Transparency in the Canadian Fixed-Income Market: Opportunities and Constraints

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Market quality is important to policy-makers because it directly affects the level of confidence and the willingness of participants to use markets for transactions. Factors such as informational efficiency, volatility, liquidity, and transparency can all affect market quality (Boisvert and Gaa 2001).

The Bank of Canada has a particular interest in the quality of fixed-income markets because of its roles in promoting a safe and efficient financial system, formulating and implementing monetary policy, and managing the federal government's debt. Liquid, orderly, and resilient markets support the financial system's ability to allocate resources effectively, the Bank's ability to rely on the efficient transmission of changes in the overnight interest rate across the term structure of yields, and the government's ability to achieve stable, low-cost financing.

This article focuses on one aspect of market quality—transparency. The Bank, the Department of Finance, and others have promoted enhanced transparency in fixed-income markets for some time.

Market Structure and Transparency

Market transparency is usually defined as the ability of market participants to observe the information in the trading process (O'Hara 1995).

In general, the level of transparency differs across different market structures. Its evolution has been influenced by the nature of the instruments traded, the interactions between market participants, and, in some instances, by rules established by public authorities. For example, fixed-income markets are distinct from equity markets in a number of ways. Most equity markets are centralized, order-driven markets, whereas fixed-income markets, where dealers intermediate customer transactions by providing quoted prices, are typically decentralized and quote driven. The frequency of transactions is lower in fixed-income markets than in equity markets; however, the average size of each trade is much larger. Fixed-income markets are generally wholesale markets, dominated by sophisticated institutional investors. Retail investors are more active in equity markets. These characteristics have contributed to the decentralized nature of fixed-income markets, where retail participants have less access to price information than they do in centralized markets, such as the equity market. Participants in fixed-income markets generally demand greater immediacy of trade execution than those in equity markets.[1] Dealers undertake the immediate trade and then proceed to manage their inventory through subsequent trades.

In fixed-income markets, transparency refers mainly to information regarding pre-trade quotes and post-trade reporting of prices and volumes. More specifically, pre-trade quotes refer to the availability of information about bids and offers, and post-trade reporting refers to the public and timely transmission of information on past trades, which may include price, volume, and execution time (BIS 2001).[2]

Equity markets have evolved in a heavily regulated environment, and much of the practical and theoretical knowledge of market regulation has developed around these particular

1. Demand for immediacy depends on the volatility of the security and the diversifiability of the risk of an adverse price movement. Therefore, the greater the risks that investors face in delaying their trades, the greater the desire for immediacy of trade execution.
2. Note that price information may also be displayed as a yield or a spread against a benchmark.

markets. A wide body of literature supports the argument that greater transparency in the trading process enhances market liquidity and efficiency by reducing opportunities for taking advantage of less-informed or non-professional participants.[3] This has led regulatory authorities to require that equity-trading information be made immediately available to the general public. However, the type of transparency regulation appropriate for equity markets may not be appropriate for fixed-income markets. While the issue of asymmetric information (where a subset of market participants have private knowledge of an asset's expected value) may apply to equity markets, it may be less of an issue in fixed-income markets for government securities. Gravelle (2002) finds that private information about the expected value of government securities plays only a minor role in the market (if any), since their prices depend on the term structure of yields which, in turn, depend on macroeconomic factors that are public information.

The effects of increased transparency

Generally, a market becomes more transparent when there is an increase in trade information available to the public. It is assumed that greater transparency would likely increase market liquidity by building up the confidence of participants. Moreover, a higher level of pre-trade transparency would encourage customers to manage their portfolios more actively and would attract new investors to the market. A higher level of customer participation would not only increase the level of liquidity, but would also add to the ability of dealers to provide liquidity to the markets by reducing their market-making cost.[4]

In Canada, because of the decentralized nature of the fixed-income market, customers typically contact several dealers to obtain the best price.[5] Increasing pre-trade transparency would not only contribute to more efficient price discovery, but would also help customers obtain the best execution of their transactions.

It is increasingly recognized by participants and researchers that, at some level, a trade-off exists between increased transparency and liquidity. For example, participants who responded to the Investment Dealers Association of Canada (IDA) and the Canadian Securities Administrators (CSA) *Market Survey on Regulation of Fixed Income Markets* (Deloitte & Touche 2002) agreed that steps taken to increase transparency should also consider the impact of such steps on liquidity. On balance, however, the literature is still inconclusive about the effect of greater transparency on overall market quality (Allen, Hawkins, and Sato 2001).

