Financial System Review

Highlights—June 2009

Risk Assessment[1]

Policy-makers around the world met the intensification of the global financial crisis at the end of 2008 with a forceful response aimed at restoring confidence in the global financial system, promoting the flow of credit, and supporting economic activity.

Although some degree of confidence has returned in response to these initiatives, and the functioning of credit markets has clearly improved, the global financial system remains under significant stress. The ongoing dislocations in financial markets are being exacerbated by the unusually deep contraction in global economic activity triggered by the financial turmoil.

Despite the severe impact of the global crisis, the Canadian financial system has continued to perform well compared with those of other countries. There have been no bank failures in Canada, nor have Canadian banks required any capital from the government. While wholesale funding conditions proved difficult towards the end of 2008, spreads between bank funding costs and government yields have since narrowed markedly.

As outlined in the April 2009 *Monetary Policy Report*, the most probable outcome is for a gradual improvement in global financial markets and credit conditions in Canada as the various international policy initiatives gain traction. The purpose of this report is NOT to focus on the most likely future path for the financial system, but rather to provide an assessment of downside risks that, although low-probability events, could generate stress on the Canadian financial system.

In the December 2008 *Financial System Review* (FSR), five key sources of risk to the stability of the Canadian financial system were identified. Those remain the key risks facing Canada's financial system. The following analysis explores how those risks have evolved in the first half of 2009, with Table 1 pulling together the assessments of the Bank of Canada's Governing Council.

1 This section represents the collective judgment of the Bank of Canada's Governing Council on the key risk and vulnerabilities bearing on the stability of the financial system.

The overall level of risk to the Canadian financial system is judged to be broadly unchanged since the December FSR.

Table 1: Changes in the Key Risks to the Canadian Financial System

Risk	Direction over the past six months
1. Funding and liquidity	decreased
2. Capital adequacy	decreased
3. Household balance sheets	increased
4. Global economic downturn	increased
5. Global imbalances and currency volatility	unchanged
Overall risk	**unchanged**

Key Risks

Funding and liquidity

The crisis of confidence that disrupted global financial markets in late 2008 was less acute in Canada, but still produced severe strains in domestic wholesale funding markets. This raised the risk that a delay in the return of confidence and more normal financing conditions would aggravate adverse feedback between the financial system and the real economy.

Since the December FSR, policy actions of the Bank of Canada and the Government of Canada have gained considerable traction, helping to reinforce the improvement in domestic funding conditions for financial institutions as the global financial crisis subsided. Market-making activity in Canadian financial markets has also been recovering.

Capital adequacy

Canadian banks are exposed to the risk of a marked deterioration in economic conditions, which would depress

earnings and generate losses in their household and corporate loan portfolios. The macroprudential risk is that their capital buffers may not be allowed to play their intended role in absorbing these losses because of market pressures to maintain inordinately high capital ratios. This could force banks to curb balance sheet growth, causing a tightening of credit conditions that would reinforce the negative impact of the economic downturn on the financial system.

Since the December FSR, markets seem to have increasingly discounted the risk of an extreme adverse outcome, in light of the aggressive international policy response. This should also relieve some of the market pressure on Canadian banks to maintain high capital ratios in the event of a marked deterioration in economic conditions.

Household balance sheets

The vulnerability of Canadian households to adverse shocks to wealth and income has risen in recent years as aggregate debt levels have grown relative to income. The risk is that a shock to economic conditions could be transmitted to the broader financial system through a deterioration in the credit quality of loans to households.

Against the background of a sharper-than-expected downturn in the economy, developments since the December FSR suggest some further weakening in the financial health of the Canadian household sector.

The Bank of Canada has conducted a partial simulation exercise to estimate the impact on household balance sheets of a more severe economic downturn than currently envisaged, which would increase the unemployment rate to 10 per cent of the workforce. The results indicate that the associated rise in financial stress among households would lead to a significant increase in losses for financial institutions, even though a large share of mortgage debt is insured.

The potential for substantial credit losses on Canadian household loan portfolios, which could transmit stress to the broader financial system, remains a low-probability risk.

