



**Remarks by Mark Carney  
Governor of the Bank of Canada  
to the Regina & District Chamber of Commerce  
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CHECK AGAINST DELIVERY

## **From Green Shoots to the Harvest: Comments on Financial Stability**

It is a pleasure to be back in Saskatchewan. This great province has been one of the fastest-growing parts of the country in recent years, benefiting from increasing diversification into biotechnology, alternative energy sources, and carbon-management solutions, among other industries.

Today, I will refer to the traditional backbone of this economy: agriculture. I do so because lately there has been much talk of “green shoots” in the global economy. From the initially careful references to data that suggested a slowing of the rate of decline in global activity, the use of the term “green shoots” has quickly evolved. Some now refer to green shoots as if the global recovery is a foregone conclusion or even as if sustainable growth had already begun.

Would that it were so easy. Saskatchewanians know that it is a long, anxious time between the appearance of seedlings and the harvest. Much hard work remains, and external forces can profoundly influence the outcome: too little or too much rain, hail, pests, and disease can all frustrate even the most promising beginnings. And, in the end, global forces of supply and demand determine the prices received. Old adages usually contain great wisdom: Just as you don’t count your chickens before they are hatched, we shouldn’t presume that green shoots today guarantee a bumper crop tomorrow.

### **Financial Stability and the Bank of Canada**

I want to extend this analogy to provide some perspective on recent developments in Canadian financial stability. Financial stability is the resilience of the financial system to unanticipated adverse shocks. This resilience determines the extent to which Canadian households and businesses have access to the credit they need at appropriate terms and conditions.

While our financial system is one of the soundest in the world, the ferocity of the once-in-a-lifetime global financial tempest has affected all Canadians, regardless of their location or occupation. So, does our financial system still leave us well positioned for our green shoots to mature into a viable crop of summer wheat?<sup>1</sup>

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<sup>1</sup> Our financial system is only one of the factors that influence the outlook for growth and inflation in Canada.

The Bank of Canada is well placed to make this judgment. As part of our commitment to promote the economic and financial welfare of Canada, the Bank actively fosters a stable and efficient financial system. The Bank constantly assesses the major risks to the soundness of our system, and helps to develop policies to mitigate them. In essence, we worry not only about prospects of external shocks (the equivalent of weather or crop prices), but also about the buffers that our banks, businesses, and households have (the equivalent of the financial reserves farmers need to carry in case the harvest disappoints).

Twice a year, the Bank publishes its *Financial System Review*, or FSR—the most recent edition appeared earlier this week. My talk today will draw on that analysis and assessment. I will concentrate on three risks, in particular: 1) the liquidity and funding positions of our banks, 2) the adequacy of their capital, and 3) the financial health of Canadian households. I will conclude with a few observations on the economic outlook.

### **Assessment of Overall Financial Stability**

Since the autumn, the global economy has been in a deep and synchronized recession that was triggered by the worst financial crisis since the Great Depression. In recent months, financial market conditions have improved noticeably and further, gradual progress is likely as numerous international policy initiatives gain traction. Equity markets have seen strong gains in recent months (see Appendix, [Chart 1](#)), and credit markets have also rallied ([Chart 2](#)). While there is still a long way to go before economic and financial conditions return to normal, markets seem to be turning their backs on worst-case scenarios. The panic that engulfed global financial markets last fall is over.

Developments in Canadian financial stability over the past six months reflect the competing influences of improved financial market conditions on the one hand and a deterioration in the economic outlook on the other. Overall, the level of risk to the Canadian financial system is judged to be broadly unchanged since last December.

I would sound a note of caution familiar to those who work the land. We are well prepared but will still be tested. While the strong position of our banks has improved further in recent months and the balance sheets of Canadian households remain relatively sound, the global recession will mean that these reserves will be drawn upon in the months ahead.

Let me now turn to the three risks that I cited a moment ago, starting with liquidity and funding for banks.

