Developments

and

Trends

Notes

The material in this document is based on information available to *26 November* unless otherwise indicated.

The phrase “major banks” in Canada refers to the six largest Canadian commercial banks by asset size: the Bank of Montreal, CIBC, National Bank, RBC Financial Group, Scotiabank, and TD Bank Financial Group.

Promoting Financial System Efficiency and Stability

The Canadian financial system comprises financial markets, financial institutions, and the clearing and settlement systems. A well-functioning financial system (i) acquires and uses information to allocate resources to the most productive investment projects and (ii) manages and distributes risk to those most willing to bear it. The financial system adds to social welfare and economic growth because it improves the allocation of resources and reduces the volatility of consumption and investment. A well-functioning financial system is also able to better absorb adverse shocks, making the real economy less sensitive to them. As a consequence, economic growth is less volatile.

Frictions in the financial system can cause inefficiencies, which impair the efficient allocation of resources and make the economy more sensitive to adverse disturbances (i.e., more unstable) with significant welfare consequences (Haldane et al. 2004). Financial inefficiencies can arise for numerous reasons. (See Bauer 2004 for definitions of market efficiency.)

Informational asymmetries in both financial markets and institutions can develop because borrowers typically have more information than lenders about the potential value and risk associated with the investment projects for which they are seeking funds. These asymmetries are exacerbated by factors such as poor quality of financial information and poor corporate governance. Transactional inefficiencies, which increase the costs of financial transactions, can occur because of lack of competition in the provision of financial services, regulatory requirement, or poor legal infrastructure (e.g., weak enforcement of rules, regulations, and contracts governing the financial system). Cases like Enron expose extreme instances of how these types of inefficiencies can play out in the real world. There is empirical evidence that these frictions are important from a macroeconomic point of view, since countries with fewer financial frictions (e.g., better contract law, enforcement, and greater corporate transparency) tend to have stronger economic growth and lower output volatility (Dolar and Meh 2002; La Porta et al., 1997; and Cooley, Marimon, and Quadrini 2004).

Reducing financial inefficiencies can, in principle, lead to a better allocation of resources, as well as helping the economy and the financial system to better absorb shocks. Policy measures to increase the quality of financial information (e.g., better accounting and reporting standards, better corporate governance), as well as the enforceability of rules, regulations, and contracts governing the financial system can potentially promote both financial system efficiency and stability. Evaluating the ultimate net benefit of any given financial system policy, however, requires careful monitoring and analysis. In particular, policies should be reviewed so that they are, indeed, efficiently achieving the established public policy goal.

Overview

This section of the Financial System Review *examines the recent performance of the Canadian financial system and the factors, both domestic and international, that are influencing it. In each issue, one or more subjects of particular interest are discussed as highlighted topics.*

Key Points

- Continued strong global economic growth has reduced financial vulnerabilities in Canada and elsewhere.
- Higher oil prices have, however, raised questions about the strength of global economic prospects going forward.
- The global financial system appears well positioned to absorb increases in interest rates over time in several countries, including Canada.
- On balance, conditions in the Canadian financial system have improved since the publication of the June 2004 *Review*, and most risks have remained unchanged.
- Overall, the reported financial situation of Canadian non-financial corporations also improved through the first three quarters of 2004, despite the appreciation of the Canadian dollar. Profitability rose considerably in most industries, aided by stronger global demand.
- Initiatives aimed at enhancing investor confidence in Canadian capital markets have been introduced in Canada over the past few years. Some of these initiatives are reviewed in this issue.

The global economy expanded strongly in 2004. In this environment, the steps taken by businesses and financial institutions to restructure their balance sheets have bolstered the stability of the international financial system.

Global growth is expected to moderate somewhat in 2005, in part because of higher oil prices. Nonetheless, policy interest rates are expected to move up in a number of countries as central banks further remove some of the substantial degree of monetary stimulus that has been in place over the past several years.

High levels of indebtedness persist among certain borrowers worldwide (such as households, firms, and some governments in emerging markets). This high level of debt, in conjuction with the prospect of further increases in policy interest rates, poses some risks for the global financial system. However, borrowers appear, well positioned overall to deal with higher borrowing costs.

In particular, corporations and financial institutions in most industrial countries have improved their financial positions. As well, with higher interest rates being part of the cyclical process of economies returning to full production capacity, higher borrowing costs are not expected to have adverse effects on the global financial system.

In Canada, the health of non-financial corporations and households is important to the soundness of domestic financial institutions. Business and household credit account for roughly 30 per cent and 70 per cent, respectively, of the credit portfolio of financial institutions. This *Review* contains an assessment of the potential impact of changes in financial market conditions on both Canadian corporations and households.

On the corporate side, the analysis indicates that, since the late 1980s, improvements in the macroeconomic environment and in corporate balance sheets, together with financial innovations and changes in the debt-maturity profile of firms, have decreased the corporate sector's exposure to cyclical movements in interest rates. As well, Canadian banks have reduced their exposures to large corporate loans.

The financial situation of the non-financial corporate sector continued to improve in the first three quarters of 2004. Despite the appreciation of the Canadian dollar since early 2003, profitability improved considerably over this period in most industries with a high exposure to international trade. The surge in commodity prices boosted profits in commodity-producing sectors, while weighing on the profitability of some commodity-consuming sectors. The further strengthening of the Canadian dollar in the past few months is expected to place additional financial pressure on some sectors and firms that are highly exposed to international trade. Overall, risks to the financial system arising from the non-financial corporate sector are currently considered to be small.

The indebtedness of Canadian households has continued to increase, reaching record levels. In this *Review*, the ability of households to service their debts in the event of either a cyclical increase in interest rates or a fall in house prices is assessed. The analysis suggests that a cyclical increase in interest rates should not significantly affect the credit quality of household debt, and that the possibility of a significant reversal in house prices in major Canadian housing markets is unlikely.

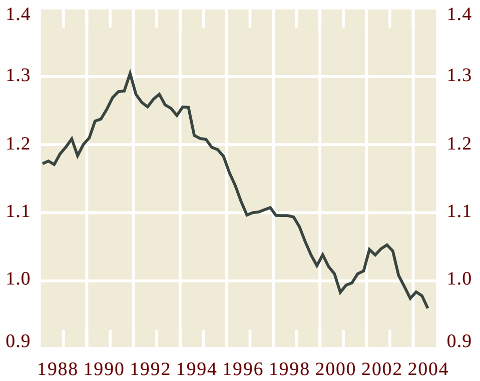
Financial institutions in Canada are in a sound financial position. Indeed, major Canadian banks reported continued strong profitability through the first three quarters of 2004, supported by a diversified business strategy. Canadian banks also continue to report high capital levels, well above minimum requirements. Other financial institutions also posted solid financial results. On balance, conditions in the Canadian financial system have thus continued to improve since the spring of 2004.

On the regulatory front, important initiatives that aim to enhance investor confidence in Canadian capital markets have been introduced in Canada over the past few years. These have been introduced by various governments, regulators, and financial market participants. A descriptive overview of some of these initiatives is provided in this *Review*.

Although the state of domestic and global financial systems has improved since the June *Review*, the global financial system continues to face some risks. Even if developments in the yield differentials of emerging-market debt reflect a lessening of macroprudential fears, and these differentials thus remain low, a risk persists that they will increase dramatically. This could occur if expectations about policy rates were revised upwards sharply. But the likelihood of this remains small.

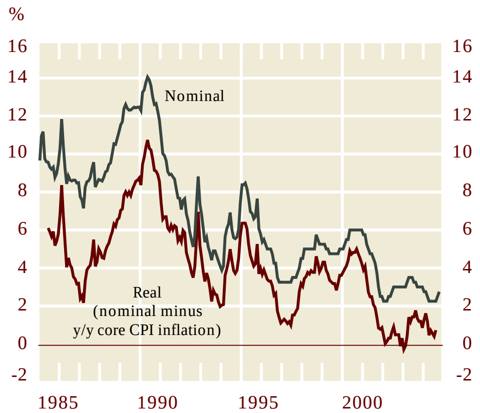
The global economy also continues to face risks. Adjustment to the large U.S. trade and fiscal deficits is one risk. Recent renewed broad-based U.S.-dollar weakness appears to reflect concerns about these deficits. There are also uncertainties related to the geopolitical situation and the high level and volatility of crude oil prices.

Chart 1 Debt-to-Equity Ratio of Canadian Non-Financial Corporations



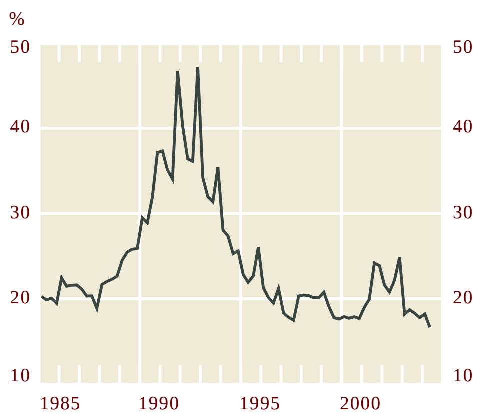
Source: Statistics Canada

Chart 2 Bank Rate



Source: Bank of Canada

Chart 3 Non-Financial Business Sector Debt Capacity: Debt-Service Costs to Cash Flow



Source: Statistics Canada

Highlighted Issues

Three issues are discussed in this section: the potential impact of higher interest rates on Canadian corporate balance sheets, the financial position of the Canadian household sector, and initiatives to enhance investor confidence in Canadian capital markets.

Potential impact of higher interest rates on Canadian corporate balance sheets

The health of Canadian non-financial firms is important to the banking sector. Indeed, despite the decreasing exposure of Canadian banks to corporations, business credit still accounts for about 30 per cent of the credit portfolio of financial institutions. In the past, Canadian financial institutions have experienced significant losses on their corporate loans during economic downturns or periods of sharply rising interest rates. It is therefore worthwhile to assess how the removal of monetary policy stimulus in the current cycle might affect the corporate sector.

First, the response of the balance sheets of non-financial businesses to the period of monetary policy tightening at the end of the 1980s is examined. The subsequent trends and developments that have affected corporate balance sheets are then reviewed, and the potential impact of rising interest rates on the Canadian non-financial business sector is assessed.

It is important to note that this analysis draws upon aggregate indicators of financial conditions in non-financial businesses. Although this provides useful information, conditions across different industry sectors and individual businesses could also have important implications that are not captured in this discussion.[1]

Monetary policy tightening in the late 1980s

Both the macroeconomic environment and the health of corporate balance sheets were very different in the late 1980s than they are currently. In particular, the corporate sector was more highly leveraged (Chart 1). As well, Canadian banks have reduced their exposures to large corporate loans over the past few years. The late 1980s were also characterized by entrenched expectations of moderate inflation. The need to control inflation led to a period of rapid monetary policy

1. See the "Industry" section on p. 22 of this *Review*.

tightening. The Bank Rate increased from 7.2 per cent in 1987 to 13.8 per cent in 1990 (Chart 2).