Global economic downturn

The risk of a deep and prolonged global recession, as identified in the December FSR, has now partially materialized.

As outlined in the April 2009 *Monetary Policy Report*, our base-case projection for global economic growth has been revised down. In light of the weaker baseline projection for the global economy, the impact on the Canadian financial system of a greater-than-expected downturn in the global economy is judged to have increased relative to the December FSR.

Global imbalances and currency volatility

Economic conditions in advanced economies have recently contributed to a reduction in the size of global imbalances, although this improvement appears more cyclical than structural in nature.

To the extent that the international policy response to the crisis does not help foster a sustained rotation of demand, away from excess consumption in the United States and towards internally generated sources of demand in the developing countries of Asia, there remains a risk that the eventual adjustment of exchange rates could prove sharp and disorderly.

Such rapid shifts in exchange rates and asset prices would adversely affect Canadian businesses and financial institutions.

Policy Actions and Assessment

In summary, the global financial system has started to emerge from its most severe crisis since the 1930s. The rapid implementation of the principles set out in the G-20 leaders' summit communiqué will be crucial to making further progress in restoring the normal functioning of the financial system and supporting the economic recovery.

The Bank of Canada has continued to provide significant liquidity to the financial system through its expanded lending facilities. A number of new initiatives to support the functioning of the financial system have also been announced by the Government of Canada under the Extraordinary Financing Framework component of its Economic Action Plan.

The Bank of Canada and Canadian regulatory authorities also remain committed to ongoing multilateral work aimed at more fundamental reform of the international financial architecture. This includes measures to improve transparency, widen the perimeter of regulation, and adopt a macroprudential approach to regulation. Further analysis is needed to guide implementation.

Reports: Procyclicality in the Financial System

Canadian authorities are participating in international efforts to study and, where appropriate, mitigate procyclical behaviour in the financial system. The reports in this special section of the *Financial System Review* each provide an overview of a particular topic relevant to this work.

Procyclicality and Bank Capital deals with the possibility that pressures on bank capital may influence the willingness of banks to extend credit. This might occur if there is a tendency to reduce capital ratios during an upturn, owing to a perceived reduction in risk, and to raise them during a downturn, exacerbating the slowdown in economic activity. The procyclical effects arising from current rules for determining bank capital could be mitigated by counter-cyclical capital buffers, which would increase capital during an upturn but allow it to fall when economic and financial conditions deteriorate.

Loan-loss provisions represent another avenue through which procyclical tendencies may emerge. Volatility in loan-loss provisions can affect bank capital. ***Procyclicality and Provisioning*** examines the conceptual issues surrounding this channel and presents evidence on its historical impact on capital. It concludes that provisioning is unlikely to be a major factor contributing to the procyclicality of capital.

Leading up to the crisis, leverage ratios for Canadian banks, which are subject to a ceiling specified by the Canadian regulator (OSFI), were generally lower than those of their peers. ***Regulatory Constraints on Leverage: The Canadian Experience*** discusses how this ceiling may have helped to limit the buildup of risk taking during the upturn, thus reducing vulnerabilities and procyclical behaviour in the downturn.

Procyclicality and Value at Risk examines the means whereby the extensive use of value at risk (VaR) to measure capital requirements for the trading book may have reinforced procyclicality in the financial system. Several potential avenues for mitigating this effect are discussed, including "through the cycle" approaches to estimating VaR.

Margins, or haircuts, are typically applied in financial transactions to provide a measure of protection from exposure to market risk. As discussed in ***Procyclicality and Margin Requirements***, these margin rules are inherently procyclical and may exacerbate volatility in markets. There are different possible approaches to mitigating this source of procyclicality, including making margin rules less dependent on near-term market conditions.

Compensation practices at large financial institutions potentially reinforce risk-taking behaviour by embedding incentives that lead to a focus on short-term financial returns. ***Procyclicality and Compensation*** compares the stylized facts regarding the compensation arrangements at major Canadian and U.S. financial institutions.