### **Liquidity and Funding**

At the heart of the financial crisis was the collapse of wholesale funding markets for banks. Since August 2007, the very short-term interbank and repo markets have been under great strain. During the most intense periods of the crisis around the collapse of Bear Stearns in March 2008 and Lehman Brothers and others in the fall of last year, these markets seized up entirely: Good collateral became unfinanceable overnight, firms failed, and risk aversion across all financial markets skyrocketed.

This crisis of confidence was less acute in Canada, but still produced severe strains in our wholesale funding markets. Heightened uncertainty made counterparties reluctant to extend financing beyond the shortest maturities, resulting in intense funding pressures for

Canadian financial institutions. Banks cut back their market-making activities in order to conserve balance sheet capacity, which further aggravated market volatility. These dynamics raised the risk of an adverse feedback loop between the financial system and the real economy.

The Bank of Canada responded to these pressures by dramatically expanding our liquidity facilities, and the Government of Canada implemented a program to purchase insured mortgages with the help of the Canada Mortgage and Housing Corporation, thereby increasing the access of Canadian institutions to longer-term financing. Reflecting both the strength of our banks and the scale of our actions, conditions in Canada have been consistently better than elsewhere ([Chart 3](#)). Since December, these policies have gained considerable traction, helping to reinforce the improvement in domestic funding conditions as the global financial crisis subsided ([Chart 4](#)).

This improvement has been reflected in a decline in the spreads on bank financing in money markets, a moderate extension of maturities, and a substantial reduction in the cost of term funding for Canadian banks. In addition, policy initiatives have allowed banks to increase substantially their holdings of government securities, which has helped boost their liquidity situation in a capital-efficient way. These improvements have been further supported by strong growth in retail deposits and slowing credit growth ([Chart 5](#)). Market-making activity in Canadian financial markets has also been recovering, although it remains less than satisfactory.

### ***Policy Response***

There are important lessons to be drawn from this experience. The performance of core funding markets during the crisis intensified the financial panic and helped trigger the recession. This is totally unacceptable. As a consequence, one of the Bank of Canada's top priorities is to promote institutional changes to create more robust core funding markets. Promising avenues to break such (il)liquidity spirals include introducing clearing houses, standardizing products, implementing through-the-cycle margining, and ensuring more effective netting. As the ultimate provider of liquidity to the system, the Bank is thinking through whether to adapt its facilities to support continuous private liquidity creation.

### **Bank Capitalization**

Since the crisis began, the capital adequacy of banks around the world has been the subject of intense scrutiny. Concerns moved quickly from bank exposures to U.S. subprime debt on to structured products of all types as the crisis spread and, finally, to more traditional credits to businesses and households as the recession took hold. Concerns about capital adequacy for banks outside Canada were made worse by uncertainties caused by accounting standards, valuation methodologies, and a loss of credibility of the Basel II regulatory capital standard. It was not lost on investors that every single financial institution that failed had a capital ratio well above its Basel II regulatory minimum the day before it went down. As a consequence, investors have demanded ever-higher capital ratios from *all* banks, creating a dynamic that has exacerbated the recession.

In this context, Canadian institutions have benefited from several factors: high initial capitalization (minimums set by the Office of the Superintendent of Financial Institutions are well above the Basel threshold), high-quality capital (with one of the highest proportions of common equity), the clarity provided by a simple leverage cap, low exposure to structured products, and clear valuation and disclosure standards (including rapid implementation of the Financial Stability Forum's enhanced disclosure guidance of April 2008) ([Chart 6](#)).

Writedowns by Canadian banks have been relatively moderate to date, reflecting their conservative lending practices and low exposure to highly impaired asset-backed products. But Canadian banks, as the principal source of finance in our economy, are still 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. In general, this risk is why banks carry high capital buffers.

The macroprudential risk is that these 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. Reflecting the generalized nature of the financial panic, as the crisis unfolded, Canadian banks came under pressure from markets to increase their capital ratios. In response, Canadian banks raised significant additional, high-quality capital from private sources.

