

## **Timothy Lane: Curbing contagion – options and challenges for building more robust financial market infrastructure**

Remarks by Mr Timothy Lane, Deputy Governor of the Bank of Canada, to the Society for Worldwide Interbank Financial Telecommunication Annual Sibos Conference, Toronto, Ontario, 19 September 2011.

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### **Introduction**

Good afternoon and, to our guests from abroad, welcome to Canada.

This conference is taking place at a troubled time. Concerns over sovereign debt have intensified, particularly in Europe's periphery. Economic growth in the United States and other advanced economies now appears to be significantly weaker than expected. In the face of these developments, there has been mounting skepticism in a number of countries over whether policy-makers will be able to do what it takes to address these problems.

The current bout of turbulence, like the financial crisis of three years ago, serves as a reminder of why it is fundamentally important to have a resilient financial system. Periods of market turbulence are a fact of life. In a resilient system, financial shocks are absorbed, creating losses for individual investors, but leaving the system intact. If the system is not sufficiently resilient, however, shocks can be amplified. We saw this in 2008, when losses in a relatively small segment of the U.S. housing market cascaded into a near-meltdown of the global financial system. That process reflected a mixture of frailties – excessive leverage, reliance on forms of liquidity that proved illusory in stressful times, the use of securitized products with risks that were not fully understood, the complex web of counterparty relationships that spread risk and bred fear in core funding markets, and the absence of resolution mechanisms to deal with insolvency in systemically important institutions without endangering the entire system.

In the wake of that crisis, leaders of the G-20 countries launched a broad agenda of reforms. These reforms aim to ensure that financial institutions have adequate levels of loss-absorbing capital and liquidity to cope with periods of market stress; to establish robust financial market infrastructure; and to develop stronger resolution mechanisms for financial institutions, particularly across borders. When implemented, the G-20 reforms will create a more resilient global financial system. Canada will benefit significantly from these reforms. Even though our financial system performed much better through the crisis than those of many other advanced countries, we are certainly not immune to events beyond our borders.

In my talk this afternoon I want to focus on one element of the G-20 reform agenda: building robust financial market infrastructure. That infrastructure includes a number of components: payment and securities settlement systems, trading venues and exchanges, information and price providers, and collateral management systems. For the most part, these key elements not only functioned well during the crisis, they were in fact a source of strength. Just after the onset of the crisis, the CLS Bank, which settles foreign exchange transactions, successfully processed roughly three times its normal daily volume of transactions; and CDSX, which clears and settles trades in Canadian-dollar-denominated debt securities, handled double its normal volume. Efficient clearing and settlement systems such as these were able to perform a stabilizing role during the crisis. That is exactly what they were intended to do.

The crisis did, however, illuminate some key areas in which financial market infrastructure needed to be broadened and put to better use. Here, I am talking about expanding the use of central counterparties or CCPs to replace bilateral clearing and settlement for a number of core markets. In my presentation today I am going to review how bilateral clearing contributed to contagion during the financial crisis, describe why greater use of resilient

financial infrastructure is needed and tell you how CCPs will strengthen the financial system. CCPs are of particular interest to us at the Bank of Canada because we are responsible for overseeing systemically important financial infrastructure that affects the stability of the Canadian financial system and, therefore, the health of the economy.

### **What happens when robust market infrastructure is not in place?**

During the crisis, we had two stark illustrations of why greater use of financial infrastructure is needed. The crisis did not start or end with the following shortcomings in bilateral clearing and settlement, but they were channels through which problems in an obscure part of the U.S. housing market cascaded into a global crisis. Although these are familiar stories, they illustrate the need for change.

One instance is the near-failure of Bear Stearns. Bear Stearns wasn't one of the largest investment banks in the United States, but it was one of the most leveraged, with large broker-dealer and proprietary operations. It played a pivotal role in the global repo market, holding collateral for transactions and acting as a counterparty for repo financing. When the firm's mounting losses, extensive leverage and reliance on potentially unstable short-term funding markets threatened to cause its failure, there was a risk that Bear Stearns' collapse would cause serious disruptions in the repo market – a core funding market. Anticipations of disruptions in Bear Stearns' operations led cash investors and collateral providers alike to withdraw, initiating a process of leverage reduction through asset sales. Funding conditions for collateral providers deteriorated sharply, and the liquidity and efficiency of related markets were severely affected. In the event, Bear Stearns was rescued and the immediate threat averted, but the danger was real.

A second instance is related to Lehman Brothers and its role as a counterparty in myriad bilaterally settled over-the-counter (OTC) derivatives transactions. Lehman's default and the doubts it raised about the viability of the few remaining investment dealers struck at the heart of both the funding and the OTC derivatives market. The strains broadened to a general evaporation of market liquidity and a retrenchment from risk.