With corporations borrowing relatively large amounts of short-term debt, rising short-term interest rates led to a large increase in the debt-service costs of the business sector. In addition, the economic slowdown itself had an important adverse impact on profitability. As a result, the ratio of debt service to cash flow increased substantially for businesses, from 19 per cent in 1987 to 47 per cent in 1992 (Chart 3).[2]

Deteriorating corporate balance sheets also had a negative impact on Canadian banks. The aggregate loan quality of Canadian banks deteriorated as the ratio of gross impaired loans to total loans rose sharply from 3.4 per cent in 1989 to 5.8 per cent in 1992 (Chart 4). Although the data for business-loan losses is available only from 1994 onwards, it appears that corporate loan losses were an important driver of the total aggregate loan quality in the late 1980s.

What might happen with the expected removal of monetary stimulus in the current cycle?

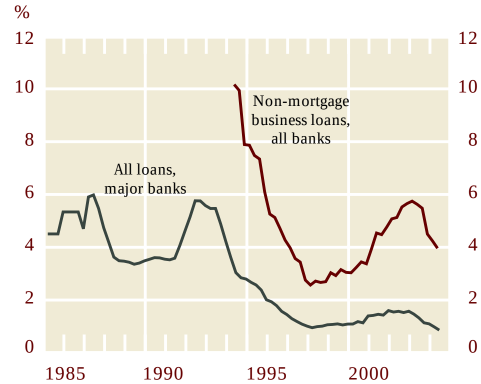
With inflation expectations well anchored to the 2 per cent inflation target, the removal of monetary stimulus over the current cycle is anticipated to entail relatively modest adjustments in interest rates. As well, non-financial corporate profits have been high and are expected to remain robust, acting as a buffer when interest rates and debt-servicing costs rise. The increase in the debt-service ratio of businesses should thus be significantly lower than was the case in the late 1980s. Moreover, the balance sheets of Canadian banks are much healthier. In particular, the ratio of gross impaired loans to total loans is currently very low (see Chart 4).

The rise in the debt-service ratio is also likely to be restrained by recent financial innovations and by changes in the composition of corporate balance sheets over the past decade. A number of trends indicate improvement in Canadian corporate balance sheets. First, equity financing has become a major financing source, accounting for 31 per cent of total outstanding business credit in 2004, up from 26 per cent in 1987 (Chart 5). As a result, the debt-to-equity ratio

2. Business debt service to cash flow is defined as interest payments divided by (after-tax profit plus non-cash items).

Chart 4 Gross Impaired Loans to Total Loans

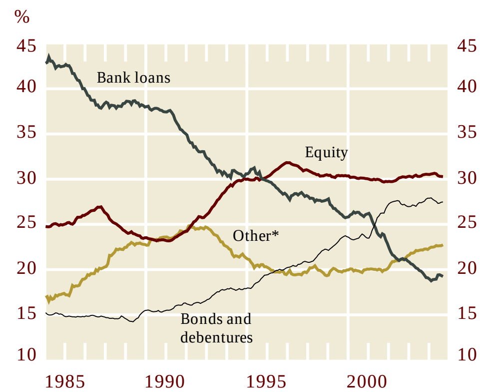
By category



Source: Banks' quarterly reports and Office of the Superintendent of Financial Institutions (OSFI)

Chart 5 Non-Financial Corporate Sector Financing

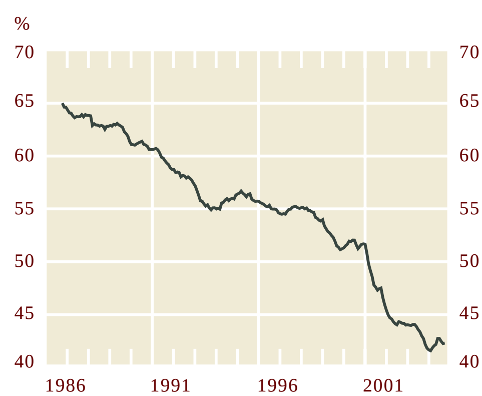
Percentage of total credit



* Includes non-residential mortgage loans, lease receivables, commercial paper, and other loans
Source: Statistics Canada

Chart 6 Non-Financial Corporate Sector: Short-Term Credit

Share of total credit minus equity and trust units



Source: Statistics Canada

has fallen from 1.17 in the late 1980s to the current historic low of 0.96 (recall Chart 1). Lower leverage implies healthier corporate balance sheets and lower bankruptcy risk, everything else being equal. Indeed, for a given level of asset risk, reduced leverage implies that corporate balance sheets will be less affected by higher loan rates when interest rates rise.

At the same time, there have been major developments in the debt-maturity profile of corporate debt. First, the share of short-term debt in total credit has fallen steadily from 65 per cent in 1987 to 42 per cent in 2004 (Chart 6). The lower reliance of firms on short-term debt suggests a smaller increase in refinancing costs when debt is rolled over, should interest rates rise, or more generally, lower liquidity risks. Second, bank loans, which were the major source of financing in the late 1980s, have been replaced by the increasing issuance of bonds and debentures. For example, bond financing increased from 16 per cent of total credit in 1990 to 28 per cent in 2004 (Chart 5).

Greater reliance on market financing and the increased use of derivatives, such as interest rate swaps, have offered corporations more flexibility to adjust their debt profiles and to manage debt-servicing costs based on their exposure and interest rate expectations. Indeed, interest rate swaps allow corporations to effectively unbundle funding and interest rate decisions.[3] This is a significant improvement from the situation in the late 1980s, when bank loans, the main source of financing, offered fixed terms to maturity and derivatives markets were less developed. But the increased use of interest rate swaps and other derivatives also implies that the share of short-term credit in total corporate credit may no longer be a useful stand-alone guide for assessing corporate exposure to various maturities of interest rates. Information about the direction of the aggregate transfer of interest rate exposures from corporations from the use of interest rate swaps would be required. This information is not, however, readily available.

A more complete assessment of the interest rate exposures of non-financial corporations requires an analysis of their defined-benefit pension plans. Although pension plans are technically off-balance-sheet items, the corporate sponsors of defined-benefit plans are legally required to meet pension liabilities. The average corporate defined-benefit plan in Canada has been in deficit since early 2002. These deficits arose primarily because of weak equity markets, which reduced asset values, and falling interest rates, which increased the present value of pension liabilities (Armstrong 2004).

On balance, rising interest rates reduce pension deficits. Higher bond yields tend to reduce the value of bond holdings (which typically comprise about 40 per cent of the assets of large pension plans), but also lower the value of 100 per cent of pension liabilities (which are calculated as the present value of future benefits). Therefore, the net effect of rising interest rates on corporate pension funding is significantly positive. For example, at the end of the third quarter of 2004, Mercer's Pension Health Index shows an average funding ratio (assets divided by liabilities) of 89 per cent, up from a cyclical low of 83 per cent in 2003. Mercer estimates that an increase in bond yields of 100 basis points at all terms to maturity could improve the average funding ratio to about 96 per cent.[4]

Overall, the analysis indicates that the improvements in the macroeconomic environment and in corporate balance sheets, including increased reliance on equity financing, changes in the debt-maturity pattern, as well as financial innovations, have decreased the exposure of the corporate sector to interest rate risk. Therefore, the removal of monetary stimulus in the current cycle should have only a relatively small impact on corporate balance sheets, especially when compared with developments in the late 1980s.

Financial position of the Canadian household sector: Autumn 2004

The December 2003 *Review* featured an assessment of the potential impact of changes in the financial environment on the ability of households to service their debts. That analysis found that financial system risks relating to the credit quality of the household sector remained manageable.

Since then, household credit has strengthened further (Chart 7). This trend reflects the increases in both mortgages and consumer credit, which

3. These instruments do not necessarily eliminate interest rate risk but enable the corporation to tailor its exposure to interest rate risk.

4. This calculation is only meant to be suggestive, since it assumes that all other variables are held constant.

includes vehicle loans, credit card loans, renovation loans, and lines of credit. Consistent with these developments, household spending has been a significant contributor to domestic economic growth since 2000. This growth also reflects the increasingly widespread access of households to various sources of financing, but raises the prospect of their increased sensitivity to interest rates.

The financial health of Canadian households is increasingly important to the banking sector in light of the greater emphasis that Canadian banks have placed on retail lending since 2002. Household credit now represents over one-half of the total loan exposure of financial institutions (Chart 8). About 70 per cent of household credit is mortgage debt, of which roughly half is insured. About 70 per cent of this mortgage debt has a term to maturity greater than two years. Nevertheless, if the ability of households to service their debts is significantly compromised by higher interest rates, a drop in house prices, or a reduction in household disposable income, the resultant reduction in credit quality could adversely affect lending institutions. For instance, higher interest rates could significantly increase the debt-service costs of households, and lower house prices could result in the value of the financed property dropping below the value of the mortgage. Both outcomes could reduce the ability and willingness of households to service their debts.

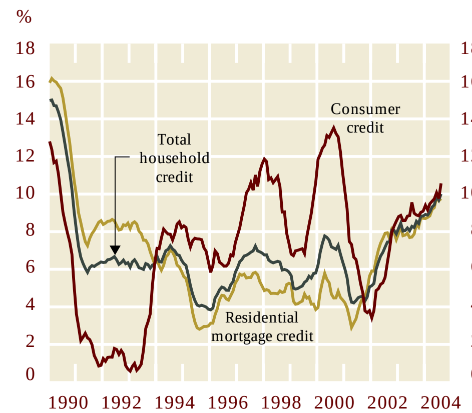
In the following assessment of the potential impact that changes to the financial environment may have on the ability of households to service their debts, it is important to note that this analysis draws upon broad-based indicators of household financial conditions. While this provides useful information, particular conditions across different levels of household income could have important implications not captured here.

Servicing household debt

Total household indebtedness, as measured by the ratio of debt to disposable income, has continued to rise, reaching a record high of 119 per cent in the second quarter of 2004 (Chart 9). However, this higher indebtedness should be seen against the background of rising household net wealth arising from higher prices for houses and other assets. Indeed, the new Statistics Canada balance sheet estimate of household indebtedness relative to net assets on a market-value basis has actually eased over the past year.