The recent improvement in market sentiment has been reinforced by the release in May of the stress-test results for the 19 largest U.S. banks. These tests showed that the amounts of additional capital that need to be raised are manageable—indeed, more than half of the estimated shortfall has already been filled. The results have contributed to a general improvement of confidence in the global banking sector. To the extent that global levels of uncertainty and risk aversion have been lowered, this should also relieve some of the market pressure on Canadian banks to maintain inordinately high capital ratios. It would be welcome if buffers could serve their intended purpose, particularly in light of the extraordinary liquidity and funding support that public authorities have provided to our financial institutions.

### ***Policy Response***

The crisis has undermined the credibility and demonstrated the procyclicality of the current bank capital regulatory regime. This, too, is unacceptable. An improved regime should be dynamic (with buffers and provisions moving through the cycle), simple (including Canadian-style leverage caps), and coherent (consistent with broader initiatives such as moving over-the-counter derivatives onto exchanges).<sup>2</sup> The Bank is working with its domestic partners and is using its positions on the Basel Committee of Banking Supervision, at the Financial Stability Board, and in the G-20 to advance this goal.

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<sup>2</sup> Given where we are in the current crisis, it should also be Augustinian; that is, new requirements should be phased in over time to avoid deepening the recession because of procyclical deleveraging.

In April, G-20 leaders made it a priority to find ways to reduce procyclicality in the financial system (procyclicality in the financial sector resembles the hog cycle, except that the boom-bust nature is further encouraged by regulations, accounting standards, and market practices).<sup>3</sup> To that end, our latest FSR provides detailed analysis of key issues, ranging from reducing the procyclicality of bank capital regimes, compensation packages, and value-at-risk-based risk-management practices.<sup>4</sup> The Bank will continue to devote considerable analytic resources to ensure Canada leads the G-20 effort to reduce procyclicality.

### **Household and Corporate Balance Sheets**

The resilience of our financial institutions is obviously directly affected by the financial resilience of Canadian households and corporations. Canadian firms entered this recession in very strong shape. Corporate leverage is close to an historic low and is substantially below that in other major countries ([Chart 7](#)).

The picture for Canadian households is more mixed. The starting point is relatively strong: The debt-service ratio has been stable over the past year and remains just below its long-term average. In addition, equity in Canadian homes is significantly higher than in the United States ([Chart 8](#)).

However, a deeper-than-expected recession has meant that stresses are rising. Income growth has slowed, and personal wealth levels have been eroded by lower house prices in some regions; credit growth has continued to outpace income growth, contributing to higher debt levels ([Chart 9](#)). At the same time, sharp increases in unemployment are raising the incidence of financial stress among households ([Chart 10](#)). Non-performing household loans and associated provisioning at Canadian financial institutions are thus increasing, although the deterioration in credit quality is being mitigated to some extent by the decline in effective borrowing rates ([Chart 11](#)).

The Bank 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 (which would reduce the Tier 1 capital ratios by about 1 percentage point) for financial institutions, which is well within their capacity to absorb ([Table 1](#)).

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<sup>3</sup> When hog prices are high, more producers opt in to the market. As the product reaches maturity, there is an excess of supply, and prices fall. Given low prices, producers then cut back their production, leading to a shortage and a price increase once again.

<sup>4</sup> This issue of the FSR includes the following reports: “Procyclicality and Bank Capital,” by N. Arjani; “Procyclicality and Provisioning: Conceptual Issues, Approaches, and Empirical Evidence,” by M. Misina; “Regulatory Constraints on Leverage: The Canadian Experience,” by A. Crawford, C. Graham, and É. Bordeleau; “Procyclicality and Value at Risk,” by P. Youngman; “Procyclicality and Margin Requirements,” by N. Kamhi; and “Procyclicality and Compensation,” by É. Bordeleau and W. Engert.

