

## Financial Economists Roundtable

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### *Statement on*

## **The Structure of Trading in Bond Markets**

The Financial Economist Roundtable (FER) is a group of senior financial economists who have made significant contributions to the finance literature and seek to apply their knowledge to current policy debates. The Roundtable focuses on microeconomic issues in investments, corporate finance, and financial institutions and markets, both in the U.S. and internationally. Its major objective is to create a forum for intellectual interaction that promotes in-depth analyses of current policy issues in order to raise the level of public and private policy debate and improve the quality of policy decisions.

FER was founded in 1993 and meets annually. Members attending a FER meeting discuss specific policy issues on which statements may be adopted. When a statement is issued, it reflects a consensus among at least two-thirds of the attending members and is signed by all the members supporting it. The statements are intended to increase the awareness and understanding of public policy makers, the financial economics profession, the communications media, and the general public. FER statements are distributed to relevant policy makers and the media. This statement is the outcome of the FER's discussion at its annual meeting, which took place on July 19-21, 2014 in Quebec.

The statement begins with the observation that despite the fact that bonds are less risky than stocks, transactions costs can be one hundred times higher in bond markets. Innovations in technology, institutional arrangements and regulation have driven down trading costs in equity markets, but have not had a comparable impact on bond markets. The Financial Economists Roundtable believes that an order display requirement in the fixed income markets would substantially improve market quality for retail and institutional investors alike. FER urges the U.S. Securities and Exchange Commission (SEC) to improve bond market efficiency by simply requiring brokers to post their customers' limit orders to an electronically accessible broker platform or alternative trading system, where one customer's limit order could trade against another customer's order without dealer intermediation.

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# Statement of the Financial Economists Roundtable

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## The Structure of Trading in Bond Markets

Innovations in equity market structure over the last twenty years have substantially lowered transaction costs for both retail and institutional investors. These changes have brought equity markets into the 21<sup>st</sup> century. By contrast, corporate and municipal bond markets are still struggling to move out of the 19<sup>th</sup> century. As a result, dealer mark-ups in these markets often dwarf trading costs in equity markets. Transaction costs for small orders in equities are typically a few pennies per share, while transactions costs in corporate and municipal bonds can be several dollars per \$100 of bond principal value. Despite the fact that bonds are less risky than stocks, transactions costs can be one hundred times higher.

The U.S. Securities and Exchange Commission (SEC) could rapidly and substantially improve bond market efficiency by simply requiring brokers to post their customers' limit orders to an electronically accessible broker platform or alternative trading system (ATS), where one customer's limit order could trade against another customer's order without dealer intermediation. As similar requirements have done for stock limit orders, this requirement would produce substantial improvement in transparency and execution, with ATS service providers focusing their attention on serving buy-side traders rather than the dealers who now largely control these markets. Dealers would remain important in these markets because for many bonds, buy-side traders are rarely on both sides of the market at the same time. But when they are, they should be able to easily trade with each other if they can trade at more favorable prices than dealers offer.

Michael Lewis' recent book *Flash Boys* identified problems which, if fixed, would save equity market customers a couple of basis points in execution costs here and there. The concerns Lewis identifies are minor compared to the efficiency gains possible in the bond markets, which could be achieved rapidly as a result of a few simple rule changes designed to harness the forces of competition and technology to better serve bond investors.

At their most recent meeting, the members of the Financial Economists Roundtable discussed the current state of security market structure.<sup>1</sup> This statement summarizes our conclusions and explains how an order display requirement in the fixed income markets would substantially improve market quality for retail and institutional investors alike. While we believe that some changes in the equity markets may be warranted, their benefits to investors will be small in

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<sup>1</sup> The Financial Economists Roundtable is an international organization of 50 highly accomplished financial economists over the age of 50 who meet annually to discuss issues of current public policy importance.

comparison to benefits that investors would obtain from simple changes in the fixed income markets.

This statement starts with a brief description of the current structure of the corporate and municipal bond markets. We motivate and describe our proposal for one or more electronically accessible order display facilities in the fixed income markets. We next consider why the markets will not improve without intervention from the SEC. Finally we conclude with a telling observation about the relation between transparency and liquidity in various markets.

## **Current Structure of the Corporate and Municipal Bond Markets**

Both corporate and municipal bonds trade in over-the-counter markets. Unlike equity markets, where multiple exchanges consolidate the quotes and orders of market participants, corporate and municipal bonds trade via a network of bond dealers. An institutional customer seeking to buy or sell a block of bonds typically contacts a dealer, who in turn either trades with the institution on a principal basis, or acts as an agent, seeking another institutional customer or dealer willing to sell or buy the bonds.