In both cases, a basic problem was counterparty risk associated with financial contracts that are cleared and settled bilaterally. Holders of such bilaterally cleared repos and OTC derivatives were exposed not only to the market risk associated with the position taken in the financial instruments themselves, but also the risk that their counterparty would be unable to honour its commitment. Counterparty risk became a key channel of contagion, posing a major threat to the global financial system. In contrast, some of Lehman's derivatives, notably interest rate swaps valued at \$9 trillion, were cleared through a CCP, which successfully managed the impact of Lehman's failure.

### **What are the objectives for reform?**

At the Pittsburgh Summit, the G-20 leaders moved to put the lessons learned from the crisis into practice. Specifically, they called for all standardized OTC derivatives to be centrally cleared and, where appropriate, traded on exchanges or electronic trading platforms. In addition, all trades, whether centrally cleared or not, are to be reported to trade repositories.<sup>1</sup>

Efforts are under way in a number of countries, including Canada, to establish arrangements for clearing interest rate swaps and other OTC derivatives that were not previously centrally cleared. In Canada, we are also developing a new CCP for repo and fixed-income transactions.

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<sup>1</sup> [http://www.g20.org/Documents/pittsburgh\\_summit\\_leaders\\_statement\\_250909.pdf](http://www.g20.org/Documents/pittsburgh_summit_leaders_statement_250909.pdf)

These reforms will have far-reaching effects on global and Canadian financial markets. The move to CCPs is intended to reduce the complexity of the network and enhance netting efficiencies, and to establish robust risk management practices and clear default procedures. Since CCPs – which interpose themselves between buyer and seller in financial markets – concentrate risk by becoming the counterparty to all transactions, they must have stringent risk-management standards. The use of sufficiently robust CCPs is likely to increase the strength of the financial system. It will also reduce the counterparty credit exposures of major participants, which will be reflected in capital requirements for financial institutions.

To be safely cleared the contracts that CCPs process must, at a minimum, be sufficiently standardized. And the push to standardize OTC derivatives contracts will have important ancillary benefits for how these markets function. Standardization will create more liquid, transparent and efficient markets for the contracts. It will also help set the stage for shifting trading onto exchanges or electronic trading platforms.

### **The challenges of the G-20 reforms**

The G-20 objectives are necessary and appropriate, but achieving them is going to be challenging, for several reasons.

First, they may require the development of new CCP services, a complex and time-consuming process. We are experiencing this in Canada in connection with the work now underway to build a CCP for repos and fixed-income transactions. The Canadian industry selected the Canadian Derivatives Clearing Corporation (CDCC) to develop this facility.

The process of creating a CCP for repos in Canada, although not yet complete, has been instructive. Two fundamental requirements are that the CCP has adequate and robust risk-control systems and the capacity to implement them. Operational issues, such as developing and testing the relevant software – both for the CCP and its participants – and its interaction with existing systems, also take time to resolve.

The challenges of establishing a CCP for repos are considerable. But at least the overall parameters are clear. Fulfilling the G-20 commitments on OTC derivatives is a more complex task, requiring coordination among many stakeholders, with a wide range of possible outcomes.

### **The complexity of clearing OTC derivatives**

Central clearing of OTC derivatives transactions will reduce systemic risk by decreasing the likelihood that one failing institution will bring down others. But, given the globalized nature of the industry, there are several ways to make the transition to CCPs. Clearing could take place on large international CCPs serving the global market (such as ICE Clear, CME or LCH.Clearnet), or new central clearing services could be established in individual countries.<sup>2</sup> We are seeing a variety of arrangements emerging. In some countries, such as Japan and Singapore, new central clearing services are under development. Other countries are likely to rely on offshore CCPs or – as in Canada – are still evaluating their options. The task before us is to ensure that this emerging configuration of CCPs achieves a significant reduction of systemic risk, both at the global level and for Canada. The G-20 commitment sets a very tight timetable for developing a strategy to meet this challenge.

The selection of an appropriate CCP strategy for OTC derivatives is a particularly important issue for Canadian market participants and regulators. To put it in perspective, Canadian-

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<sup>2</sup> Five Canadian banks currently qualify to be direct participants in LCH.Clearnet, the primary CCP for interest rate swaps. And interest rate swaps are the most important OTC derivatives products in the Canadian market.

dollar OTC derivative contracts have a notional outstanding value of just under \$9 trillion. Moreover, OTC derivatives, especially interest rate swaps, are closely connected via arbitrage and financing relationships with other financial markets in Canada, including other derivative, bond and money markets. That's big enough and connected enough that any disruptions would likely result in significant reverberations throughout our markets. At the same time, these derivatives markets are innately global: for example, over half of the trading in Canadian-dollar interest rate products involves at least one party that is not a resident of Canada; and Canadian-dollar OTC derivatives products are only about 2 per cent of the global market. Whatever solution we adopt must come to grips with both of these realities – the systemic importance of OTC derivatives to Canada and the globalized nature of the market.

### **Large offshore CCPs serving multiple markets**

Given the globalized nature of the market, clearing through large offshore CCPs has important advantages. These CCPs can benefit from economies of scale and, potentially, provide greater scope for netting and risk mutualization.