## **The Economic Outlook**

The global economy is in the midst of a major synchronized recession. The Bank expects that growth will resume later this year but that the recovery internationally and in Canada will be more muted than normal. In part, this reflects the need to correct a series of imbalances across and within major economies. The recovery will initially owe much to monetary policy, which has been very aggressive, and to fiscal policy, which is beginning to have an impact. The effects of monetary and fiscal policy will reach full force in 2010. Self-sustaining demand in most economic areas is not yet imminent.

It appears likely that the global economy is entering a period of lower potential growth. The substantial capital misallocation and financial excesses of the boom years will take years to work off. Recognizing the scale of the industrial restructuring and the decline in investment over that period, the Bank has sharply lowered its estimate for Canadian productivity growth and potential growth.

The shifting composition of global growth will have important implications for Canada. The current pattern of U.S. activity, with its weakness in the housing and auto sectors, is proving particularly challenging for our businesses. We expect the U.S. recovery to be relatively subdued compared with historical experience, given its need to reduce excesses, particularly of private debt.

More positively, the greater proportion of emerging-market growth in overall global growth should create new opportunities. Our research indicates that, even in the throes of the crisis, those emerging markets whose demand is most relevant to our exports are also generally the most resilient. These countries can be expected to make up an increasing proportion of global demand. This should provide an important support for commodity prices over the medium term.

The Bank has acted proactively and aggressively to counter the major shocks to the Canadian economy. We eased our policy rate to the lowest possible level – 1/4 per cent – to support private demand and to achieve our 2 per cent inflation target. Conditional on the outlook for inflation, the Bank expects the policy rate to remain at its current level until the end of June 2010 in order to achieve the inflation target. The Bank retains considerable additional flexibility, including unconventional measures, as outlined in the principles-based framework in our April *Monetary Policy Report*.

## **Conclusion**

Despite the global crisis, the Canadian financial system remains resilient. Prior to the crisis, Canadian households, businesses, and financial institutions had not built up the high levels of debt that have made other countries vulnerable. Canadian banks have bolstered their already strong capital ratios with new private funds. Wholesale funding conditions have improved significantly and are among the most competitive in the world. The liquidity of bank balance sheets has improved. In short, our system is well positioned to face the strains of both the current recession and a more muted recovery.

In farming, you are not in full control of your destiny, and your work is never done. Shocks frequently come from above. You may hope for the best, but you must plan for the worst. Even on the eve of summer, you know that it will soon be a long, cold winter, followed by another spring. The cycle begins anew, and the process is renewed as you

constantly innovate by investing in new equipment and crop varieties. Ultimately, you are keepers of the land to pass on to the next generation.

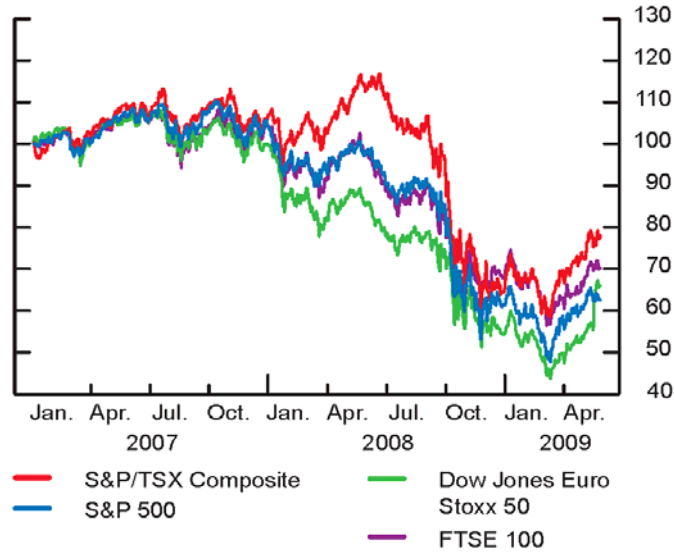
And so it is with financial stability. In a highly integrated global economy, shocks frequently come from abroad. We plan for the worst by trying to build a system that can absorb blows rather than amplify them. Canada has a strong system, but this crisis has proven that even the best is not good enough. Just like farmers, policy-makers need to innovate to make our financial system more resilient and efficient. This means more robust core funding markets, a better bank capital regime, and, more broadly, a series of measures to reduce procyclicality.

