow payments in order to route investors' orders to the market offering the best price (but not the largest order flow payments), it will have to charge a higher commission rate as a result. Because small investors judge brokers based on commission rates, and not on quality of trade execution, a broker gains nothing by getting the best prices for investors' orders.

Indeed, competition between securities markets based on order flow payments has an additional effect. To the extent that providing inferior trade execution enables securities markets to offer larger order flow payments to brokers, they will do so. The security market that fails to offer the largest payments to brokers will be placed at a competitive disadvantage vis-à-vis those that do.

The tradeoff between inferior trade execution and maximizing order flow payments has, in fact, occurred. Securities markets that offer little, if any, price improvement on the NBBO price typically are the markets offering the largest side payments. Non-NYSE dealer securities markets, which often offer the largest order flow payments, commonly offer limited opportunities for price improvement for small orders routed to them pursuant to payment for order flow agreements. One study analyzed all orders in 500 NYSE-listed securities received in 1988 and 1989. 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 was even larger — 1.51 cents per share. The data from 1989 is similar. Other subsequent econometric studies have provided further evidence that the securities markets that typically offer the largest order flow payments also often offer inferior trade execution for the type of orders routed pursuant to payment for order flow agreements.

How should brokers decide? If a broker is interested in maximizing the welfare of his investors, where should it send orders? The answer to that question is quite complicated because there are a number of considerations that can go into trade execution decisions. Those include such factors as price improvement opportunities on different securities markets, order flow payments, access fees, and the cost of individualized routing decisions. The bottom line, for most investors, is whether they are getting the best possible overall deal, taking into account both trade execution quality and commission rates.

Consider, for a moment, price improvement opportunities. While unquestionably important, it is not necessarily the case that the securities market that offers the best price (which often turns out to be the NYSE for NYSE-listed securities) is the appropriate market to which investors' orders should be routed. An investor's overall economic interest may be best served by having his order routed to a securities market offering an inferior price. Suppose a NASDAQ dealer offered to clear an investor's order at the NBBO with an order flow payment of $6, while the price available on the NYSE floor for filling the order was $5 better than the NBBO. Obviously, if the order flow payments were used to reduce the commission rate charged, an investor would be better served if the order were sent to the dealer. While price improvement opportunities are sometimes larger than order flow payments, that is not inevitably so.

Brokers will compete for investors' orders on dimensions that investors can, and do, form judgments — such as commission rates.

Speed of execution is another aspect of brokerage execution quality. Most orders routed pursuant to order flow agreements are small orders placed by nonprofessional traders. While immediacy might be a very important consideration for some larger, sophisticated investors, the difference in execution times (which amounts to a few seconds) at the NYSE and NASDAQ is unlikely to be significant for the average investor placing a market buy or sell order of a few hundred shares.

The appropriate market Some commentators argue that payment for order flow is unproblematic because competition between securities markets on the basis of providing order flow payments will still ensure an efficient allocation of investors' orders. The market offering the largest side payment should receive investors' orders. That argument ignores a crucial, and often overlooked, fact: To a significant extent, auction markets, such as the NYSE, are institutionally incapable of providing side payments to brokers because auction markets simply match investors' orders without dealer intermediation. It is dealers, not auction markets, who offer (and are capable of offering) large order flow payments for small orders.

One can readily see the consequences of the inability of auction markets to offer order flow payments on their competitive position. 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 securities, the third market's share increased from 2.39 percent in 1976 to 10.77 percent in 1995. As of 1996, the NYSE had only 47 percent of the market for orders less than 1,000 shares in NYSE-listed securities, despite the frequent opportunity for price improvement on the NYSE.

The securities market that offers the best price is not necessarily the appropriate market to which an investor's order should be routed.

Some conclude from those trends that investors' orders are not being routed to the appropriate securities market. How has the SEC responded to the practice of paying for order flow?

ENTER THE REGULATORS

Regulators have long focused their attention on the issues surrounding how investors' orders are routed to securities markets. The Securities Acts Amendments of 1975 explicitly instructed the SEC to ensure that investors' orders receive "an opportunity to obtain best execution." Since that time, the SEC has tirelessly and repeatedly proclaimed the importance of guaranteeing that investors' orders receive the best possible execution. Numerous regulatory structures have been erected to that end, but they have met with very little success.

Intermarket trading system rules One such regulatory attempt was the adoption of intermarket trading system rules that require securities markets to match the NBBO or route an investor's order to the securities market offering the NBBO. The rules were adopted in the hope that they would guarantee that investors' orders would receive best execution and that securities markets would compete on the basis of posting competitive quotes. But the regime has been a near-complete failure because the NBBO often is not the best price that investors can get. For a variety of reasons, securities markets are either unwilling or incapable of publicly posting their best price and thereby competing for order flow on that basis.

There are several reasons why the prices available on exchanges often are better than publicly posted prices. One reason is that auction markets are able to cross investors' orders directly at prices within the NBBO spread. Whether an investor's order will be crossed at prices better than the NBBO is very difficult to predict (and hence reflect in the publicly posted price) because it depends on the other orders that happen to be routed to the exchange floor at a particular point in time.

Another reason that exchange prices often are better than the NBBO is because of the arbitrage risk a securities market creates if it publicly posts its best price. If market conditions change and the securities market is unable to adjust its public quotation quickly enough, the securities market might very well have to buy or sell stocks at a value different than what they are worth. Sophisticated traders will quickly take advantage of any outdated or ill-advised quotations at the expense of securities markets. Indeed, securities markets are very mindful of that fact; the National Association of Securities Dealers has documented that markets have been forced to widen their posted spreads in order to protect themselves against such arbitrage possibilities.

