Introduction
It's a pleasure to be here today.

I am going to take advantage of this audience of financial professionals to talk about financial market infrastructure, a subject that affects every single person in one way or another – you, because of the nature of your work, more than others.

Usually, when people talk about infrastructure, they think about roads and transportation systems. Montrealers, like everyone who lives in a big city, know only too well what happens when a city's infrastructure system is weak or fails: delays, disruptions of all kinds, and various degrees of chaos.

The nature of infrastructure is such that we only truly understand its importance when it fails us.

The same goes for financial market infrastructure. Virtually all financial transactions are cleared, settled and recorded through financial market infrastructures (FMIs). FMIs allow consumers and firms to safely and efficiently purchase goods and services, make financial investments, and transfer funds.

Given the critical role of FMIs, their risk management is of paramount importance; indeed, the subject of "systemic risk" was a hot topic in discussions about infrastructure long before the recent financial crisis.

Over the past twenty years, there has been a steady stream of improvements, for example, developing payments systems and safely settling foreign exchange transactions across time zones. These improvements proved their worth during the crisis. Despite numerous institutional failures around the world and extreme levels of uncertainty and risk aversion, FMIs continued to perform their critical functions.

The crisis also highlighted the importance of one type of FMI in particular – central counterparties (CCPs). A CCP acts as a buyer to every seller and a seller to every buyer for the financial transactions that it clears. An appropriately risk-controlled CCP improves the market's resilience by reducing counterparty credit risk and, therefore, the potential for disruptions to be transmitted through the financial system. This helps essential markets to remain continuously open, even in times of severe stress. A CCP also provides enhanced netting efficiencies to its members, and helps to manage defaults in a controlled manner.

For example, the Lehman Brothers default, one of the most memorable and dramatic of the recent crisis, would have been even worse if the London Clearing House, which is the CCP for a large portion of OTC interest rate derivatives, had not managed the default as well as it did. More generally, we saw that markets served by CCPs tended to be more resilient during the crisis than bilaterally settled markets.

Given this track record, it is not surprising that market infrastructure, and CCPs in particular, have been key elements of the G-20's efforts to strengthen financial stability.

The Bank of Canada has a very strong interest in FMIs. Under the Payment Clearing and Settlement Act, the Bank is responsible for the regulatory oversight of FMIs with a view to controlling systemic risk in Canada.
But the Bank is just one part of the equation. Canada’s regulatory community and the industry are moving forward together to strengthen Canadian financial market infrastructure, and thus increase the resilience of the financial system.

In the rest of my remarks, I will highlight some of the principal initiatives under way. Considerable progress has been made, but there is still work to be done.

**Greater participation in the Canadian CCP for fixed-income repos is essential**

I will start with an initiative that is close to home. Here in Montréal, the Canadian Derivatives Clearing Corporation (CDCC) launched a central counterparty service for the Canadian fixed-income repo market called the Canadian Derivatives Clearing Service (or CDCS) in February 2012. This CCP has been under the oversight of the Bank of Canada since 30 April 2012.1

Repos represent a major source of wholesale funding for financial institutions and are critically important to the functioning and liquidity of other important related markets, such as the market for government bonds. CDCS was developed to facilitate a continuously open repo market, and to help prevent a repeat of the severe liquidity crunch that occurred in this market during the recent financial crisis.2

In the short time since it began operations, CDCS has expanded its product offerings, added participants and seen a steady increase in the average daily value cleared through the system. This is all to the good, but not enough. At present, just 10 to 15 per cent of repo transactions are cleared through CDCS – not nearly enough to ensure that the markets remain open in times of stress.

While most of Canada’s major banks and securities broker-dealers are currently CDCS participants, the majority of Canadian repo trades involve at least one non-CDCS participant on one side of the transaction.3 Since CDCS cannot clear a trade unless both counterparties are participants, it will not be able to materially increase the proportion of the repo market that it serves without capturing a broader set of participants.

Clearly, the challenge is getting more participants on board, but several issues must be addressed before some institutions can participate given the current CDCS model. For instance, smaller dealers may not be willing or able to meet daily operational demands or to actively participate in actions necessary to manage exposures in the event of a default. And large buy-side firms, in particular, pension funds, do not currently meet all the requirements for direct membership.4 Pension fund participation is especially important because these institutions are on one side of a large proportion of repo transactions.

CDCC and its members are already working to find a way for both of these groups to participate.

CDCC is considering how to set up a mechanism that would allow smaller firms to clear indirectly – that is, through a direct member that provides clearing services. This is a tried-and-true approach, one that is well understood by financial institutions.

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1 In addition to fixed-income and repo transactions, CDCS centrally clears options and futures traded on the MX and over-the-counter (OTC) equity options.


4 CDCS participants must be either a member in good standing of an exchange recognized in a Canadian province, or a bank to which the Bank Act (Canada) applies. Pension funds generally do not fall into either of these categories.
Current CDCS participants have a role to play in facilitating this initiative. They need to consider whether or not to provide clearing services to smaller institutions and, if they choose to do so, to develop the capacity to take on this business. They will also need to determine how to manage their exposure to their customers.

For large pension funds, indirect membership may not be a viable option, given the concentration of risk that would result if these entities cleared through a single direct participant. CDCC and the industry are examining an approach that would allow these entities to directly participate in the CCP in such a way that risk is managed without requiring them to be subject to the same mutualized loss-sharing arrangements. It is important that efforts to determine the exact details of how this arrangement could work in practice be pursued.

The Bank of Canada strongly supports the work currently being undertaken by CDCC and the Investment Industry Association of Canada to increase participation in the CCP. The Bank will continue to be involved to ensure that the solutions put in place meet our high standards for risk management.

