

FINANCIAL SYSTEM

The Bank of Canada promotes the safety and efficiency of the financial system by providing unique banking services, including a lender-of-last-resort facility, by overseeing key domestic clearing and settlement systems, by conducting and publishing research, and by providing advice to various domestic and international policy-making bodies.

The activities of the financial system function over the past four years have been guided by the Bank's medium-term plan that ended in 2006. The Bank has improved its capacity to carry out the oversight of major clearing and settlement systems. It has conducted research on the operations of clearing and settlement systems, the risks associated with increased cross-border linkages in securities markets and securities-settlement systems, macrofinancial stress testing, the monitoring of systemic risk, forecasting financial stress, and the workings of a broad range of financial markets. This work has supported the Bank's policy advice on legislation, regulations, and practices affecting financial institutions, financial markets, and financial infrastructure arrangements. The Bank has led improvements in the continuity

of operations in critical parts of the domestic financial system and has reduced its operational risk in the provision of payment services and other related banking activities. It has also played a leadership role in bringing forward and promoting proposals to improve the safety and efficiency of the international financial system.

In 2006, the Bank's analysis and research focused on the risk and efficiency issues facing the domestic financial system. The Bank also participated in multi-country groups to address issues related to the safety and efficiency of the international financial system, including the reform of the International Monetary Fund to reflect global economic realities.

Promoting Safety and Efficiency in the Financial System

The Bank supports financial system efficiency by conducting and publishing research and by providing advice to domestic and international policy-making bodies. It works with other regulatory and public sector agencies, financial sector participants and their associations, and academics. During 2006, research was concentrated on the transparency of fixed-income, derivative, equity, and foreign exchange markets; on conducting research on macro-financial stress testing and the assessment of potential risks posed by cross-border linkages among clearing and settlement systems; and on examining the productivity and efficiency of the Canadian banking system.

In 2006, the Bank continued to actively support work that promotes international financial stability. It played a leadership role in the international debate on the reform of international financial institutions, particularly the International Monetary Fund. The Bank's work reflects a desire for the IMF to remain a key player in international financial matters and a need to realign IMF operations with changing global economic realities. The Bank has carried out research and analysis on the governance of the IMF, as well as its surveillance and lending activities. This has involved joint studies with the Department of Finance and other central banks. This work has been underpinned by collaborative research with the Bank of England and has been communicated in international forums and in articles aimed at the policy-making community. In addition, the Governor

of the Bank of Canada addressed the Executive Directors of the IMF on its potential reform.

The Bank also participates in international groups, such as the G-7 and G-20, the Financial Stability Forum, and several committees and working groups of the Bank for International Settlements. These groups address a wide range of topics, including assessments of potential risks to the financial system; the oversight and development of payments systems; arrangements for continuity of operations for key parts of financial systems in a cross-border context; issues associated with changes in asset allocation by pension funds and insurance companies; housing finance; and the consequences of China's emergence as a major economic power and its integration into world trade and other cross-border arrangements. The Bank also continues to provide technical assistance to other countries by participating in various IMF activities.

In response to international developments, changing perceptions of best practices, and domestic imperatives, the Bank continues to work with the operators and participants of systemically important Canadian clearing and settlement systems in their efforts to enhance arrangements for continuity of operations. These systems are at the centre of Canada's financial system, and serious economy-wide repercussions could arise if their operations were not extremely reliable. In 2006, the operators of these systems took further steps to make their continuity of operations more robust by locating business staff at separate sites and by improving their ability to recover from

Canada's Systemically Important Clearing and Settlement Systems

All systemically important clearing and settlement systems processed record daily volumes and/or values during 2006.

Large Value Transfer System (LVTS):

Operated by the Canadian Payments Association. Handles large-value or time-sensitive Canadian-dollar payments. Average daily number of transactions: 19,000. Average daily value of transactions: \$166 billion. Records for daily volume and value were registered in 2006: 31,000 transactions and \$253 billion in value.

CDSX: Operated by the CDS Clearing and Depository Services Inc. Settles virtually all debt and equity trades in Canada. Average daily number of trades settled: 391,000. Average daily gross value of trades settled: \$232 billion. A record daily volume was registered in 2006: 684,000 transactions.