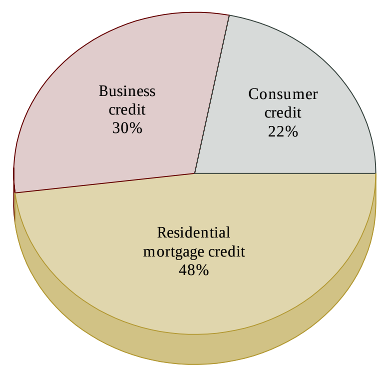
Chart 7 Household Credit

Year-over-year rate of growth



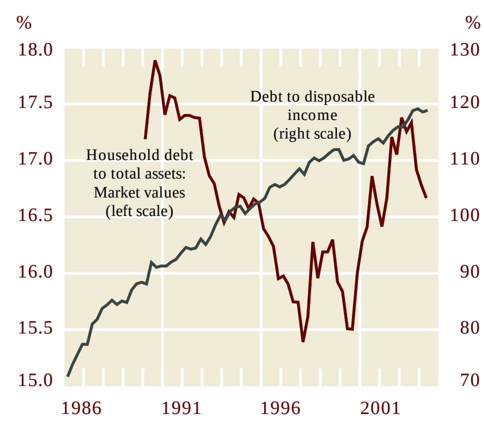
Source: Bank of Canada

Chart 8 Distribution of Lending by Canadian Financial Institutions



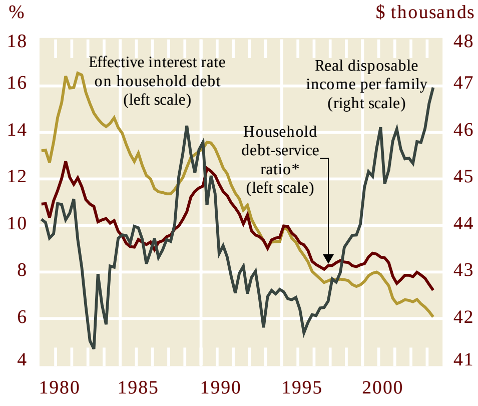
Source: Bank of Canada. Based on year-to-date average balances as of September 2004

Chart 9 Canadian Household Debt Ratios



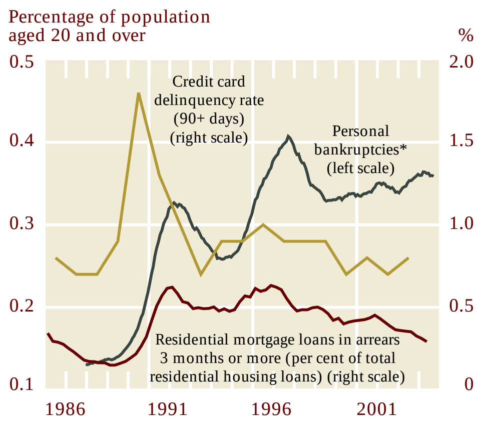
Source: Statistics Canada

Chart 10 Household Sector Debt



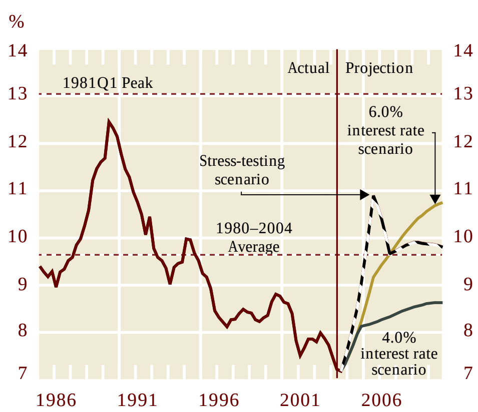
* Does not include principal repayments (See Box 1.)
Source: Statistics Canada and Bank of Canada calculations

Chart 11 Canadian Financial Indicators



* 12-month moving sum
Source: Statistics Canada, Canadian Bankers Association, and Bank of Canada calculations

Chart 12 Projections of the Debt-Service Ratio Based on Different Paths for the Overnight Rate



Source: Statistics Canada and Bank of Canada calculations

In addition, the cost of servicing these higher levels of indebtedness has remained near historic lows, owing to low consumer and mortgage interest rates (Chart 10). Indicators of the degree of financial stress affecting households also remain positive. For example, residential mortgage loans in arrears and the rate of credit card delinquency have both remained low (Chart 11).

Potential challenges: Rising interest rates

By making a number of assumptions, it is possible to gauge the impact of higher interest rates on the debt-service burden of Canadian households.[5] (See Box 1 for a description of the methodology used to conduct these simulations.) Simulations assess the impact on the aggregate household debt-service ratio of nominal short-term interest rates returning to more normal levels of 4 to 6 per cent in 2005. (Such rates would be roughly consistent over time with an environment of two per cent inflation.)

The results indicate that in 2005–07, the debt-service ratio would increase to a range of 9 to 11 per cent, from the current level of about 7.3 per cent. At these levels, the debt-service ratio would remain near its 1980–2004 average, but would stay well below earlier peaks (Chart 12).[6] Although households may be more sensitive to a given change in interest rates, a steady flow of income remains the key factor in the ability of households to service their debt. In this respect, current prospects for employment growth, and economic conditions more generally, remain supportive.

The same method can be used to assess household debt-servicing costs under an extreme interest rate scenario. In the extreme scenario, interest rates are assumed to increase in 2006 as they did in 1994–95 (short-term rates rapidly rise by 400 basis points above the midpoint of their historical range, to 9 per cent), before returning to 5 per cent in 2007.[7] Under such a scenario, the debt-service ratio increases by 2007

5. Similar simulations were initially reported in the December 2003 issue of the *Review*. Simulations reported here are based on a richer and more complex methodology.
6. Other components of household financial portfolios are also affected by changing interest rates, but their impact on household wealth would be relatively small. See the December 2003 *Review*.
7. Thus, short-term rates are assumed to increase by 650 basis points from their level on 26 November 2004.

Box 1

Simulating the Impact of Rising Interest Rates on the Debt-Service Ratio

One measure of the cost of household indebtedness is the debt-service ratio, calculated as the share of disposable income required to make interest payments on existing debt. To estimate the future path of all the components of this ratio a number of assumptions must be made.

The data

Estimating past levels of the debt-service ratio requires data on its various components. Statistics Canada data on personal disposable income and household debt are used. Posted rates on consumer loans are used to calculate consumer debt-service payments. The use of posted rates would overestimate interest payments on mortgage loans, given the prevalence of mortgage rate discounting in Canada. Therefore, estimated discounted rates are applied to a share of mortgage loans, increasing from 25 per cent in 1990 to 80 per cent in 2004.

Information on the term structure of household debt in the 1980s and 1990s is used to calculate a weighted average of interest rates (Montplaisir 1996–97). The key development in this area is the increasing popularity of variable-rate mortgages, which currently account for about 20 per cent of total mortgages.

Estimating the future path of the debt-service ratio

The debt-service ratio is calculated as the product of the debt-to-income ratio and prevailing interest rates. In all scenarios, the debt-to-income ratio is assumed constant at its most recent level of 119 per cent.[1]

Interest payments are the product of debt levels and household borrowing rates, weighted by the share of each type of debt in the total debt. Moving averages of interest rates are applied to fixed-rate debt to capture the lagged effects implied by long-term debt contracts. For variable-rate debt, the relevant interest rate is that prevailing in a given period.

A flattening of the yield curve is assumed to lead to a reduction in the share of variable-rate mortgages, as borrowers shift to fixed-rate mortgages. Accordingly, the share of variable-rate mortgages is adjusted downwards as interest rates rise.[2]

Scenario 1: Rates return to more normal levels

We consider the normal range for short-term interest rates in Canada to be 4 to 6 per cent. This is roughly consistent with historical experience since 1970 and with a 2 per cent inflation rate.

Estimating lending rates that are consistent with normal short-term rates requires two steps: First, risk-free rates for different maturities are derived by assuming that the historical yield spread is a measure of the normal term premium and using linear interpolation; second, historical intermediation spreads are added to the risk-free rates to obtain lending rates for different maturities. The assumed rise in interest rates to more normal levels and the associated flattening in the yield curve take place at a measured pace.

Scenario 2: Stress testing

In this scenario, interest rates increase in two phases: First, interest rates rise to a normal level of 5 per cent. The assumptions underlying the calculations in this phase are consistent with Scenario 1. Second, further increases occur for all maturities that are similar in magnitude to those of the 1994–95 period.[3]

The second phase is associated with a further flattening of the yield curve, since long-term rates increase more modestly than shorter-term rates because agents perceive the increases as transitory.[4] The share of variable-rate mortgages is not reduced in the second phase owing to the transitory nature of the rate increases.

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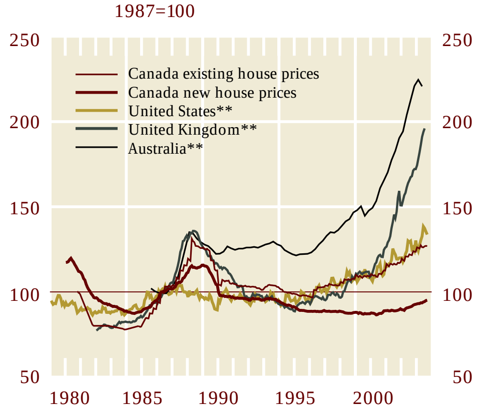
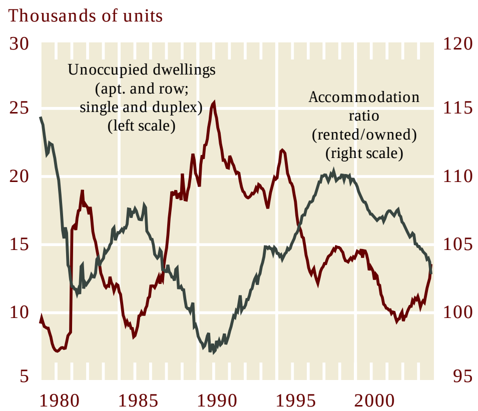
1. Higher interest rates could slow debt growth and lead to a decline in the debt-to-income ratio. Alternatively, if the debt-to-income ratio maintains its upward trend, then the calculations would underestimate the impact of rising rates on debt-service costs.
2. Variable-rate mortgages tend to cap households' debt-service payments, with changes in interest rates affecting mainly the rate at which the principal is repaid. Our calculations do not allow for this feature and may therefore overestimate the impact of higher interest rates on household cash flow.
3. This is a commonly used stress-testing scenario in risk management. Such increases in interest rates could result from several different circumstances. For instance, rising rates could be related to a general increase in risk premiums, perhaps due to a decrease in investor tolerance for risk. We assume here that such circumstances would not affect the debt-to-income ratio, which is assumed to remain constant.
4. The overnight rate rises to a peak of 9 per cent in the stress-testing scenario, before adjusting back to a more normal level of 5 per cent.

Chart 13 International Levels for House Prices: Real*



* Deflated using national consumer price indexes, except for the U.K. where retail prices were used
** Weighted prices for new and existing houses
Source: Bank of Canada and Royal LePage (Canada), Statistics Canada (Canada and U.S.), Australian Bureau of Statistics (Aus.), Halifax plc (U.K.)

Chart 14 Housing Market Indicators



Source: Bank of Canada, Royal LePage, and Statistics Canada

but remains below its historical peak of 13 per cent, before falling back (Chart 12). Such a rapid increase in the aggregate debt-service ratio could adversely affect the quality of household credit.

A more likely scenario of cyclically rising interest rates should provide households with time to adjust their spending behaviour. Such an outcome should not significantly affect the ability of households to service their debts, and therefore should not significantly affect financial institutions.

Potential challenges: House prices

In recent years, the prices of new and existing houses in Canada have risen more gradually than was the case in the late 1980s, and the increase has been more subdued than in other industrialized countries (Chart 13). Nevertheless, it is useful to assess the nature of recent developments in the Canadian housing market and their potential impact on the Canadian financial system.

First, rising disposable incomes and historically low interest rates in the past several years support rising housing prices (recall Chart 10). Second, the accommodation ratio, which measures the relative cost of renting a dwelling in comparison to owning, continually increased during the 1990s (Chart 14); i.e., the cost of renting increased compared with the cost of owning.[8] This contributed to a rise in the number of potential homebuyers and supported housing prices. Although recent house-price increases have contributed to a very gradual decrease in the accommodation ratio since 2000, it remains near its historical average. This suggests that house prices are not out of line with their fundamental value. Indeed, various other measures of housing affordability in Canada indicate that housing costs remain near or below their average over the past 20 years.[9] Third, recent home purchases have been made largely for occupancy purposes, rather than for potentially speculative investment purposes. Indeed, the increase in housing prices over the past five years has

8. The accommodation ratio is equal to the rented-accommodation component of the CPI divided by the owned-accommodation component of the CPI.
9. These include the ratio of household income taken up by mortgage costs (principal and interest components) and the RBC Housing Affordability Index.

been accompanied by a general downward trend in the number of unoccupied (vacant) dwellings across Canada and in major urban areas (Chart 14).[10] Finally, recent strong increases in the supply of housing in response to demand and price pressures suggest that market forces are working effectively. Indeed, listings of existing houses have risen strongly over the past year, and housing starts have increased significantly since 2002 (Chart 15).

