

Discussion

Charles Gaa

This paper is particularly interesting in that it describes a practical and pragmatic application to policy of many of the concepts presented at this conference.

I would like to draw your attention to a couple of the key issues raised in Allison Holland's paper.

- I will start by outlining the different types of electronic trading systems that are out there in global debt markets, and what they mean in terms of market structure.
- In this context, I will go on to discuss the policy response of the U.K. Debt Management Office (DMO) to the challenges identified in the paper, and attempt to demonstrate parallels between this response and the research that has been presented already this morning.
- Finally, I would like to step back and approach these issues from a slightly different direction and discuss electronic trading from a financial stability perspective—a perspective that we at the Bank of Canada bring to the table, in addition to that of a debt manager, which we share with the DMO.

Wholesale Debt Market Trading Systems

First of all, I'd like to examine electronic trading in wholesale fixed-income markets more generally. We hear from the Bond Market Association (a U.S. industry group) that there are about 70 systems out there, but how can we distinguish one from another? Which features are important?

There are at least two characteristics that differentiate wholesale debt systems:

- **Market function:** Is it a customer-dealer market, where customers trade with dealers to adjust their portfolios, or is it an interdealer market, where dealers trade with each other for risk-sharing and inventory management? This has implications for the size, frequency, and information content of trades.
- **Pricing mechanism:** Is it an order-driven market, where participants post public offers to trade, or a quote-driven market, where participants supply prices at which they are willing to trade?

This implies at least four categories of trading system, but I will focus here on the two that have been most successful in global fixed-income markets.

Multiple-Dealer Trading Systems

These systems essentially represent an automation of the bilateral, dealership, telephone-based market. Instead of calling each dealer in sequence to obtain quotes for a desired trade, customers can solicit quotes from several dealers simultaneously and then trade with the dealer of their choice. Customers have no opportunity to trade with each other, and eventual trade outcomes are known only to the customer and dealer involved.

TradeWeb has achieved a great deal of success in the U.S. Treasury bill market, and it is also now active in mortgage-backed, agency, commercial paper, and euro-sovereign securities. The system accounts for some 20 per cent of primary dealer trading in Treasury bills, with 18 dealers and 800 buy-side participants.

BondVision (formerly BondClick, recently acquired by MTS (Mercato Telematico dei Titoli di Stato)) and TradeWeb appear to be the front-runners in the European market. In Canada, CanDeal is a potential multiple-dealer system, although TradeWeb may also be considering entering the Canadian market.

These systems (and potential systems) are being offered by consortia of dealers, in direct competition with their other market-making activities. The intent would appear to be to ensure a seat at the table once the seemingly near-certain consolidation occurs. It should be noted that, in addition to participating in these multi-dealer systems, most bond dealers also now offer e-trading through a single-dealer proprietary system.

Electronic Interdealer Brokers

Representing a further automation of the screen-based voice brokers, electronic interdealer brokers (IDBs) allow traders to trade anonymously among themselves in an order-book-style market. Dealers also trade with each other bilaterally, just as in the telephone-based, customer-dealer market, although this has become less important over time.

Dealers use the interdealer market to manage the risk they incur through trading with customers. Interdealer trading is very important and may account for up to one-half of total trading volume. In the paper's U.K. setting, this is referred to as the inter-GEMM (gilt-edged market-maker) market.

The BrokerTec Global and eSpeed systems have gained some success in the U.S. Treasury market. MTS has been very successful in European interdealer markets, although BrokerTec Global may be making inroads. Interdealer markets are typically much more transparent than customer markets. In the case of the United States, and potentially Canada, interdealer trade information is made available outside of the interdealer market.

Market Segmentation

By combining Figures 1 and 2 to create Figure 3, we can illustrate the segmentation between the interdealer and customer-dealer spheres, and how these electronic systems correspond to debt-market structure. The upper half of Figure 2 is the interdealer market and the lower half represents the customer-dealer market. In general, the two markets are completely segmented.