The Bank will continue to work with our domestic and international partners to build such a financial system, so that the economic harvest in Saskatchewan and across Canada can be more consistently bountiful.

## Appendix

**Chart 1: Global equity markets are recovering**

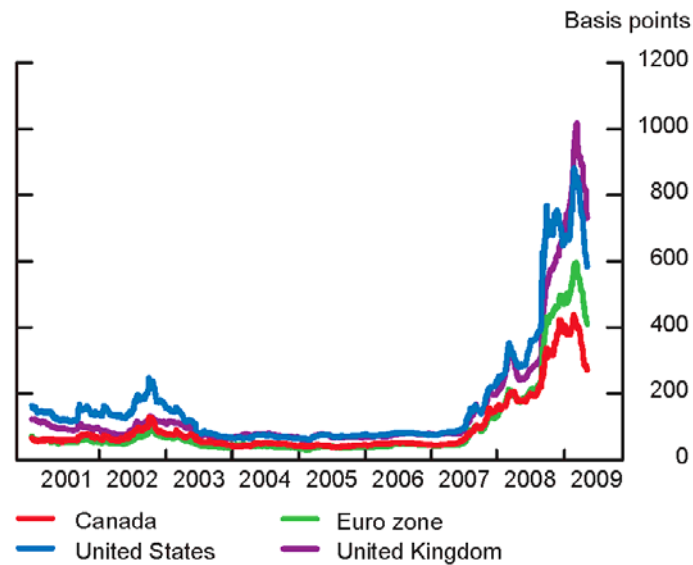
January 2007 = 100



Source: Bloomberg

Last observation: 25 May 2009

**Chart 2: Yield spreads for investment-grade financial issuers are down from historic highs**



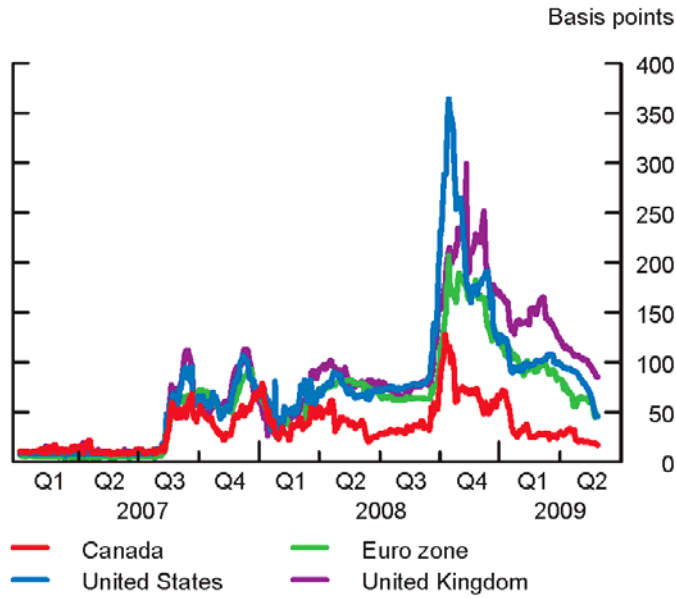
Sources: Bloomberg and Merrill Lynch

Last observation: 25 May 2009



**Chart 3: Conditions in short-term funding markets have improved\***

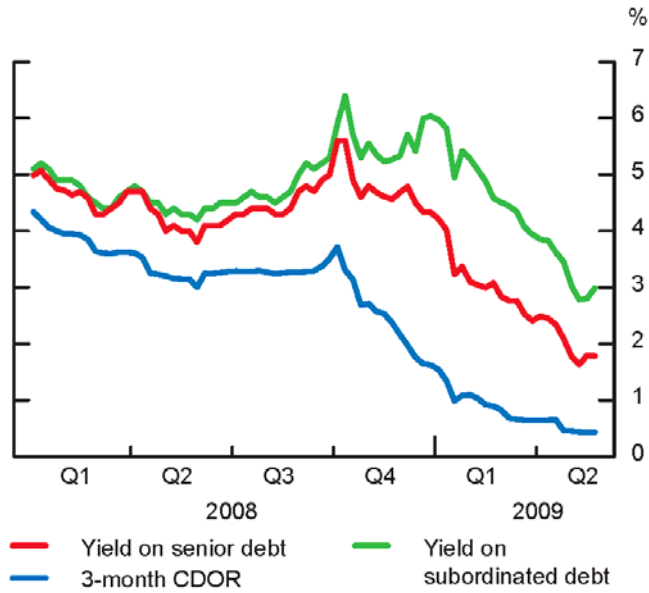