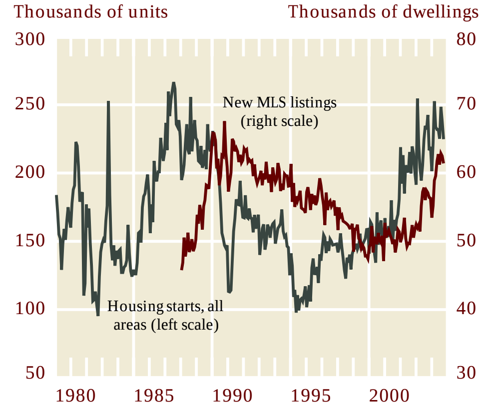
Taken together, these developments indicate that risks to the financial system related to developments in the Canadian housing market are currently limited. Because current housing prices seem to be supported by strong fundamentals—and should continue to be supported by positive economic conditions—with very few signs of speculative behaviour, the possibility of a significant reversal in house prices in major Canadian markets is unlikely.

Although the current assessment of the potential impact of changes to the financial environment on the ability of households to service their debt levels does not suggest near-term dangers, other longer-term structural developments affecting households may warrant monitoring. Indeed, it appears that certain risks may be migrating from various segments of the financial system to the household sector and may thus affect the future savings behaviour of households.[11]

Exposure of lending institutions to households

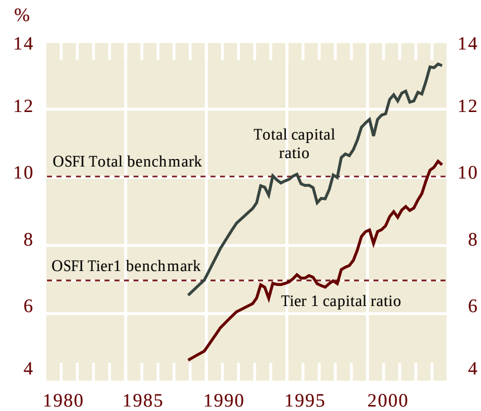
As indicated in Chart 8, household credit represents over one-half of the total loan exposure of financial institutions. Much of this exposure is, however, backed by assets. Indeed, mortgage debt, which accounts for almost 70 per cent of total household debt, is supported by the value of the property, and high-ratio mortgages are

Chart 15 Housing Starts and New MLS Listings



Source: MLS and CMHC

Chart 16 Bank Capital Ratios



Source: OSFI

10. This analysis does not exclude the possibility that modest imbalances exist in certain regional or specific segments of the housing market (e.g., condominiums).
11. For instance, there appears to be a shift away from defined-benefit pension plans towards defined-contribution plans. Should this trend become more generalized, the retirement income of an increasing number of future pensioners will depend on the performance of pension plan assets rather than being a guaranteed level. Such structural developments, although diversifying overall financial system risks, suggest that risks borne by households are rising.

covered by mortgage insurance.[12] Even the remaining portion of household credit, that of consumer credit, is partially secured by assets such as real estate. Over the past few years, it is estimated that approximately 30 per cent of consumer credit is secured.[13]

In addition, the Canadian banking system currently retains capital well in excess of that required (Chart 16). This suggests that the Canadian banking system could withstand a deterioration in the quality of household credit.

Overall, financial system risks relating to household credit quality remain low. A cyclical increase in interest rates should not significantly affect the credit quality of household debt, and thus should not significantly affect financial institutions. As well, the possibility of a significant reversal in house prices in major Canadian markets is unlikely.

Selected initiatives to enhance investor confidence in Canadian capital markets

Broader participation in financial markets is likely to result when participants can be confident that markets are free from manipulation and fraud. This provides a clear incentive for stakeholders to foster markets that operate in a way that merits confidence and trust. Towards this end, Canadian federal and provincial governments, securities regulators, and market participants have implemented various initiatives to support financial market integrity.

There is a link between financial system efficiency and the stability and resiliency of both the financial and real sectors of the economy.[14] As such, initiatives that help improve the efficiency of the financial system have the potential to improve financial stability. One approach towards reducing financial inefficiencies is to increase the integrity of financial markets.

There is no standard definition of market integrity. The lack of integrity is easier to identify; for example, instances of price manipulation by a single firm (or investor), misleading accounting information, poor governance practices, or illegal insider trading. A lack of market integrity has clear negative implications for the efficiency of the market. If investors do not have confidence in the quality of financial information and in the regulators' ability to enforce market principles of fairness, they may require higher risk premiums or reduce their willingness to participate in financial markets. Both such occurrences could increase the cost of capital.

Over the last several years, financial markets in several countries have experienced a number of high-profile corporate scandals (e.g., Enron, WorldCom, Parmalat, and Bre-X) that have had a negative impact on investor confidence in the fairness and integrity of financial markets. These occurrences, while relatively isolated events, highlight the need to continue to work towards a high level of market integrity. Several initiatives have been designed to strengthen investor confidence in Canadian capital markets.[15]

Market behaviour

Some of these initiatives relate to developing principles and best practices to guide the conduct or behaviour of market participants, with the aim of improving liquidity and efficiency in the markets.

In 1998, the Bank of Canada and the federal Department of Finance worked actively with market participants in developing a series of initiatives to promote and maintain the integrity of Canadian fixed-income markets in general, and the well-functioning of the Government of Canada securities market, in particular. These efforts were directed to the primary and secondary markets so that the possibility and perception of market manipulation were minimized.

In the primary market, the Bank and the Department of Finance revised auction rules for the issuance of Government of Canada securities and

12. The securitization of household debt has also been another significant trend in consumer debt. Securitization allows banks to restructure their exposure to these loans, effectively selling it in the form of bonds to a range of investors.
13. The importance of lines of credit (of which more than 40 per cent are secured, mainly by residential property) has grown, and these now represent 48 per cent of consumer credit. Personal loans (of which about 45 per cent are secured) represent 22 per cent of consumer credit. See CIBC World Markets (2004) and Clayton Research (2003).
14. See Bauer (2004) on page 37 of this *Review* for definitions of market efficiency.
15. See Armstrong (2003) for an earlier discussion of the initiatives that aim to enhance domestic governance practices.

enhanced the Bank's role in monitoring auctions to increase confidence in the auction process for government securities and to encourage participation from customers and dealers.

The Bank and the Department of Finance also worked actively with the Investment Dealers Association (IDA) to develop Policy No. 5, a code of conduct for trading in domestic debt markets. While Policy No. 5 applies directly to IDA members, its principles are expected to be a guide to all participants in the wholesale debt market.

Initiatives to enhance standards in the Canadian foreign exchange market and the global market for the Canadian dollar have also been undertaken. In 2001, the Canadian Foreign Exchange Committee (CFEC), together with the Canadian Committee for Professionalism (CCFP) and the Financial Markets Association of Canada (FMAC), adopted the ACI[16] Model Code as the recommended standard for best market practices in the Canadian foreign exchange marketplace. The Model Code combines the recommendations of six pre-existing codes of conduct (those of New York, London, France, Singapore, Tokyo, and the original ACI Code). As such, it is a comprehensive set of global guidelines for best market practices and personal conduct for over-the-counter foreign exchange markets.

Enforcement

The lack of enforcement of security laws can be a challenge to market integrity. Credible enforcement by regulators is vital to establishing the right incentives to deter market participants from committing any fraud or malpractice. Initiatives to bolster enforcement in Canada have been implemented by governments, securities regulators, and self-regulatory organizations (SROs), especially since 2002. (See Box 2 for a description of enforcement initiatives.)

Corporate governance and disclosure

There have also been initiatives to encourage firms to develop practices that are in the best interest of all investors. Accounting and disclosure rules have also changed to provide investors with better quality and availability of financial information. Timely, accurate, and truthful financial information is critical for investors, since it allows them to properly evaluate the risk and value of a company in their investment decisions.

In June 2002, major Canadian institutional investors created the Canadian Coalition for Good Governance (CCGG), a not-for-profit organization whose mission is to promote "best corporate governance practices and to align the interests of board and management with those of the shareholders." In 2003, the CCGG introduced governance guidelines that propose minimum standards and best practices for Canada's largest publicly traded companies. Although the CCGG does not have the authority to impose binding rules on companies, it has reviewed the governance practices of over 100 companies and has recommended improvements. More recently, the Toronto Stock Exchange followed CCGG recommendations and introduced new stock symbols that clearly identify shares with non-conventional voting rights.

In July 2002, federal and provincial regulators, as well as Canada's chartered accountants, announced the creation of the Canadian Public Accountability Board (CPAB). CPAB is an independent public oversight system for accountants and accounting firms that audit "reporting issuers."[17] Its main mission is to strengthen the independence of auditors and to support investor confidence by promoting consistent, high-quality, independent audits of Canadian public companies. To carry out its mission, CPAB has developed a comprehensive inspection program to review the quality-control systems of participating audit firms. With the new rules in place, accounting firms that audit reporting issuers must be registered as participating members in CPAB's oversight program.

In March 2004, the Canadian Securities Administrators (CSA) adopted a number of regulatory instruments governing auditor oversight and the disclosure requirements applicable to public companies.[18] These new rules follow the enactment in the United States of the Sarbanes-Oxley

16. ACI-The Financial Markets Association.

17. CPAB defines reporting issuers as companies that have raised funds from the Canadian investing public and who, for that reason, must file financial statements with one or more provincial securities commissions.

18. The CSA is a forum where the 13 securities regulators of Canada's provinces and territories can coordinate and harmonize the regulation of Canadian capital markets.

Box 2

Initiatives Regarding Enforcement of Securities Laws in Canada

High-profile corporate scandals have refocused attention on the enforcement of Canadian securities laws. A wide range of coordinated initiatives to bolster enforcement have been undertaken by the Government of Canada, provincial securities commissions, and self-regulatory organizations (SROs). These initiatives, described below, include the dedication of more resources to investigation and prosecution of white-collar crime, the passage of new laws, adoption of new regulatory instruments, changes to the structure and processes of self-regulatory organizations, and the development of new electronic reporting systems.

In 2002, the federal government committed to boosting investor confidence in Canadian financial markets. As a result, Integrated Market Enforcement Teams (IMETs) were established in 2003. IMETs are multidisciplinary teams jointly managed by the Royal Canadian Mounted Police and other partner agencies and departments (e.g., the Department of Justice). They work closely with securities regulators and other federal and provincial authorities and are aimed at improving the investigation and prosecution of the most serious market-related crimes. IMETS are currently operating in Toronto, Vancouver, Montréal, and Calgary.

Another major federal government initiative was the passing of Bill C-13 in March 2004. Bill C-13 makes insider trading an offence under the Criminal Code and increases the maximum sentences for existing fraud offences. It also endows investigators with new search powers to obtain data and information from persons under investigation and provides whistleblower protection to employees who report unlawful conduct. These requirements came into force in September 2004.