In each sub-market, the existing structures have evolved to meet the needs of participants. The electronic trading systems that have been introduced in each segment correspond to the prevailing market structure. What sort of implications can we draw from this analysis?

Fragmentation or Consolidation?

One of the potential concerns with respect to electronic trading noted in the paper is fragmentation. Fragmentation occurs when market liquidity is split between two or more markets and orders do not have an opportunity to interact. Network economics tells us that, with markets, the whole is greater than the sum of the parts. When participants do not have the opportunity to interact, the overall quality of a market suffers.

Figure 1
Multiple-dealer trading systems
(e.g., TradeWeb, BondVision, or CanDeal)

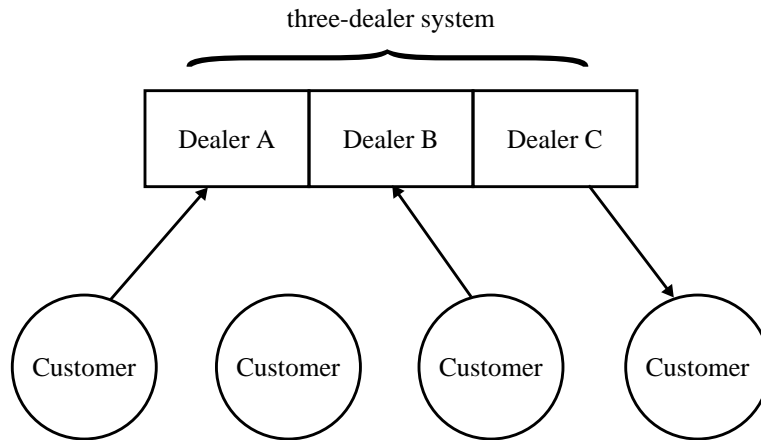


Figure 2
Electronic interdealer brokers
(e.g., BrokerTec Global, EuroMTS, or eSpeed)

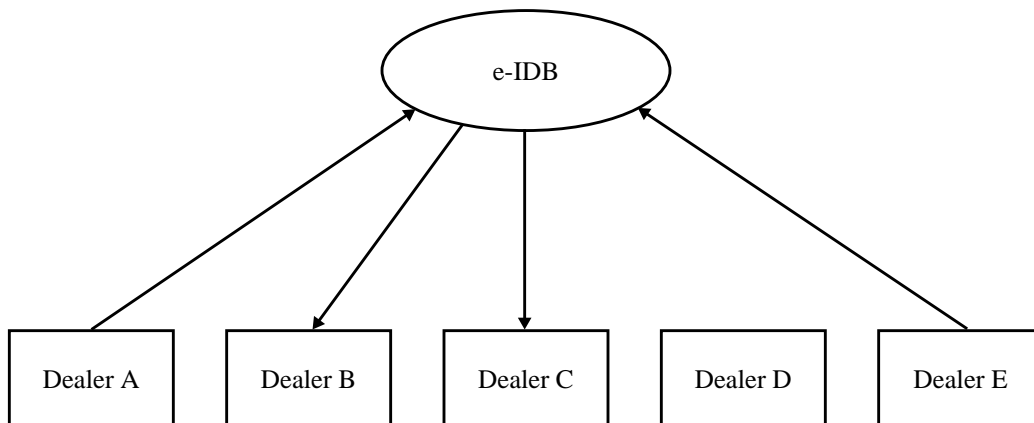
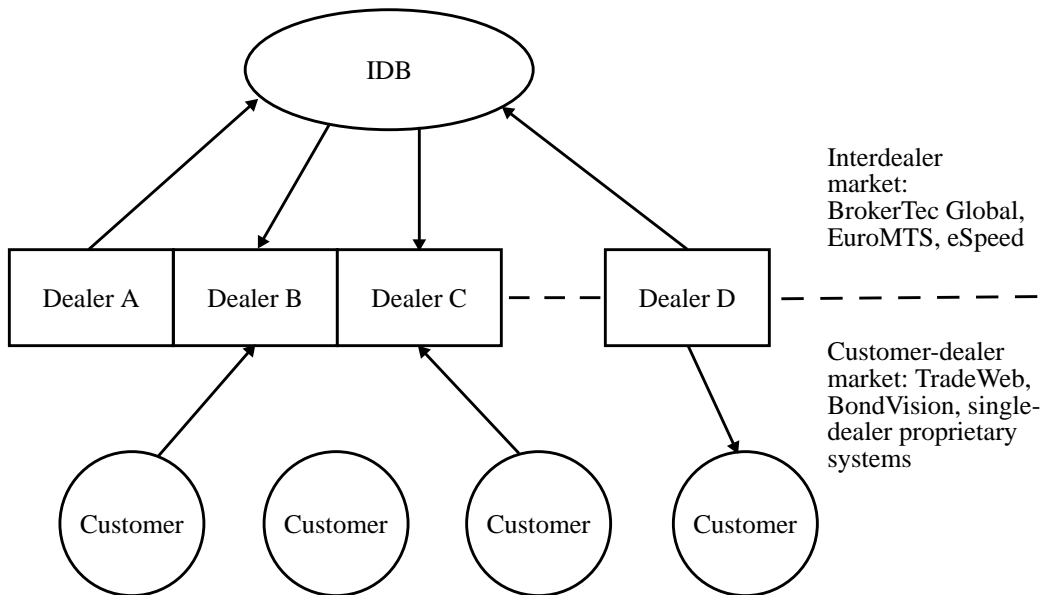