Difference between 3-month interbank offered rates and their respective overnight index swaps



\* U.S. and U.K. LIBOR, EU EURIBOR, and Canada CDOR  
 Source: Bloomberg Last observation: 25 May 2009

**Chart 4: The cost of term funding for Canadian banks has declined markedly**

5-year debt swapped into 3-month floating-rate debt



Sources: Bloomberg, Canadian commercial banks, and Bank of Canada calculations  
 Last observation: 22 May 2009

### Chart 5: Banks have built up their holdings of liquid assets

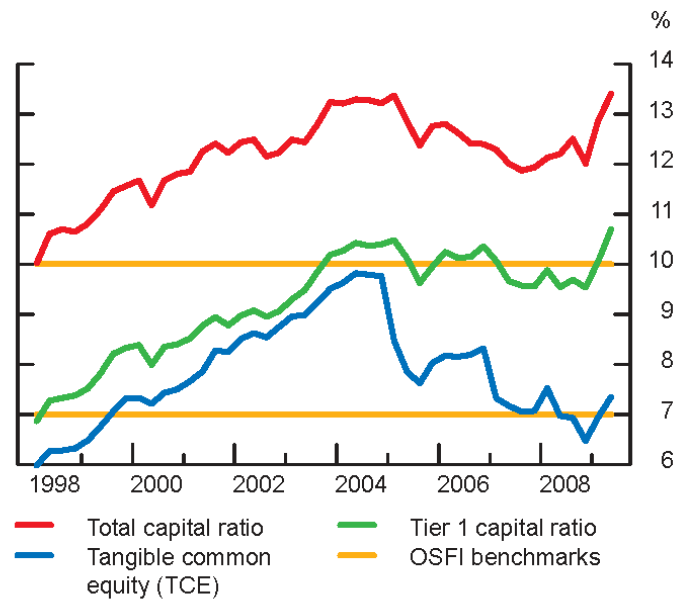
Liquid assets as a percentage of total assets



Source: OSFI

Last observation: 2009Q1

### Chart 6: Bank capital ratios remain high



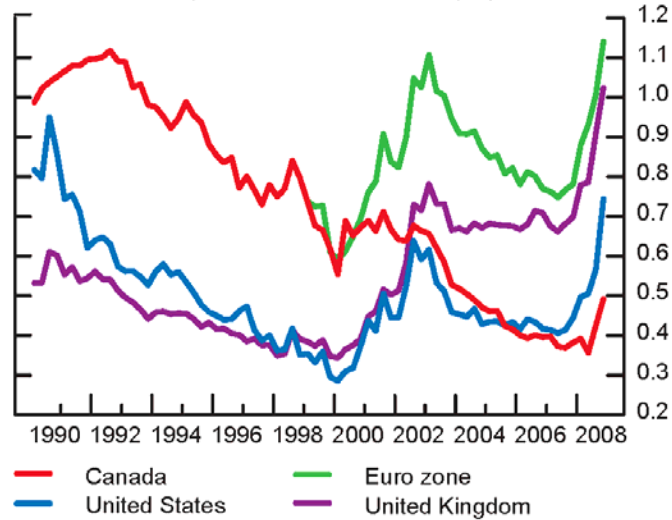
Note: Data reflect Basel II framework beginning in 2008Q1.