A key concern, however, is access. Until recently, access was limited to the largest financial institutions with global reach. Access is now being broadened, but the global dealers – the so-called “G-14” – have considerable entrenched advantages in settlement costs. Those institutions that do not have direct access to offshore CCPs would have to clear indirectly through one of the direct clearing members.

The primary rationale for restricting access is risk control. Direct clearing members of a CCP are required to share the losses and take over positions in the event that another member fails – which requires that they have large financial resources and a wide scope of activities.

But here lies an important challenge. In carrying out the G-20 mandate requiring all OTC derivatives to be centrally cleared, it is essential to ensure that we do not unduly concentrate risk in a relatively small number of institutions that are direct clearing members of global CCPs. These were the very institutions that spread and amplified contagion through the global financial system in 2008.

This potential concentration of risk has several dimensions. First, if one of the direct clearing members fails, that poses risks to the CCP and to the other direct clearing members. Second, the failure of one of these large institutions would pose risks to institutions that clear indirectly through it. Third, the offshore dealers may be able to use their dominance in direct clearing to heighten their competitive edge in other financial market activities, such as trading and other investment banking services. That, in turn, could lead to greater concentration of business, and of risk, across a whole range of activities.

So if we are going to rely on central clearing through large offshore CCPs, direct access has to be broadened in a manner compatible with ensuring that these CCPs have robust risk controls. Indeed, financial market infrastructure standards are now being revised to ensure that CCPs and their members can withstand such shocks.

There is also a need to ensure that indirect clearing is safe and efficient. Here, a key priority is to ensure that these indirect clearers' positions are protected through appropriate segregation of collateral and portability of positions in the event that the direct clearer fails.

The Bank of Canada is working at the international level, in co-operation with our colleagues at other Canadian agencies, to design measures for the safe and effective use of offshore CCPs no matter where they are located.

## **Domestic CCPs**

While offshore CCPs may be a suitable choice for some jurisdictions, a few countries have decided to develop their own CCPs, particularly for products that can have important repercussions on their domestic financial systems.

So what would be the advantage of building a Canadian CCP to clear OTC Canadian-dollar interest rate derivatives? First and foremost, it would be more straightforward for Canadian authorities – including the Bank of Canada – to exercise our responsibilities for overseeing systemically important financial infrastructure if a CCP were located in Canada. We would also be better placed to manage a crisis and provide emergency liquidity support for a Canadian CCP should that be necessary. While cooperative arrangements for oversight and crisis management of offshore CCPs can be developed, and are currently being discussed at the international level, this work is still in progress. Such arrangements will need to be adequate to enable the Bank to fulfill its responsibilities for overseeing and safeguarding the stability of the Canadian financial system.

A domestic CCP could offer other advantages as well. It could, in some situations, reduce – although certainly not eliminate – the impact on Canadian markets of financial shocks from abroad. It could be tailored to the needs of the Canadian financial system and support the development of market expertise and innovation.

The key questions are whether a domestic CCP would be economically viable and whether it would support financial stability and efficiency. We know that much of the OTC market is global in nature and that, for a Canadian clearing service for OTC interest rate swaps to be a success, wide participation of both Canadian and global firms is necessary. Without that, the market could become fragmented, market liquidity could decline and the domestic CCP's own risk controls could be undermined. Yet another key question is whether a domestic CCP would adequately address the clearing needs of Canadian financial institutions. As a related point, a Canadian CCP would need to be reasonably cost-effective; otherwise it could push transactions offshore, undermining its potential benefits.

Developing links between CCPs in different jurisdictions could help to minimize fragmentation of the market. But establishing such links would be a complicated undertaking, and risk within the links would have to be properly managed. In practice, while a few CCP links exist and are in operation (for cash markets, in particular), there is not yet a generally accepted model that could be used for the establishment of links among CCPs clearing trades in OTC derivatives.

In assessing the best clearing strategy for Canadian OTC derivatives, the Bank of Canada is moving forward on two fronts. First, we are working with our domestic and international counterparts to ensure that global CCPs, particularly those of systemic importance to Canada, are able to deliver the intended benefits of financial stability. Second, we are actively exploring the possibility of developing a Canadian-domiciled CCP, in collaboration with the financial industry and other public policy institutions. We must choose the arrangements that best support the stability and efficiency of Canada's financial system.

## **Conclusion**

We are in the midst of an enormous financial regulatory transformation, easily the most sweeping set of reforms in 70 years. Not only are the issues complex, they present cross-border challenges that must be addressed at both the global level and in Canada. The Bank supports the objectives of the G-20 reform agenda. Reform is critical if we are to prevent a crisis similar to that of 2008 from occurring. However, we must be alert to the risk of unintended consequences. At the Bank of Canada, we are working actively, both here and internationally, to ensure that the proposed reforms to the global and domestic financial infrastructure substantially improve the functioning of the financial system and significantly reduce systemic risk.