At the provincial level, Ontario brought amendments to the Securities and Commodity Futures Acts into force in April 2003. These amendments increase penalties and give the Ontario Securities Commission (OSC) more enforcement power for certain Securities Act offences. In November 2003, the OSC also launched the Mutual Fund Probe to investigate potential late-trading and market-timing abuses by retail mutual funds in Ontario.

Self-regulatory organizations bear certain responsibilities for the participants in the Canadian securities industry. Major initiatives at the Investment Dealers Association's Enforcement Division include the implementation of a risk-based operational approach, development of the Case Tracking System, and the creation of a complete set of policies and procedures for enforcement personnel. As of 15 October 2002, all IDA members are required to use a web-based system (ComSet) to file reports every time the firm receives a public complaint, is subject to a lawsuit relating to securities transactions, or becomes aware of a criminal or regulatory investigation relating to the firm.

The Toronto Stock Exchange's demutualization ultimately led to the creation of Market Regulation Services Inc. (RS Inc.)—an independent supervisor of trading in Canada's stock markets. RS Inc. has implemented a common set of trading rules across the country, instituted new early-warning systems to mark potential trading violations, launched a new national Cease Trade Order database, and participated in the creation of a national task force to examine illegal insider trading.

In November 2003, the Insider Trading Task Force, created earlier by regulatory authorities, released its report, which recommended practices for preventing, detecting, and deterring illegal insider trading in Canada. One of the issues identified was trading through nominee and offshore accounts that may prevent regulators from obtaining sufficient evidence in suspected illegal insider trading cases. In May 2004, the Canadian Securities Administrators approved amendments to the IDA's policy on the ownership of corporate accounts, which require member firms to identify and verify beneficial owners for every new and existing corporate account.

Technological advances have also facilitated compliance with the requirements of securities laws. In May 2003, the System for Electronic Disclosure by Insiders (SEDI) became fully functional. SEDI is a web-based service that allows insiders to file their trades in electronic format and provides information to the market about the trading activities of directors, senior officers, or significant shareholders of reporting issuers. The system also serves to deter insider trading based on confidential information, since insiders know they must publicly disclose all of their trades.

Given the relatively recent implementation of all these initiatives, it will be important to periodically assess their contribution to the efficiency of the Canadian financial system.

Act of 2002. The Canadian rules are designed to reflect Canada's particular financial and institutional setting. The stated purposes of the rules are (i) to maintain investor confidence and (ii) to harmonize and improve disclosure requirements. Among other requirements, public issuers are now required to disclose off-balance-sheet arrangements that have, or are likely to have, an effect on the results of operations or financial conditions, important contractual obligations, and material forward-looking information in the management discussion and analysis that accompanies their financial statements. To support the reliability of financial disclosure, the rules stipulate that the Chief Executive Officer and Chief Financial Officer of a public company will be required to certify the accuracy of the financial statements and management discussion and analysis. Moreover, reporting issuers must have an independent and financially literate audit committee with prescribed duties.

In May 2004, the federal government proposed an amendment to the Canada Business Corporations Act (CBCA) to improve the corporate governance standards of Canadian companies. The CBCA sets the regulatory framework for all federally incorporated business corporations, excluding financial institutions. Some of the issues being considered are the role and composition of boards, auditor oversight and independence, and financial reporting and offences.

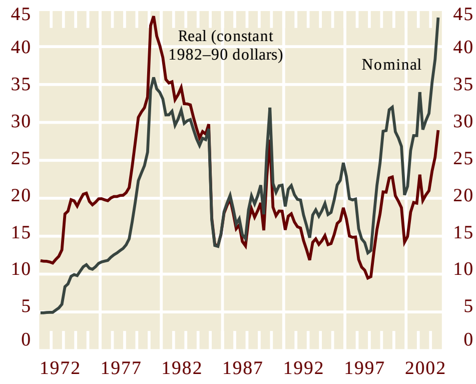
In October 2004, the CSA published a national proposal that would require issuers listed on the TSX to disclose their corporate governance practices with reference to specific guidelines. Companies listed on the junior TSX Venture Exchange would, pursuant to this proposal, be required to disclose only their general practices. These new rules are targeted to come into effect in time for the 2005 proxy season.

Conclusion

These are just a few of the initiatives underway in Canada designed to bolster trust and confidence in financial markets. Given their recent implementation and the evolving nature of corporate governance, it will be important that their contribution to the efficiency of the Canadian financial system be assessed periodically.

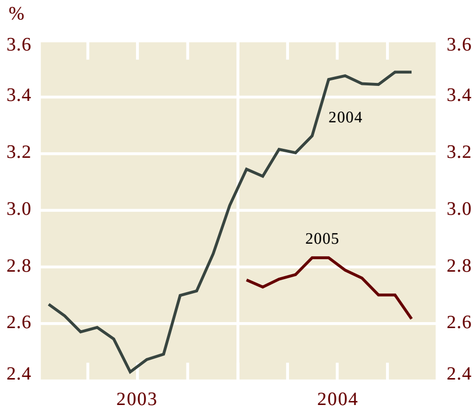
Chart 17 Oil Prices

US$ per barrel, quarterly averages



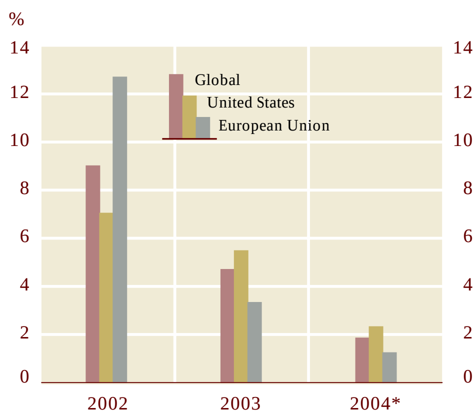
Source: Bank of Canada

Chart 18 Evolution of Consensus Estimates for Annual Growth of Industrialized Economies*



* North America, Western Europe, and Japan
Source: Consensus Economics Inc. and Bank of Canada calculations

Chart 19 Default Rates on Speculative-Grade Bonds



* 12 months to October
Source: Standard & Poor's

The Macrofinancial Environment

Financial vulnerabilities in Canada and elsewhere have continued to subside since the June *Review*, aided by the solid pace of the global economic expansion. Nevertheless, high levels of debt for many borrowers worldwide could pose some challenges in an environment of rising interest rates. At the same time, financial institutions in many countries, including Canada, are in a sound position, while others are working to improve their balance sheets. These efforts will further enhance the financial system's ability to withstand major adverse shocks.

Global environment

In response to higher oil prices (Chart 17), expectations for economic growth in the industrialized countries in 2004 have stabilized in recent months, whereas the outlook for growth in 2005 has been revised down slightly (Chart 18). Nevertheless, expected growth remains robust, and production levels are approaching capacity limits in some countries. As a result, some central banks have started to reduce the amount of monetary stimulus, and further increases in policy interest rates are anticipated. For instance, financial market participants expect the U.S. federal funds rate to be raised by a further 25 basis points this year and by roughly 100 basis points next year (from the current level of 2 per cent).

Improved corporate profitability and ongoing favourable financing conditions have contributed to a further decrease in various indicators of financial distress. For instance, according to Standard & Poor's, the global corporate default rate for speculative issuers, based on a 12-month rolling average, fell to 1.9 per cent in October from 4.7 per cent at the end of 2003 (Chart 19).[19]

Globally, financial market conditions have remained favourable since the completion of the June *Review*, and volatility has been low. Nevertheless, the surge in oil prices since early August has created some unease.

19. The average rate over the 1981–2003 period was 5.3 per cent.

Box 3

Assessing Credit Risk in IMF Lending

The increased use of exceptional access to IMF lending, resulting from capital account crises in emerging-market economies, has led to a greater concentration of Fund credit. In 2002, in recognition of the increased risk associated with the IMF's exposures to a few, large borrowers, the Executive Directors approved a doubling of precautionary balances to about SDR10 billion. The Executive Directors have also asked the staff to review possible analytical approaches to assessing the adequacy of precautionary balances (IMF 2004).

While concentration risk in the IMF's portfolio is not new, what has changed is the composition of IMF borrowers. Under the Bretton Woods system of fixed exchange rates, all member countries could expect to find themselves on both the creditor and debtor side of the balance sheet. But by the 1980s, the industrial countries that were once on both sides of the balance sheet emerged to become permanent creditors. Consequently, the IMF has gradually evolved to become a lender to higher-risk emerging-market countries. Moreover, the term of Fund programs has lengthened, and in some cases, programs have been followed by back-to-back successor arrangements. Larger loans for longer periods to a relatively small group of emerging economies has arguably increased the risks being borne by the Fund, all other things being held equal.

To assess the degree of credit risk in the IMF's portfolio, a measure of expected credit loss (ECL) was constructed using sovereign credit ratings. When credit ratings were not available, ratings were estimated using macroeconomic and institutional information. Expected credit loss was then constructed as follows: For every year, the IMF's exposure under the General Resource Account for each country is multiplied by the respective country's default rate and then summed across all borrowing countries:

$$ECL_t = \sum_{i=1}^{n} EXP_{it} \times (DEF_{it} \times LGD),$$

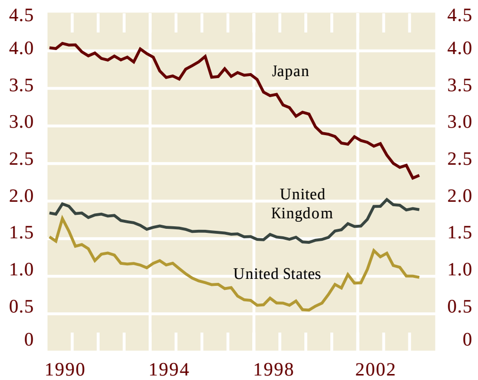
where ECL_t is the expected credit loss at time t, EXP_{it} is the IMF's exposure to country i, DEF_{it} is the respective default rate associated with the country's actual or estimated sovereign credit rating, and LGD is the percentage loss, given default assumed constant across countries and time. We find that ECL had increased over time. While ECL averaged SDR550 million between 1990 and 1998, by 2003 it had increased to over SDR2.9 billion. As a percentage of total loans, ECL in 2003 was nearly 4.6 per cent—twice the average of the 1990s.

The calculation of a simple expected credit-loss metric confirms priors that credit risk has increased at the Fund in the last decade. Critics of this credit-risk approach would argue that any measure of ECL is inappropriate, given the unique nature of the Fund's balance sheet and the lack of defaults over its 60-year history. Moreover, critics would underscore that the existence of the Fund's preferred-creditor status and economic policy conditionality imply that the IMF faces lower credit risk than suggested by any conventional credit-risk model. While true, in lieu of more standard risk-management techniques, the IMF may have to rely more heavily on its preferred-creditor status, and the effectiveness of conditionality to protect the integrity of its balance sheet, given the structural change in its lending behaviour.

Chart 20 Emerging-Market Bond Index (EMBI+) Spread over U.S. Treasuries

Source: J.P. Morgan Chase & Co.

Chart 21 Corporate Debt-to-Equity Ratios



Note: Country data are not necessarily comparable.
Source: U.S. Federal Reserve and Thomson Financial Datastream

Vulnerabilities to rising interest rates in the external economy

Most financial system participants appear well positioned to face the prospect of rising interest rates. Higher interest rates would likely occur in the context of solid economic activity, sustained employment gains, and robust growth in income. As a result, higher borrowing costs would not likely lead to adverse effects on the financial system, although some highly indebted individual borrowers or countries could experience financial strain.