Source: OSFI

Last observation: 2009Q2

### Chart 7: Canadian corporate leverage stands below that in other countries

Non-financial corporate sector: Debt-to-equity ratio\*

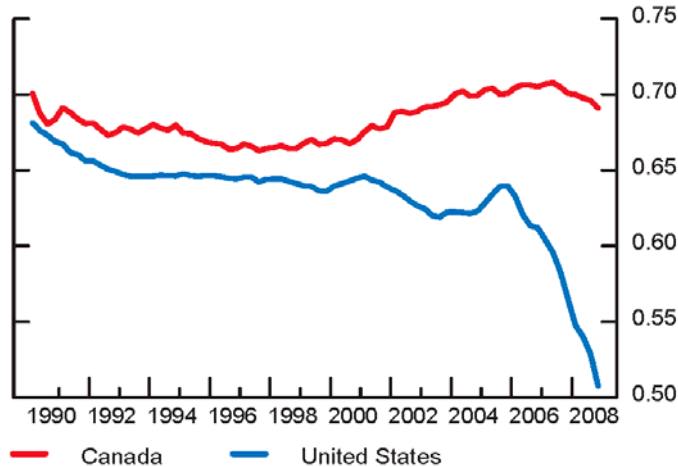


\* For international comparability, data for Canada are measured at market value rather than at book value.

Sources: Statistics Canada, U.S. Federal Reserve, U.K. National Statistics, ECB  
Last observation: 2008Q4

### Chart 8: Equity in Canadian homes remains significantly higher than in the United States

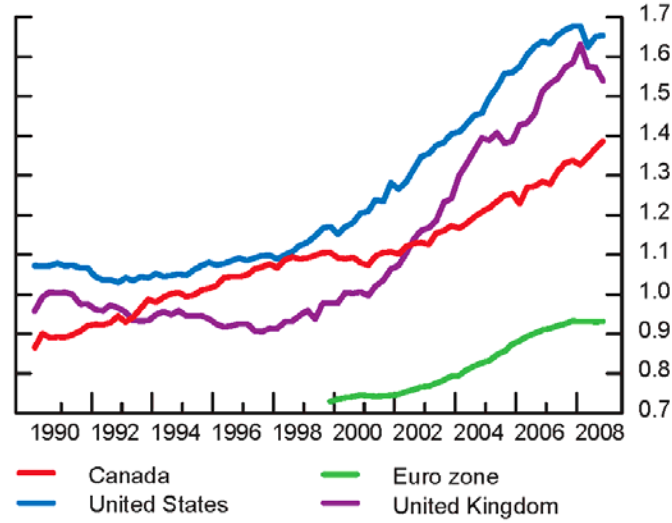
Real estate equity\* as a share of real estate assets



\* Real estate equity = real estate assets excluding mortgages  
Sources: Statistics Canada, U.S. Federal Reserve (at market value)  
Last observation: 2008Q4