While increased transparency benefits the market as a whole, full transparency may not always be optimal. This is particularly true if dealers are required to display information on large-volume trades in real time (i.e., full post-trade transparency) to the market. For example, such a dealer will incur greater costs for managing inventory risk, since other dealers, who have been informed about the direction and size of the trade in real time, will strategically adjust their quotes in the interdealer market.[6] Full post-trade transparency would hinder the ability of dealers to manage their inventory risk, thereby reducing their incentive to provide liquidity to the market. Ultimately, dealers might pass on these higher risk-management costs to their customers by widening the bid/ask spread and providing less depth to the market.

How transparent are Canadian fixed-income markets?

The IDA/CSA *Market Survey on Regulation of Fixed Income Markets* (Deloitte & Touche 2002) states that "price transparency varies depending on the type of security and on the type of market participant." Respondents to the survey indicated that government securities have good price transparency, while illiquid securities are less transparent. However, the survey

3. A liquid market is generally defined as a market where participants can rapidly execute large-volume transactions with only a small impact on prices (BIS 1999).
4. Increased customer participation could help dealers to manage part of their inventory risk by increasing the frequency of their trading with their own customers.
5. Because they are primarily institutional investors, customers usually have a fiduciary duty to obtain at least three quotes from different dealers.
6. Dealers use the interdealer fixed-income market not only as a price-discovery mechanism, but also as a means of sharing with other dealers the position risks that they have taken on while trading with customers.

shows that customers in the *retail* sector have very little access to price information.

Market participants (i.e., institutional, wholesale investors) can currently obtain information on debt securities via CanPX.[7] CanPX is a system for reporting quotations and trades and is designed to provide a consolidation of interdealer prices to all interested market participants. By logging on to CanPX, participants can have access to the best bids and offers in the interdealer market.

Moreover, participants have access to price information by calling dealers for quotes and also to indicative quotes via service providers (e.g., Bloomberg). The recent development of alternative trading systems (ATSs) in Canada gives participants access to quotes from a number of dealers through these systems. Therefore, ATSs have the potential to increase transparency in fixed-income markets.

Changing Technology: An Opportunity for Increased Transparency

While the last few years have seen the rapid emergence of electronic trading systems in securities markets, their penetration has been uneven. Distinctive market structures have led to slower development of electronic trading in fixed-income markets than in equity or foreign exchange markets.[8] On a cross-country comparison basis, electronic trading has been slower to develop in the Canadian fixed-income market than in U.S. or European markets. This may be partly explained by the varied needs and incentives of market participants, as well as by the regulatory and competitive factors present in each country. The relatively smaller size of Canadian markets and the degree of concentration, coupled with the high cost of technological infrastructure, may also be factors behind the slower development of electronic trading in Canada.

The impact of electronic trading systems

Electronic trading systems have already affected the functioning of fixed-income markets in many ways, particularly in the United States and Europe. First, they can facilitate greater pre-trade and post-trade transparency. In fact, the most commonly cited benefit of electronic trading systems is that they can enhance the price-discovery process and help establish best prices. Second, electronic trading can be more cost-efficient, especially with its capability for straight-through processing. Third, these systems alter the relationship between dealers and customers. For example, customers can obtain quotes from several dealers almost instantaneously without having to contact each dealer. The introduction of a customer-to-customer system (bypassing the intermediary role of dealers) could affect the structure of the fixed-income market by removing the current separation that exists between the interdealer sphere and the dealer-customer sphere.

Reporting quotations and trades

The CanPX system provides further price transparency for the Canadian fixed-income market by consolidating price information. At this stage in its development, its coverage is limited to benchmark government securities and a relatively narrow number of corporate securities traded in the domestic marketplace. The Deloitte Report (2002) indicates that responses to CanPX have been mixed. On one hand, institutional investors and issuers commend CanPX for increasing the level of price transparency in the markets. On the other hand, large dealers are skeptical about the quality of the information displayed on CanPX because it is limited to a minimum trade size, whereas prices usually vary with the size of the order.

Improving market quality

Electronic trading systems and systems for reporting quotations and trades are welcome additions to the Canadian fixed-income market. Although some of these systems are still in their early developmental stages, they have the potential to enhance current levels of transparency. By enhancing transparency, electronic trading systems will add to market quality, because trading transparency contributes to reliable

7. CanPX was developed by IDA member firms and interdealer brokers. It began operating in Canada in 1999 and is similar to the GovPX system in the United States.
8. Asset type is also an important element in the development of electronic trading, since standardized, homogeneous products have proved the easiest to migrate to electronic trading platforms.

price discovery and efficient risk-allocation between market participants.