CLS Bank: Operated by CLS Bank. Settles foreign exchange transactions in 15 currencies. Average daily number of instructions settled: 252,000. Average daily value settled: US\$2.7 trillion. Records for daily volume and value were registered in 2006: 502,000 instructions and US\$5.5 trillion in settled instructions.

severe operational disruptions more quickly than the current target of two hours.

The Bank is the sole provider of unique services to these systems and continued to move on two fronts to strengthen its ability to supply these services on an extremely reliable basis. The first involves the multi-year redevelopment project

to modernize both the business application and the supporting infrastructure for providing banking services to financial institutions.

While completion of this project was expected in 2006, the need for additional testing of the business application and the challenges experienced in setting up the required infrastructure have postponed the planned implementation. The Bank also continued to examine its own arrangements for continuity of operations. In 2005, the Bank completed its three-year effort to improve the ability of its backup site to respond effectively to serious operational disruptions. Testing during 2006 revealed some shortcomings that are being addressed as a high priority.

In addition, the Bank has continued to communicate its views on the crucial role of systemically important clearing and settlement systems to provincial organizations responsible for determining the priority of these systems to access essential inputs such as hydro, diesel fuel, or municipal services during a seriously disruptive event. It also worked with these organizations on this issue by, for example, participating in exercises to simulate the management of shortages of critical inputs.

Under the Payment, Clearing and Settlement Act (PCSA), the Bank is responsible for the oversight of systemically important clearing and settlement systems. These systems enable the daily transfers of funds and other financial assets worth hundreds of billions of dollars, such as foreign exchange or securities, among their participants or among the customers of system participants. The Bank's objective is to be satisfied that the risk-control mechanisms in these systems virtually eliminate the possibility

that a disruption in their operation, caused by a participant failure or otherwise, could have severe repercussions across the financial system and the economy as a whole.⁴

The focus of the Bank's oversight activities during 2006 was on: (i) implementation of a memorandum of understanding with the Canadian Payments Association that describes how the two organizations intend to work together towards the common goal of a safe

and efficient large-value payment system; (ii) analysis of the impact of the corporate restructuring of The Canadian Depository for Securities Limited on the risks and risk-containment mechanisms in CDSX; and (iii) continuing joint work with the supervisor of Canadian banks to bring about greater use of the CLS Bank by these banks for the settlement of foreign exchange transactions, which is now considered best practice for mitigating foreign exchange settlement risk.



Deputy Governor Pierre Duguay (left) and Guy Legault, President and CEO of the Canadian Payments Association, sign memorandum of understanding, November 2006.

4. See "The Bank of Canada's Role in Clearing and Settlement Systems," *Financial System Review* (June 2006)



Meeting of the Financial System Review Steering Committee

Conducting and Communicating Research

Promoting an active debate and a public policy focus on issues affecting the financial system is a key component of the Bank's work. It publishes its semi-annual *Financial System Review* and hosts conferences and workshops to raise awareness and promote discussion of financial system issues. The *Financial System Review* has evolved since it was first published in December 2002. A survey of readers conducted in 2006 suggests that, overall, they are satisfied with the publication. Nevertheless, the Bank intends to sharpen the *Review's* focus over the

next few years. Beginning in June 2006, the Bank decided to use the *Financial System Review* as the primary vehicle for reporting on its oversight activities related to the design and operation of systemically important clearing and settlement systems.

In 2006, the Bank held workshops on topics related to the functioning of financial markets, including a joint workshop with the Norges Bank on the microstructure of foreign exchange and equity markets. A conference on fixed-income markets was held in May 2006. A joint workshop with the Department of Finance examined IMF-related issues, and



the Bank actively pursued these topics with other central banks and at a variety of conferences. The Governor also continued to host quarterly meetings of heads of regulatory authorities in securities markets. The Bank made submissions to the Investment Dealers Association's Task Force to Modernize Securities Regulation in Canada and to the Canadian Securities Administrators on issues related to securities markets.

The Bank's research addressed such topics as

- modelling LVTS payment activity to assess trade-offs between liquidity and collateral

costs and to assess the impact of a participant default in this system

- the development of tools to assess risks in the financial system and further work on approaches to macrofinancial stress testing
- continued analysis of how Canadian banks manage foreign exchange settlement risk
- the market microstructure in fixed-income and foreign exchange markets
- the efficiency of the Canadian banking system

Much of this work was published as working papers or in economic journals.