While there are costs to participate in CDCS, the benefits are substantial, and they are reaped in both normal times and in times of stress. Not only will the Canadian financial system benefit from more repos being centrally cleared, but both current and future participants will benefit from increased netting efficiencies and reduced counterparty credit risk.

These benefits will be further enhanced as the industry develops a generalized collateral repo product, in which any security in a predetermined basket of instruments can serve as collateral. This product should increase the liquidity and efficiency of the Canadian repo market.

The Central Clearing of OTC interest rate derivatives is increasing

Let me now turn to another effort to strengthen financial stability through the use of CCPs. I’m sure you are all well aware of the G-20 leaders’ commitment that all standardized over-the-counter (OTC) derivatives be cleared through CCPs.

Canadian authorities, like those of most member countries of the Financial Stability Board (FSB), decided last autumn that we would allow our institutions to meet the G-20 commitment by using any CCP recognized by Canadian authorities, including global CCPs. While a CCP in Canada would provide the most straightforward oversight and capacity for Canadian authorities to intervene to mitigate risks, if needed, there are many advantages to the global solution. Global CCPs better promote liquidity and efficiency in what is largely a global OTC derivatives market. A global CCP makes the financial system more robust to shocks and allows derivatives users to appropriately manage their risk.

The result though is that, globally, there will likely be a concentration of transactions in a small number of CCPs – these are truly becoming international systemically important financial institutions. To address this concentration of risk and to ensure that local authorities have the tools needed to protect local markets, the FSB developed safeguards for global clearing.

These safeguards mean that global CCPs must:

- provide fair and open access;

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5 This does not preclude the development and use of a local CCP in the future.
Now, when it comes to OTC derivatives, the most systemically important market for Canada is the interest rate derivatives market; and the largest global CCP for this market is LCH. Clearnet’s SwapClear service, located in London. The Bank is satisfied with the progress being made to implement the safeguards for SwapClear and has joined a multilateral arrangement for oversight co-operation put in place on 14 December 2012 by the U.K. Financial Services Authority.

To be clear, the safeguards have not yet been fully achieved, in particular the development of recovery and resolution regimes for CCPs. Going forward, authorities in Canada will monitor the implementation of the safeguards in any CCP that becomes important to the stability of Canadian OTC derivatives markets.

Canadian institutions have steadily moved their interest rate derivatives transactions to SwapClear.\footnote{The Big Five Canadian banks are direct clearing members at SwapClear.} We expect this trend to continue as Canadian banks satisfy the G-20’s commitment to central clearing.

Indeed, the progress is such that the Bank of Canada now considers SwapClear to be systemically important, and it will become subject to Bank oversight as of 2 April. Designation, which the Minister of Finance agrees is in the public interest, gives the Bank the authority and responsibility to assure itself that SwapClear has appropriate and effective risk controls in place. The Bank believes that the combination of co-operative oversight of SwapClear and the tools that come with designation will provide the Bank with the ability to effectively control systemic risk within this critical market and thereby improve the resilience of the Canadian financial system.

Holding financial market infrastructures to more stringent risk-management standards

The last area of reform that I want to discuss today is the new risk-management standards for systemically important financial market infrastructures. In 2010, the Committee on Payment and Settlement Systems (CPSS) and the International Organization of Securities Commissions (IOSCO) initiated a complete review of their risk-management standards. The goal was to make the standards consistent with current best practices and to reflect the experience of authorities in applying them, taking into account lessons learned from the financial crisis.

The resulting Principles for Financial Market Infrastructures were finalized last year. The new standards are considerably more stringent than the previous ones and sharpen the focus on the control of systemic risk. They place a stronger emphasis on governance, and require FMIs to have comprehensive risk-management frameworks in place and to hold substantially more financial resources.

The Bank of Canada has adopted these Principles and will apply them to the FMIs that it oversees.\footnote{In addition to CDCS, the Bank oversees the Large Value Transfer System (LVTS), Canada’s main electronic funds-transfer system; CDSX, Canada’s securities settlement system and central securities depository; and the Canadian-dollar leg of CLS Bank, which is a global payment system for the settlement of foreign exchange transactions, including those involving the Canadian dollar.} All FMIs – including those in Canada – will need to make improvements to their risk-management practices to meet the new standards. At the moment, each designated FMI is
undertaking a rigorous analysis of its practices against the new Principles, identifying gaps and developing plans to address them. The Bank and other Canadian regulators are working closely with FMIs to ensure timely compliance.

What this means for participants, for you and your firms, is that there will be changes in the FMI’s risk-management practices as they move to meet the new standards. New risk-management practices will mean higher costs for FMIs which will have an impact on participants. In some cases, there will also be higher collateral requirements, but there will be greater assurance that transactions are carried out according to the wishes of participants, in good times and in bad. FMIs will inform their participants of upcoming changes as they work out the details.

We are on our way, but we’re not there yet

So where does this leave us?

Emerging from the crisis, a key element of international reforms to strengthen the financial system was to reinforce FMIs. The goal is to reduce systemic risk and keep essential markets continuously open.

In Canada, we have made much progress by creating a CCP for fixed-income repos and by substantially increasing the share of the OTC derivatives interest rate market that is centrally cleared. As well, we are putting in place new, more rigorous international standards for our FMIs.

It is impressive how much has been accomplished, but there is more to be done.

We recognize that many of the improvements involve costs, in both time and money, for the financial services sector. I do not want to understate the commitment this requires from all stakeholders. But the benefits will greatly outweigh the costs. And now is not the time to stop or slow down. It is essential to continue to invest in financial market infrastructure. With continued investments, we will have the assurance that FMIs will serve us well in the future.