About ten years ago, regulators mandated bond post-trade reporting systems that disseminate, with a 15-minute delay, the price and quantity of every trade conducted by a dealer. This innovation improved transparency in these markets by allowing customers to obtain more current information about bond market values. Unfortunately, because some bonds trade infrequently, the last trade for a given issue may be weeks or even months old, thus providing little useful information to a current buyer or seller. Pre-trade transparency could address this concern, but innovation in this direction so far has been limited.

Much trade in these markets is still conducted over the telephone, which means that trades occur as a result of a series of bilateral conversations among human broker-dealers and their clients. Such trading is inefficient and very costly in comparison to electronic trading.

This practice persists in spite of the proliferation of electronic trading technologies in many other markets, including equity, futures, and U.S. Treasury bond markets. Market participants cite a host of reasons to explain the lack of electronic trading in the bond markets. These explanations include the large number of bond issues (when compared to equity or futures markets instruments), the low trading demand from customers, and the complexity and non-standardized nature of bonds relative to other instruments. None of these explanations precludes the formation of cost-saving electronic systems.

Dealers, including those who offer electronic trading systems for equities, have not developed comparable electronic trading systems for corporate or municipal bonds. The profits that these dealers enjoy from the inefficient nature of trading in these markets may explain why so little innovation has occurred. Bonds trade at high spreads in part because dealers face limited competition when trading with their customers.

Academics, practitioners and regulators have documented spreads reaching as high as 3% or more for municipal and corporate bonds. Perversely, these transaction costs rise as the trade size decreases. Thus, a relatively small trade of \$50,000 may cost, on a percentage basis, five or ten times more than a large trade arranged by a financial institution. This transaction-cost problem is particularly acute for municipal bonds, which have particular appeal to retail traders because of their tax advantages.

## **The Order Display Facility Proposal**

Regulators have the power to mandate enhanced trade transparency to make corporate and municipal bond markets more liquid. Equity markets generally are characterized by high levels of both pre- and post-trade transparency. Pre-trade transparency refers to the practice of requiring market centers to publicly display orders and quotations in the form of published bid and ask prices; post-trade transparency entails the timely reporting of the price and quantity of shares for each trade.

Last decade, under pressure from the SEC, the NASD (now FINRA) and the MSRB (Municipal Securities Rulemaking Board) established bond trade price reporting systems for the corporate and the municipal bond markets, respectively. The public dissemination of these data improved market quality by permitting buy-side investors to see recent trade prices before arranging their trades. The reduction in transaction costs has been modest, in part because brokers are not required to disseminate these data to their clients before they trade.

In contrast, pre-trade transparency in these markets is almost wholly lacking. While some private systems for pre-trade transparency do exist, and their market share is slowly growing, we believe that much more can and should be done on the regulatory front.

To this end, we recommend that the SEC encourages the development and use of one or more facilities for the display and execution of customer orders in these markets. The SEC could accomplish this goal through an explicit mandate to develop and use such systems, or indirectly through a requirement that brokers who accept customer orders or trade with public customers use such systems.

We expect that the existence of such a facility would substantially increase customer use of limit orders, especially sell limit orders. Customers presently do not often use limit orders when trading bonds because doing so presently provides so little benefit to them without a place to post these orders where they could be filled.

An order display facility would allow customers who want to buy or sell a bond to display their interests at lower cost to many more potential counterparties than is possible today. The public display of customer orders can benefit market participants many ways:

- First, by exposing customer orders to the public market, more dealers will see customer orders and compete to trade with them. Such competition will bring more favorable terms of trade to customer orders.
- Second, the display of accessible customer orders can allow some trades to occur without the need for dealer intermediation, thereby decreasing all-in trading costs to customers. The facilitation of trade between public customers, without the need for dealer participation, is one of the basic principles behind the framework Congress established for the equity markets. We believe the same principle should apply to these fixed income markets.
- Third, broker-dealers who want to arrange trades at prices inferior to those of publically displayed (and electronically accessible) orders will have to fill the public orders first, as they must in the equity markets. A no-trade-through requirement would ensure that traders (including dealers) who give other traders options to trade are rewarded for making the markets liquid. And if broker-dealers are unwilling to fill standing orders, the broker-dealers will have to match the standing price, which will improve prices for their clients.
- Finally, as trading costs decrease, volume and liquidity will rise as additional participants are drawn into the marketplace, further increasing competition and liquidity. Not only will customers benefit from this increased market participation: higher liquidity also will lead to higher bond prices, and thus lower funding costs for municipalities and lower costs of capital for firms.