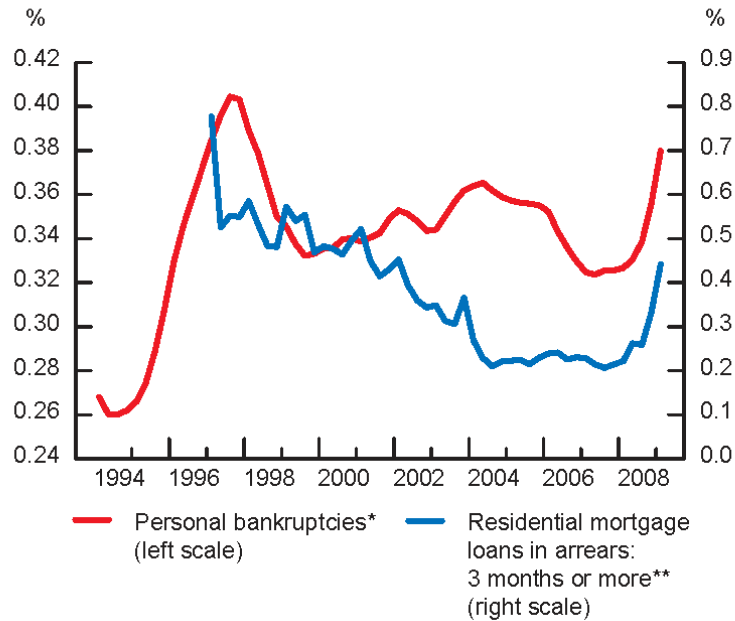
**Chart 9: The household debt ratio is still rising in Canada**

Household debt as a share of personal disposable income



Sources: Statistics Canada, U.S. Federal Reserve, U.K. National Statistics, ECB  
Last observation: 2008Q4

**Chart 10: Financial stress among Canadian households is also rising**

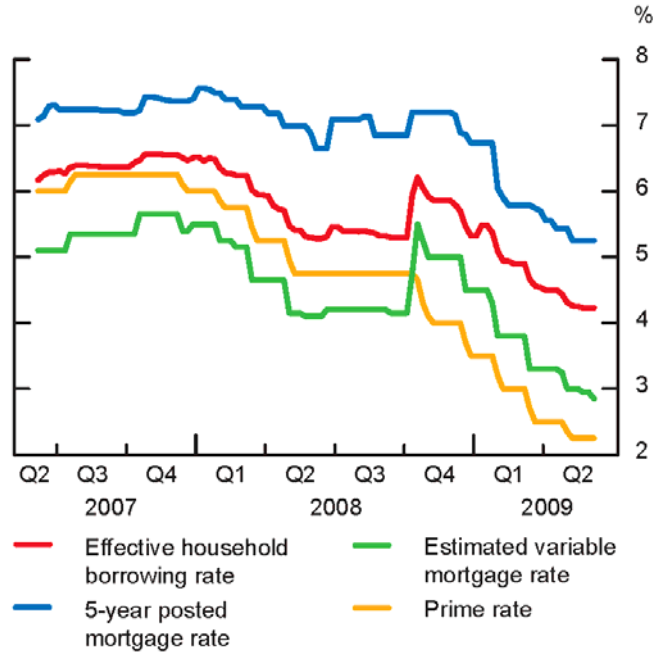


\* As a percentage of population aged 20 and over

\*\* As a percentage of total residential mortgage loans outstanding

Sources: OSFI, Statistics Canada, Office of the Superintendent of Bankruptcy Canada  
Last observation: 2009Q1

**Chart 11: Household borrowing costs have fallen significantly since December**



Source: Bank of Canada

Last observation: 25 May 2009

**Table 1: Estimated marginal impact of a prolonged economic slowdown on households (10 per cent unemployment rate)<sup>a</sup>**

Unemployment characteristics <sup>b</sup>		Change in the proportion of insolvent households (%)	Change in the proportion of debt held by insolvent households (%)	Banks' resulting losses as a percentage of their RWA <sup>c</sup>
Duration (weeks)	Incidence (%)			
20	26	1.4	5.2	0.9
25	21	2.1	6.0	1.0

a. Results are presented as variations from the 2008 starting point.

b. In 2008, the average unemployment rate was 6.1 per cent, and duration averaged 15 weeks.

c. RWA: Risk-weighted assets

Source: Bank of Canada simulations