The Canadian Public Policy Response

Canadian provincial securities regulators are actively involved in regulating electronic trading systems. In December 2001, the ATS Rules came into effect in Canada.[9] The primary purpose of the ATS Rules is to establish a new framework that allows ATSs to compete with more traditional exchanges. The regulatory objectives are to provide investors with more choices, decrease trading costs, and improve price discovery and market integrity. The ATS Rules are divided into three parts: (1) a framework for the regulation of marketplaces, (2) requirements for data transparency and market integration, and (3) rules for market regulation.[10] The requirements for data transparency are divided into two categories: (a) exchange-traded securities and foreign-exchange-traded securities, and (b) debt securities.

According to the current ATS Rules, transparency requirements for debt securities have been separated into two subcategories: government debt securities and corporate debt securities. For government securities, marketplaces and interdealer brokers (IDBs) must provide real-time order and trade information on designated benchmarks to an information processor (full pre-trade and post-trade transparency).[11] For corporate securities, marketplaces are required to provide real-time order information to an information processor. The reporting of trade information for corporate securities is, however, subject to volume caps and a time delay.[12]

The CSA granted fixed-income ATSs an exemption from transparency requirements until 31 December 2003. In October 2003, the CSA released a notice of amendments to the ATS Rules. Under the amendments, all transactions in government securities would be granted a three-year exemption from the transparency requirements, while transparency requirements for corporate securities would be implemented as planned. The CSA indicated that the three-year period will allow market participants to determine the appropriate level of transparency for government fixed-income markets. The CSA have also recommended CanPX as an information processor for corporate debt securities.[13]

Views on the ATS Rules

The Bank, together with the Department of Finance, has been participating in the development of the ATS Rules since 1999, and has provided comments on the potential repercussions of the Rules on the maintenance of well-functioning fixed-income markets. While greater transparency is generally supported, our perspective has been that transparency requirements be designed so as to not adversely affect the price-discovery mechanism or market liquidity.

Throughout this period, in interactions with the CSA and the Bond Market Transparency Committee (BMTC), the importance of developing appropriate levels of transparency on a consultative basis has been stressed.[14] While transparency should increase, especially in the retail sector, measured steps should be taken when increasing transparency so as not to disrupt the efficient functioning of the wholesale fixed-income market. This sentiment is shared by the market participants who responded to the Deloitte & Touche survey.

One consideration is the need for an equitable, but appropriately differentiated, regulatory framework, recognizing similarities and differences in market structures. More specifically, it

9. The CSA's ATS Rules consist of National Instrument 21-101 Marketplace Operation (NI 21-101), National Instrument 23-101 Trading Rules (NI 23-101), and the related companion policies (21-101CP and 23-101CP).
10. Marketplaces are exchanges, as well as systems for reporting quotations and trades, including ATSs. They do not include interdealer brokers.
11. The ATS Rules define an information processor as any person or company that receives and provides information under the NI 21-101 and has filed Form 21-101F5.
12. More specifically, marketplaces, IDBs, and dealers executing trades outside of a marketplace must provide trade details within one hour after the trade, subject to volume caps of $2 million and $200,000 for investment-grade corporate securities and non-investment-grade corporate securities, respectively.
13. CanPX was named information processor for corporate securities by the provincial securities commissions in September 2003.
14. The BMTC was established by the CSA to examine the levels of transparency appropriate for Canadian debt securities. The BMTC was designed to include, as much as possible, representatives from all segments of the fixed-income market.

has been suggested that fixed-income ATSs and marketplaces that are similar in nature should be subject to the same transparency requirements. As such, systems displaying executable prices should have the same level of transparency as IDBs, which are also characterized by this feature. Furthermore, the Bank and the Department of Finance have expressed confidence that IDBs and systems displaying executable prices should be able to support a higher level of transparency than systems displaying indicative prices.

When the amendments come into effect in early 2004, transactions in *corporate debt securities* will be regulated by the ATS Rules. But the CSA have indicated that it is premature to impose transparency requirements in the *government debt* market. One would expect that government securities, which are the most liquid of Canadian fixed-income securities, could support a higher level of transparency than corporate debt securities and support it sooner rather than later.

What's Next?

The Bank will continue to work in collaboration with the Department of Finance, the CSA, and the BMTC to promote increased transparency in a way that recognizes the unique characteristics of fixed-income markets.

In February 2004, the Bank will host a workshop on regulation and transparency in fixed-income markets. The workshop will bring together academics, regulators, and market participants to examine and analyze issues related to transparency and market quality. This will further inform our work to enhance the efficiency of the Canadian fixed-income market.

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