Figure 3
Market segmentation



On the face of it, to the extent that electronic trading lowers the barriers to entry for new markets, and may result in the introduction of new and competing trading venues, fragmentation would appear to be a real threat for debt markets. However, when we look at “markets” (i.e., debt, equity, or foreign exchange) not as homogenous units but as collections of discrete sub-markets, the potential impact of electronic trading becomes much less clear.

In other words, there is no existing centralized market in the customer-dealer segment that is in danger of becoming fragmented. In the interdealer debt market, however, IDBs are centralized markets and there is consequently some concern about fragmentation. This reasoning is consistent with the DMO’s decision to introduce a central, committed inter-GEMM market, while leaving the customer-dealer market unchanged.

Transparency

Transparency is an issue that has received a lot of attention. Electronic trading has the potential to increase market transparency, but the appropriate level of transparency, as suggested in Toni Gravelle’s paper (this volume), may depend on the market examined. Trading characteristics, such as frequency, size, and information content, seem to be important. With respect to the DMO’s policy stance, this corresponds well to the differential transparency regime in the U.K. gilt market (as described in the Holland

paper), where (i) interdealer trades are transparent to the interdealer market only; (ii) wholesale customer-dealer trades are not transparent at all; and (iii) retail customer-dealer trades are publicly disseminated.

Policy Objectives and Implications

One question that may come to mind is: why are we interested in all of this? Market structure is important for liquidity and, in this context, the introduction of electronic trading is important insofar as it has an impact on market structure.

From a debt management perspective, policy that enhances market liquidity is vital to achieve low-cost financing, particularly in the face of declining government borrowing needs.

In addition to its role as fiscal agent for the Government of Canada, however, the Bank of Canada has a mandate to promote financial system stability, of which financial market stability is an important component. We believe that liquid markets are more resilient and robust in the face of financial crises than illiquid ones and, therefore, policy that promotes liquid and well-functioning markets is important from a financial stability perspective as well.

From a financial stability perspective, however, electronic trading is important for reasons beyond its potential impact by way of changes to market structures on liquidity.

In conclusion, I'd like to draw your attention to the policy issues raised by the following questions.

- How do these systems respond in times of crisis?
- Are they robust?
- What about contingency planning and backups?
- How do participants respond in times of crisis? Do they return to the old methods? Following the events of 11 September, for example, participants were able to fall back to the telephone market in many cases (fixed-income: eSpeed, TradeWeb). So what happens if electronic systems completely replace lower-tech alternatives?