We understand that private systems for the display of “bid wanted” lists currently operate, and that other bond ATSS have the potential to provide the needed transparency to the marketplace. We remain concerned that, absent a positive step from the SEC, the structure of the bond markets will prevent the needed changes that would be of such benefit to investors, both large and small. In particular, we believe that brokers should be required to post their customer limit orders to an actionable electronically accessible order display facility, and nobody should be allowed to arrange a trade at an inferior price without first filling all displayed orders that offer better prices. These changes will require the support and encouragement of the SEC. In particular, we note that similar changes in the NASDAQ market did not occur until its 1995 settlement with the SEC.

Pre-trade transparency is common in equity markets, and it benefits customers interested in trading both actively traded and inactively traded stocks. In the actively traded stocks, the requirement to display orders led to the development of extremely low-cost exchange trading systems. In less actively traded stocks, the requirement allows public traders to find each other, if both sides are present. When only one side is present, dealers typically make markets as they currently do in the bond markets.

Nothing about fixed income instruments requires that these securities trade exclusively in dealer markets without significant pre-trade order exposure for those traders willing to display their orders. In particular,

- The huge number of bond issues does not preclude the display of orders by computers that can easily maintain and query enormous databases.
- The complexity of many fixed income bonds only means that they are hard to price. So too are many equities for which pricing is extremely difficult because the future prospects of their issuers are hard to forecast.
- The low trading demand for many bonds ensures that they will continue to trade predominately in dealer markets. But when buy-side traders are willing to offer liquidity to each other, an actionable electronically accessible order display facility will allow them to arrange more favorable trades. Lower transaction costs, of course, will increase demand.

### **Effect on Dealers and Brokers**

The existence of one or more public order display facilities to which brokers must post their customer's limit orders would decrease dealers' per-bond profits. Dealers would have to narrow their spreads to match the displayed order prices, or they would have to give up some of their trades to the displayed orders.

Some dealers may claim that when faced with such competition, they will withdraw from the market, and thus provide less liquidity, making the public worse off. Not surprisingly, most dealers oppose greater transparency of all types.

Their first two claims are correct, but their last one is not. Dealers will lose profits and withdraw only if buy-side traders out-compete them. If so, the buy-side traders will be supplying liquidity and the markets will be no worse off, and certainly at least as liquid. But, the customers will be better off because they will obtain better prices on average. Transaction costs will be lower because buy-side traders will not be paying dealers for services that they can often provide to each other at lower cost.

The decrease in fixed income transaction costs will lead to an increase in fixed income trading volumes, just as similar decreases in equity transaction costs led to substantial increases in equity volumes. Dealers who can adapt will continue to profit, but they will have to profit from higher volumes at lower spreads.

Some brokers also may oppose this proposal. Those who act as dealer for their own clients may be against it because they will lose dealing profits. Those who simply broker orders will be opposed because dealers currently pay brokers to send their customers' orders to them. Although these payments-for-order-flow seem like kickbacks ("you must pay me to trade with my customer"), the SEC has permitted them both in equities and in fixed income, albeit with

substantial concern in recent years. Since fixed income bid/ask spreads are very large relative to the risks of dealing in these instruments, the payments for fixed income orders are often quite large in comparison to payments for equity orders.

The opposition of dealers and brokers to greater transparency may explain why new electronic trading systems have not gained traction in the fixed income markets. Neither dealers nor brokers want to compete with their customers when offering liquidity.

This problem is well known. For example, until the SEC mandated similar order handling rules for equities, NASDAQ securities traded in markets similar to those we still have for bonds. Spreads were wide in comparison to exchange-listed stocks, payments for order flow were high, and volumes were low as investors avoided incurring high transaction costs. Following affirmative actions by the SEC, these markets improved very substantially, and investors and issuers are now much better off.

## **Conclusion**

The interest rate and credit risks associated with holding a corporate bond are very similar to the combined risks of holding a Treasury bond (that primarily embodies interest rate risk) and some shares of the corporation's stock (that primarily embodies credit risk). With this understanding, the poor quality of the corporate bond market is particularly surprising since government bonds and corporate equities both trade in highly efficient transparent electronic markets. The example of these related markets suggests that greater transparency and more direct access for buy-side traders will substantially improve both corporate bond markets and municipal ones too.

Dealers and brokers will not willingly give up their profits associated with maintaining the status quo. It thus falls to the SEC to write (or to encourage FINRA and the MSRB to write) regulations that will improve the fixed income markets as they have done for the equity markets. Requiring brokers to post customer limit orders in an actionable electronically accessible order display facility, and preventing traders from trading through those orders, will substantially increase liquidity in these markets.

As investors approach retirement, many reallocate their portfolios from equities to fixed income. The aging of populations in all developed countries suggests that fixed income markets will be of increasing importance to investors. Now is the time to bring them into the 21<sup>st</sup> century.

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