Disclosure requirements In an attempt to address concerns over order flow payments, the SEC has imposed disclosure requirements on brokers, mandating that they release information concerning the payments that they receive. Investors, upon request, can receive detailed information concerning the routing of their orders. But it is unclear whether the statements provide investors with useful information. An investor should not 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. Furthermore, the functional equivalent of order flow payments can be created through internal routing of order flow in a vertically integrated broker-dealer firm, without money ever changing hands. The disclosure requirements do little to address internalization.

A DIFFERENT APPROACH: DEREGULATION

A better approach to addressing order flow payment concerns would be the removal of the legal requirement that brokers credit investors' orders with the actual price received. Brokers could then fill investors' orders at the NBBO and keep any price improvement realized on the order for themselves. Let us call this the "NBBO pricing option."

A broker who adopts the NBBO pricing option will have a powerful incentive to route small investors' orders to the securities market offering the best possible price, because the failure to do so would come at the broker's expense. Of course, if the market offering the best possible price for an order also charged large access fees, or if the benefits of the best price were otherwise economically outweighed, the broker may decide to send the order to another securities market. In any event, brokers would have the proper incentive to make the efficient routing decision.

How would that benefit investors? The fact that discount brokers have been using their sizable order flow payments to reduce their commission rates points to the answer. There can be little doubt of the intense competition between brokers over commission fees. As a result, any benefits accruing to brokers from employing the NBBO pricing option would accrue to investors in a form they could readily observe and appreciate — most likely lower commission rates.

With an efficient allocation of investors' orders, brokers would no longer reward securities markets for merely offering side payments in lieu of better prices. Auction markets such as the NYSE would no longer be disadvantaged just because they are institutionally incapable of offering order flow payments. Indeed, to the extent that prices can adjust more quickly and at less cost than side payments, markets will have a new reason to compete on the basis of posting competitive prices.

An analogy might be useful in illustrating the logic behind such deregulation. No one protests the fact that car manufacturers occasionally receive cash rebates from their suppliers. If General Motors were to receive a rebate from its muffler supplier, is the automaker less likely to serve the interests of its customers? Of course not. Presumably, any rebate would be passed along to car buyers in the form of lower prices. The same would be true in the securities industry. Deregulation would permit brokers, like other firms in the economy, to pass on to investors the benefits resulting from their vertical relationships.

Old vision Why has such deregulation not already occurred? Why, instead, has the SEC erected an ineffective and cumbersome regulatory regime? One reason lies in the fact that securities market regulation, and the attitudes that have informed it, has not adequately reflected the dramatic increase in competition faced by securities markets in recent times. A regulatory mindset that evolved in the presence of natural monopolies, as the NYSE once was, now is anachronistic.

A second reason is the SEC's implicit vision of how competition between securities markets should be structured. That vision is one of competition for order flow based on public price quotations posted by securities markets —— whichever market offers the best publicly posted price should receive investors' orders. Order flow payments and other forms of nonprice competition represent a threat to that vision (although it is only a vision, as there is relatively little quote-competition between the securities markets). Deregulation of how brokers compete for investors' business, which could conceivably (but not necessarily) result in more competition over commission rates and other nonprice dimensions, would represent a move from the vision of quote-based competition.

CONCLUSION

There has been increasing general recognition over the last 25 years (even if there is sometimes a failure to act on it) that a regulatory cure can often be worse than the purported market failure. In the case of payments for order flow, the purported market failure — an alleged conflict of interest between brokers and investors — is, in reality, the unintended byproduct of the current regulatory structure. Rather than more regulation, the appropriate course of action to resolve the market flow payment issue is deregulation.

Perhaps more importantly, there is a general lesson to be drawn concerning how the regulation of securities markets should be approached. The current level of competition substantially increases the justificatory burden of a would-be regulator. Regulators should appreciate the value of that competition instead of promulgating new rules that impede competition and, as a result, harm investors. R

READINGS

- "Best Execution in Market 2000: An Examination of Current Equity Market Developments," published by the Securities and Exchange Commission, 1994.
- "The Causes and Consequences of the Rise in Third Market and Regional Trading," by Hans R. Stoll. *Journal of Corporate Law*, Vol. 19 (1994).
- "Differences in Execution Prices Among the NYSE, the Regionals, and NASD," Working Paper 4-92, by Marshall E. Blume and Michael Goldstein. White Center for Financial Research, 1992.
- "The Law and Economics of Best Execution," by Jonathan Macey and Maureen O'Hara. *Journal of Financial Intermediation*, Vol. 6 (1997).
- "Market Integration and Price Execution for NYSE-Listed Securities," by Charles M.C. Lee. *Journal of Finance*, Vol. 48 (1993).
- "Posted versus Effective Spreads: Good Prices or Bad Quotes?" by David Fialkowski and Mitchell A. Peterson. *Journal of Finance*, Vol. 35 (1994).
- "A Proposal for Solving the 'Payment for Order Flow' Problem," by Allen Ferrell. *Southern California Law Review*, Vol. 74 (2001).
- "Report on the Practice of Preferencing," published by the Securities and Exchange Commission, 1997.
- "U.S. Equity Markets: Recent Competitive Developments," by James E. Shapiro. Printed in *Global Equity Markets: Technological, Competitive, and Regulatory Challenges*, edited by Robert A. Schwartz. New York, N.Y.: McGraw-Hill Professional Publishing, 1995.