Spreads on emerging-market assets have decreased significantly in recent months, after having increased sharply between the end of April and mid-May 2004, following the prospect of an earlier-than-expected tightening by the U.S. Federal Reserve (Chart 20). As discussed in the June *Review*, there remains a risk of a possible sell-off of emerging-market assets should interest rates in industrial countries rise more quickly and/or higher than currently expected. According to Standard & Poor's, a moderate rise in global interest rates would not severely affect the credit quality of emerging-market bonds, but a larger increase could put added pressure on the credit rating of some of these countries.[20]

In the event of a marked deterioration in the credit quality of emerging-market issuers, creditors, both private and official, could be adversely affected. Questions could even be raised regarding the balance sheet of the International Monetary Fund (Box 3). But there is every reason to believe that the IMF's financial position will continue to remain strong because of the combination of its existing frameworks for lending and dealing with arrears, its increased use of debt-sustainability analysis in guiding lending decisions, and the maintenance of its preferred-creditor status.

In many industrial countries, corporations have worked hard to repair their balance sheets

20. Standard & Poor's (2004). Two scenarios are considered. In the first, yields on U.S. 10-year Treasuries rise steadily to 5.8 per cent in 2008 from an average of 4.3 per cent in 2004. The second scenario assumes an increase to 7.3 per cent over the same period. The report analyzes the effect of such scenarios on the fiscal position of a few sovereign issuers rated investment grade as well as a few rated below investment grade.

since 2002. They have reduced their indebtedness (Chart 21), improved their liquidity positions by extending the maturity profile of their debts, and improved their profitability (Chart 22). Although the improvement has not been uniform among countries, corporations in many industrial countries appear well positioned to cope with higher interest rates.[21]

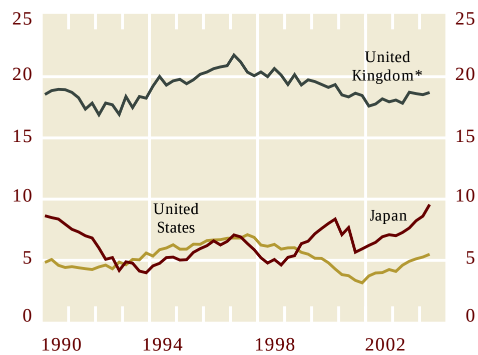
In contrast to the situation of corporations, households in most industrialized countries have continued to increase their debt load (Chart 23). However, a large share of household debt is mortgage related and is as such supported by the value of the property financed. As a result, household indebtedness is not viewed as posing financial system risks in most countries.

Financial institutions in most industrial countries seem well placed to cope with the risks discussed above in the event that they materialize. They have continued to report robust profits and maintain a substantial amount of capital (Chart 24). In Japan, corrective measures, which have been adopted to address the vulnerabilities of the banking sector, are having visible positive effects.[22]

The discussion on "Global imbalances" on page 12 of the June *Review* also remains topical, as external imbalances in the United States, which mirror external imbalances elsewhere, continue to be a source of uncertainty for the global financial system.Various policy or structural changes are required to facilitate the reduction of these imbalances. One such adjustment is taking place. Since the June *Review*, there has been a general depreciation of the U.S. dollar on a trade-weighted basis.

Chart 22 Corporate Profits

Percentage of GDP



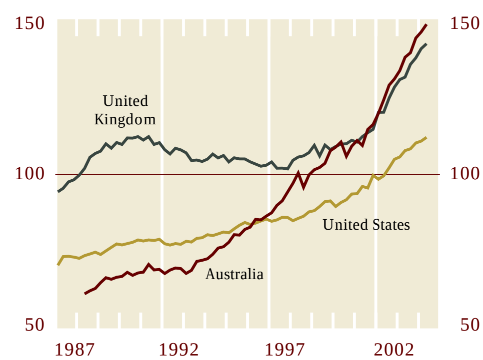
* Includes depreciation, unlike profits of other countries depicted

Note: Profits are defined differently in the countries depicted, so comparisons of profitability should not be made.

Source: U.S. Bureau of Economic Analysis, Thomson Financial Datastream, and Bank for International Settlements (BIS)

Chart 23 Household Debt

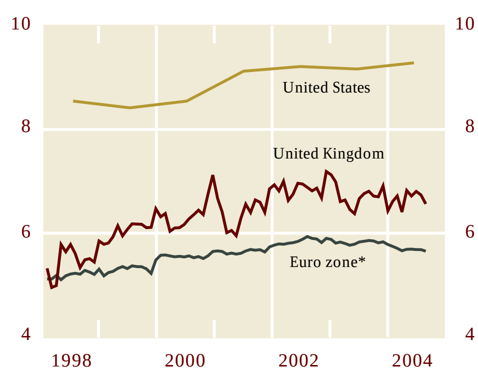
Percentage of disposable income



Note: Country data are not necessarily comparable.

Source: U.S. Federal Reserve, Thomson Financial Datastream, and BIS

Chart 24 Ratio of Equity Capital to Total Assets: Aggregate Banking Sector



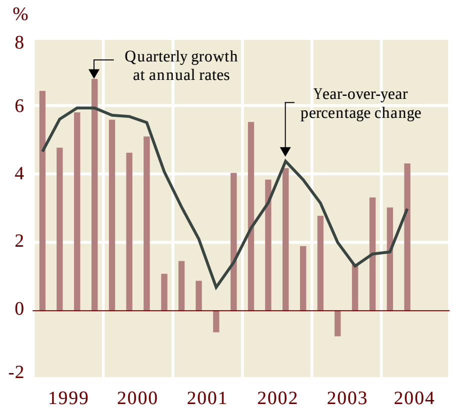
* Monetary and financial institutions for the euro zone

Note: Country data are not necessarily comparable.

Source: Federal Deposit Insurance Corporation and Thomson Financial Datastream

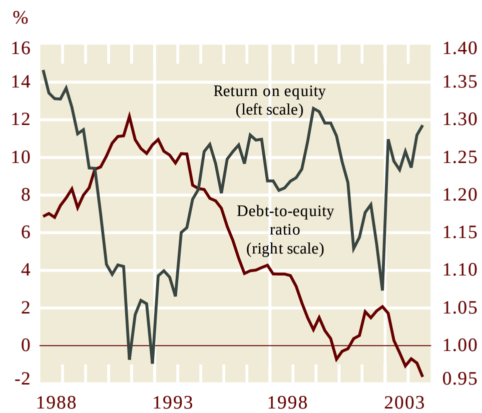
21. In the June 2004 issue of the *Financial Stability Review*, however, the Bank of England expressed the view that U.K. corporate indebtedness was above its long-run desired level.
22. Owing to ongoing restructuring efforts and improved economic conditions, three of the four major Japanese banks marked a return to profitability, with declining loan losses (as a share of total loans) and a rising capital-adequacy ratio for the year. This strong performance is reflected in the Moody's July 2004 upgrade of the credit ratings of four Japanese banks. Nevertheless, many individual banks are still weak, especially regional banks. In addition, although capital-adequacy ratios appear satisfactory, a large share of capital, about 30 per cent for the sector, still consists of deferred tax assets.

Chart 25 Real GDP Growth: Canada



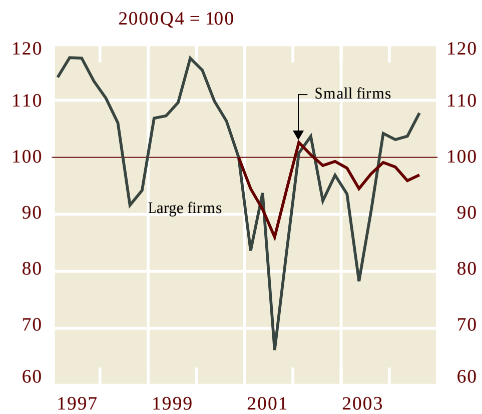
Source: Statistics Canada

Chart 26 Financial Position of the Canadian Non-Financial Corporate Sector



Source: Statistics Canada and Bank of Canada

Chart 27 Canadian Business Confidence



Source: The Conference Board of Canada and CFIB Research

Canadian Developments

Canadian economy

Canada experienced substantial economic growth in the first half of 2004 (Chart 25). In particular, increases in both final domestic demand and exports were quite strong. Continued strong growth of final domestic demand is expected to contribute importantly to solid economic expansion through to 2006. While further global economic expansion should imply ongoing gains for Canadian exports, this is likely to be more than offset by faster growth in imports. Indeed, the appreciation of the Canadian dollar since early 2003 is expected to dampen the growth of Canada's exports and boost that of imports through 2005.

Corporate sector

The financial situation of the non-financial corporate sector improved still further in the first three quarters of 2004. Profitability strengthened between the end of 2003 and the third quarter of 2004, and leverage continued to be very low (Chart 26). In particular, profitability improved considerably in most industries with a high exposure to international trade, given stronger output growth and substantial increases in selling prices, notwithstanding the appreciation of the Canadian dollar. Profit levels also remained quite high in most sectors with a low exposure to international trade.

The surge in the prices of both energy and non-energy commodities so far in 2004 contributed to the increases in selling prices and thus had important effects on the profitability of certain sectors.[23] Profits in commodity-producing sectors rose considerably in the first three quarters of this year. On the other hand, profitability in some sectors that use commodities intensively (e.g., air transportation) has been adversely affected, especially in cases where firms had limited ability to pass on their higher costs in the form of increased selling prices. At the same time, other industries with relatively high material costs (e.g., chemical manufacturing) still experienced marked gains in profits because of

23. The general increase in commodity prices chiefly reflects the strong global economic recovery. The effects on profits have been limited in the short run, by hedging (by both commodity producers and consumers) and by the presence of long-term pricing contracts.

substantial increases in demand and, hence, marked rises in output and product prices.

Given the overall improvement in profitability, the confidence of large firms has remained robust (Chart 27). On the other hand, the confidence of small firms has eased slightly since the end of 2003, reflecting the adverse impact of much higher insurance and energy costs.[24]

Industry

A limited set of industries have continued to be under some degree of financial stress so far in 2004. These industries account for only about 13 per cent of the capital of the non-financial business sector, and so the risks they pose to the financial system are limited.

The profitability of Canada's auto manufacturing industry recovered markedly in 2003 and the first three quarters of 2004 (Chart 28). Rates of return for auto parts producers are likely to ease considerably over the coming months because of much higher raw materials costs (as long-term contracts are renegotiated) and the threat of overseas competition.

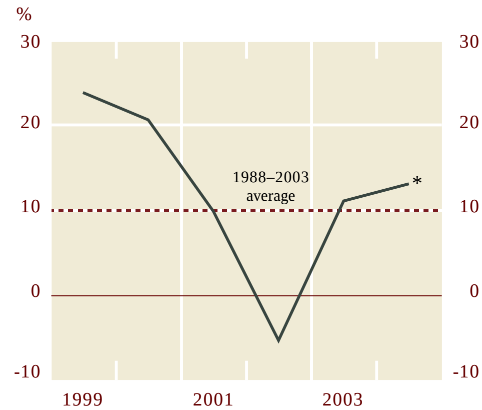
Profitability in the wood and paper industry fell considerably in late 2003 and early 2004, chiefly as a result of the substantial appreciation of the Canadian dollar and much higher energy costs (Chart 29). Stronger product prices (especially for building products) boosted profits in the second and third quarters of 2004. But with the substantial drop in these prices since mid-September and the subsequent appreciation of the Canadian dollar, profits are likely to ease markedly towards year-end.

Profitability in the electronic and computer manufacturing industry remained low in the first three quarters of 2004, despite a substantial recovery in production since late 2002 (Chart 30). Ongoing intense competitive pressures, particularly in the market for telecom equipment, are likely to result in continued low rates of return over the near term.

The financial position of the Canadian air transport industry improved so far this year, reflecting both the impact of restructuring measures and recent gains in air traffic. But the sharp rise

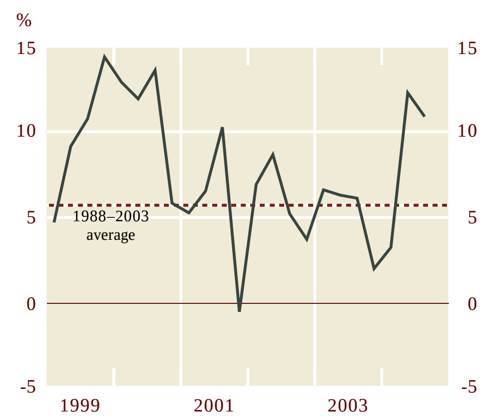
24. See the Highlighted Issue on page 5 of this *Review* for a discussion of the potential impact of expected increases in interest rates on Canadian corporate balance sheets.

Chart 28 Return on Equity: Automotive Manufacturing



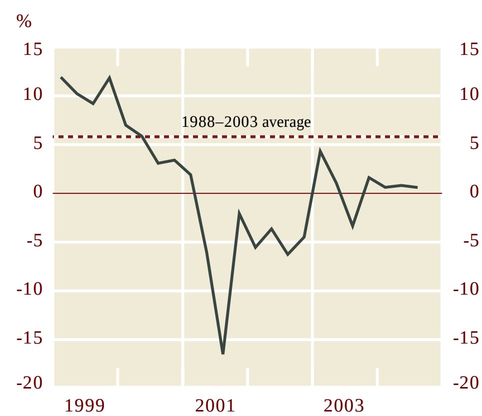
* Estimate
Source: Statistics Canada

Chart 29 Return on Equity: Wood and Paper Manufacturing



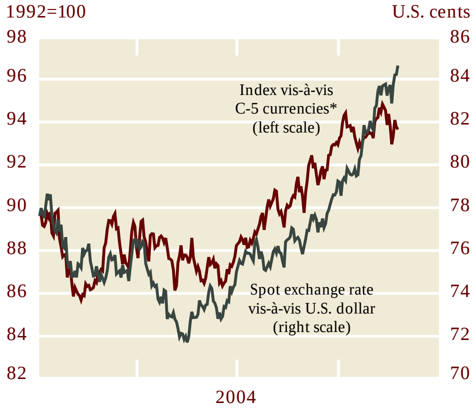
Source: Statistics Canada

Chart 30 Return on Equity: Electronics and Computer Manufacturing



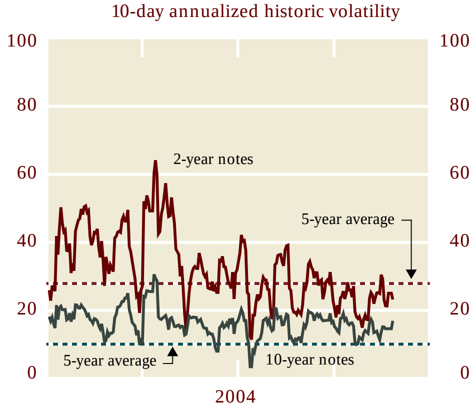
Source: Statistics Canada

Chart 31 Canadian Dollar Exchange Rate



* Euro, yen, U.K. pound, Swedish krona, and Swiss franc
Source: Bank of Canada

Chart 32 Volatility of Yields on 2-Year and 10-Year U.S. Notes



Source: Bank of Canada

in fuel costs has been an important offsetting factor. As well, some Canadian aircraft suppliers have come under intensified financial pressure as a result of the increased financial stress of some of their major U.S. customers.

The financial situation in Canada's cattle industry remains weak because of the continuing ban on exports of live cattle, imposed after the discovery of BSE in Canada. With insufficient Canadian slaughtering capacity, there is an important risk that Canadian cattle prices will remain low for some time to come. However, federal and provincial governments have promised further financial aid to the industry.

Over the near term, the financial positions of many industries with a strong net export orientation—and no offsets such as a further rise in world demand or in commodity prices—are likely to be adversely affected by the further strengthening of the Canadian dollar in the past few months (Chart 31). The adverse impact on profitability among industries already experiencing financial stress would likely be especially pronounced for wood and paper products, auto parts manufacturing, and electronic and computer manufacturing. However, it is unlikely that financial institutions with well-diversified portfolios would be strongly affected overall by the worsening financial situation in such industries.

The Financial System

Financial markets

Recent developments in financial markets have been driven by factors relating to global economic growth and the removal of monetary stimulus. Thus far, market reaction to the removal of monetary stimulus has been orderly. Indeed, volatility has remained subdued, as both bonds and equities continue to trade in relatively narrow ranges (Chart 32). Sources of risk to global financial markets remain, however. These include the recent surge in oil prices, and the possibility that interest rates may rise by more and faster than expected.

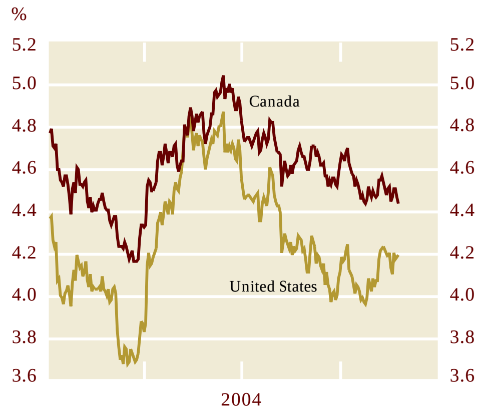
Adapting to higher policy interest rates

As noted earlier, several central banks have already started to reduce monetary stimulus. The timing and magnitude of the tightening to date has, however, been widely anticipated by market participants and, thus, has not led to an increase in market volatility.

Overall, the impact of higher policy rates on longer-term yields in Canada and in the United States has been relatively muted (Chart 33). Their effect on 10-year yields in both countries has been largely counterbalanced by concerns from market participants about the sustainability of the U.S. recovery (and its impact on Canada).

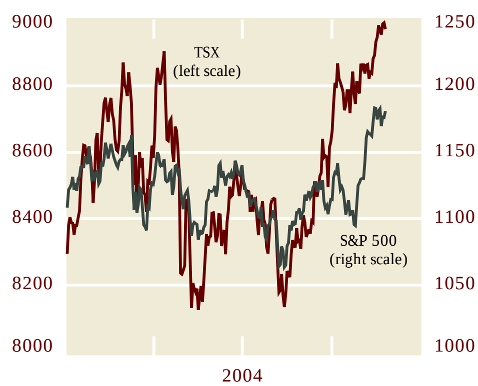
To date, higher short-term interest rates have not had a material impact on other asset classes. Equity markets have generally traded within a narrow range in 2004 (Chart 34). While expected earnings respond negatively to higher interest rates, they have, nonetheless, remained strong, owing to robust global economic activity. The risk that the pace and magnitude of interest rate increases prove to be greater than currently expected, and the resultant impact on asset prices, including equities, remains.[25]

Chart 33 Yield on U.S. and Canadian 10-Year Notes/Bonds



Source: Bank of Canada

Chart 34 North American Stock Market Indexes



Source: Bank of Canada

Oil prices

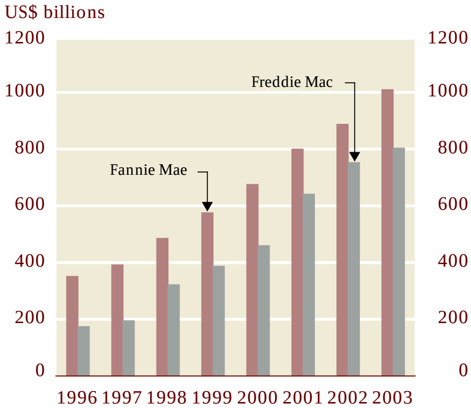
Currently, the main risk to global financial markets relates to the surge in oil prices to record nominal highs, and its impact on longer-term global growth prospects and financial market volatility (Chart 17). If high energy prices persist, they will affect financial markets through various channels, including a dampening effect on earnings and thus on equity prices of non-energy companies, as well as through changes in nominal exchange rates. The net impact of high oil prices on fixed-income markets is likely to be more ambiguous because such prices could potentially temper global economic growth, and thus put downward pressure on yields. They could also result in higher inflation, and thus put upward pressure on yields. Given the underlying low-inflation environment and well-anchored inflation expectations, however, market participants expect high oil prices to have their major impact on economic growth.

Government-sponsored enterprises

The Office of Federal Housing Enterprise Oversight (OFHEO) in the United States, which regulates government-sponsored enterprises

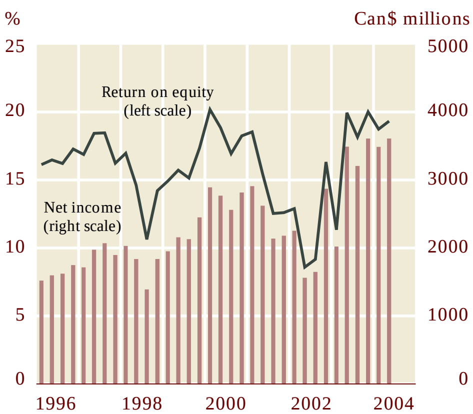
25. See the June 2004 *Review*, pages 4-8 for a detailed discussion of factors affecting the prices of financial assets, including prospects for higher interest rates and the risks to asset valuations. That discussion remains current.

Chart 35 Total Assets: Fannie Mae and Freddie Mac



Source: Fannie Mae and Freddie Mac

Chart 36 Bank Profits



Source: Banks' quarterly financial statements

(GSEs),[26] recently released a report critical of Fannie Mae's accounting policies. Specifically, the OFHEO found pervasive manipulation of earnings. The manipulation asserted in the OFHEO report was allegedly designed to smooth earnings volatility and help meet earnings expectations. Furthermore, the report suggested that Fannie Mae may have violated accounting rules in the way that it accounted for derivative products used to hedge its underlying mortgage positions.

Although the effect of these findings on financial markets has so far been modest and relatively isolated, a risk exists that further negative developments concerning U.S. GSEs more generally, in light of their scale and level of participation in financial markets, could have important negative effects on financial market stability. While this impact would be largely in U.S.-dollar markets, given the tight linkages between U.S. and Canadian fixed-income and derivatives markets, there is the potential for spillover effects into Canadian markets.

Fannie Mae is America's third-largest financial corporation in terms of assets and plays a key role in financing home mortgages in the United States (Chart 35). It is also the second-largest issuer, behind the U.S. Treasury, of U.S.-dollar securities and a significant participant in the interest rate derivatives market. As such, any material change in the firm's use of derivatives as hedging instruments has the potential to significantly affect U.S.-dollar interest rate swap and options markets.

Since the release of the OFHEO report, Fannie Mae has agreed to hold 30 per cent more capital against loans than previously required by the regulator. This decision on capital holdings is identical to that agreed to by Freddie Mac last year, following findings of similar accounting irregularities. As well, Standard & Poor's has placed the agency's subordinate debt and preferred stock on CreditWatch with negative implications.

Although much attention has focused on the reporting problems of Fannie Mae and Freddie Mac, their senior debt continues to carry the

26. U.S. housing-related GSEs, such as Fannie Mae and Freddie Mac, are congressionally chartered companies owned by private shareholders. They acquire home mortgages from the lenders that initially extended credit and aim to help low- and moderate-income Americans purchase homes.

Box 4

OSFI's New Guideline B-5 and the Canadian ABCP Market

On 23 November, the Office of the Superintendent of Financial Institutions (OSFI) published a revision to its Guideline B-5 for asset securitization transactions. Many of the changes aim to align Canada's regulatory treatment of securitization with that of other countries. The revision also clarifies a number of old B-5 provisions.

The revisions that may have the most significant impact on the Canadian financial system are those pertaining to facilities for enhancing the liquidity of asset-backed commercial paper (ABCP). They remove a major impediment to the potential growth of the Canadian ABCP market. This should impart greater efficiency to Canadian-dollar capital markets.

Because the assets that comprise the collateral are typically of longer maturity than the ABCP financing them, some sort of liquidity buffer is needed to protect against rollover risk and timing mismatches. Hence, ABCP issuance programs purchase liquidity protection. At a minimum, in the old B-5 such protection should have safeguarded against what it called a "general market disruption" (GMD), which was never defined but was interpreted by market participants to mean a situation in which "not a single dollar of corporate or asset-backed commercial paper can be placed in the market at any price."

Because Standard & Poor's and Moody's viewed Canadian liquidity enhancements as too restrictive, they have been reluctant to give their highest investment-grade ratings to Canadian ABCP. But if a Canadian bank provided less-restrictive liquidity, it would, at a minimum, incur increased regulatory capital charges that would make the ABCP less economical.

The new B-5 defines a GMD as a "disruption in the Canadian commercial paper market resulting in the inability of Canadian paper issuers, including the SPE, to issue any commercial paper, and where the inability does not result from a diminution in the creditworthiness of the SPE or any originator or from a deterioration in the performance of the assets of the SPE."[1] This would allow the liquidity facility to be tapped in the event of any non-credit disruptions, satisfying Moody's and Standard & Poor's standards to provide their highest investment-grade ratings to Canadian ABCP, while still retaining a zero capital charge.

Furthermore, the new B-5 acknowledges that the liquidity facility might not even need to include GMD as a restriction, leading to the type of liquidity support common in other markets. However, the use of this alternative would also come at the cost of capital charges, as outlined in the Basel II Framework. Moody's and Standard & Poor's have both suggested that this approach might also meet their highest short-term rating standards.

Hence, with the new B-5 it will be possible for Canadian banks to offer expanded liquidity protection to Canadian ABCP programs on a cost-effective basis. Although it is premature to speculate which, if any, of the new liquidity options the banks will adopt, and therefore whether Moody's or Standard & Poor's will be able to give Canadian ABCP their highest short-term ratings, it appears that the Canadian market will at least have that option.

Although Canada's Dominion Bond Rating Service (DBRS) already gives Canadian ABCP their highest short-term rating, many institutional investors require two ratings for investments to be acceptable. Hence, the new B-5 could significantly broaden demand for Canadian ABCP and give corporate borrowers expanded and lower-cost access to financing.

1. An ABCP program bundles together numerous assets into a "special-purpose entity" (SPE), which in turn, issues marketable securities.

highest (AAA) rating assigned by the three major global rating agencies on the strength of the implicit government guarantee. Although their subordinate debt is rated at AA- and is on CreditWatch, the default of Fannie Mae or Freddie Mac is deemed highly unlikely.

Regulatory and other developments

On 26 June 2004, central bank governors and the heads of bank supervisory authorities in the Group of Ten (G-10) countries endorsed the publication of the "International Convergence of Capital Measurement and Capital Standards: a Revised Framework," the new capital-adequacy framework commonly known as Basel II.

This framework should improve the stability of the financial system as a whole. It sets out the details for the adoption of more risk-sensitive minimum capital requirements by banking organizations.[27] The new framework reinforces these risk-sensitive requirements by laying out principles for banks to use in assessing the adequacy of their capital and for supervisors to use when reviewing such assessments so that banks have adequate capital to support their overall level of risk. Basel II also seeks to strengthen market discipline by enhancing transparency in banks' financial reporting. The implementation of the new framework is expected to commence in member jurisdictions as of year-end 2007.

In Canada, in November 2004, the Office of the Superintendent of Financial Institutions (OSFI) published revisions to its Guideline B-5 for asset transactions. Many of the revisions aim to align Canada's regulatory treatment of securitization with those of other countries. Box 4 outlines how these revisions may encourage growth in the Canadian market for asset-backed commercial paper.

The securities industries of Canada and the United States plan to move to straight-through processing (STP) to clear and settle securities transactions.[28] STP should increase the operational efficiency of the securities-settlement process. The Bank of Canada supports the efforts of the Canadian Capital Markets Association (CCMA) and all Canadian industry and regulatory participants to take the necessary steps to achieve STP capability.[29] To move towards this objective, the CCMA has, since the June 2004 *Review*, decided to realign its key priorities. It will now focus its efforts on achieving institutional trade-date matching (agreeing to the details of a trade on the day the trade was executed), the area considered to be the largest hurdle for the Canadian marketplace to overcome in achieving STP.

Financial institutions

The major Canadian banks reported continued strong profitability through their first three fiscal quarters of 2004. Average return on equity in the third quarter was 19.3 per cent, compared with 18.7 per cent in the second quarter and 16.5 per cent for 2003 as a whole (Chart 36).

To date in 2004, the diversified business strategy of the major Canadian banks has been supportive of continued gains in profitability. Although there were some notable differences among the banks, in aggregate, the major segments of their diversified business strategy performed well. Credit performance continued to strengthen, as provisions for loan losses as a share of average assets declined to 0.04 per cent in the third quarter of 2004 (Chart 37). Results from foreign operations remained mixed, however.

The major Canadian banks continue to report high capital levels (Chart 16), well above minimum requirements. From a financial stability perspective, the strong capital position of the Canadian banking system may provide a buffer to absorb unexpected shocks that could negatively affect banks. These high levels of capital provide banks with the reserves from which they may choose to carry out future acquisitions, as well as continuing to raise dividends and/or conduct common share repurchase programs. Indeed, TD Bank Financial Group announced the purchase of a $5 billion controlling interest in Banknorth Group of Maine. The deal, which is subject to approval by Banknorth's shareholders

27. The article "Basel II and Required Bank Capital" on page 61 of this *Review* examines some potential implications of these changes.
28. STP is defined as the seamless passing of information electronically—on a timely, accurate, system-to-system basis—to all parties in the end-to-end chain of a securities transaction without manual handling or redundant processing. See the Box on page 25 of the June 2004 *Review*.
29. Created in August 2000, the CCMA serves as a forum for industry experts to provide leadership and coordinate the industry-wide implementation of STP.

and by U.S. and Canadian regulatory authorities, is expected to close in February 2005.[30]

The life insurance industry continued to report solid financial performance in the first three quarters of 2004, with the three largest Canadian insurers reporting a return on equity of about 15 per cent (Chart 38). Strong balance sheets, firm sales in most product lines, and good geographical diversification helped insurers sustain profitability.

The profitability of the property and casualty insurance industry, which experienced a significant gain in 2003, stabilized in the first three quarters of 2004. Rising premiums and improved investment income allowed the industry to report a return on equity of about 18 per cent so far in 2004, following 11.3 per cent in 2003, and only 1.7 per cent in 2002. There is still uncertainty, however, surrounding the prospects for the performance of this industry in light of increasing competition. The automobile market, which accounts for more than one-half of all premiums collected, faces particular challenges. Some provincial governments implemented premium rollbacks or rate freezes in 2003–04 in exchange for cost savings for the auto insurance industry (in the form of legislated reforms expected to reduce adverse claims). The effect of the reduced premiums on industry rates of return are, however, expected to be greater in 2005 as premium reductions are fully passed on to holders of auto insurance (Chart 39).

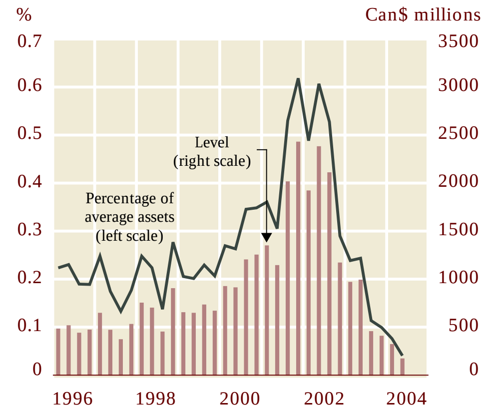
In late October, the New York Attorney General sued Marsh & McLennan, the world's largest insurance broker, on the basis that it received special payments (known as contingent commissions) from insurance companies that were charging above-normal commissions. Although there has been a significant impact on the market value of the equity of most insurance firms, including Canadian firms, it is not clear to what extent the investigation in the United States will affect the Canadian insurance industry.[31]

Clearing and settlement systems

Clearing and settlement systems are a key component of the financial system, allowing payments and other financial obligations to clear

30. Other, smaller foreign acquisitions by major Canadian banks have also taken place.
31. In 2004, Canadian property and casualty insurers paid out special commissions to insurance brokers.

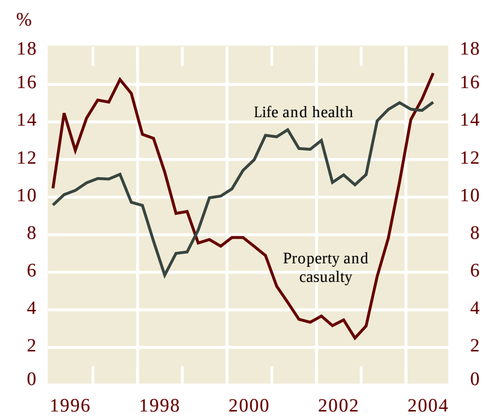
Chart 37 Bank Loan-Loss Provisions



Source: Banks' quarterly financial statements

Chart 38 Return on Equity of Insurance Industry

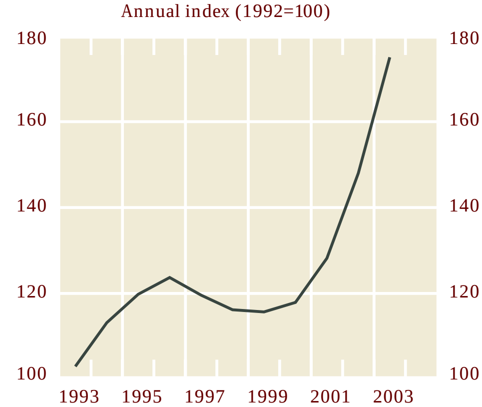
4-quarter moving average



Source: OSFI and Bank of Canada calculations

Chart 39 Average Nominal Premiums Written: Private Passenger Vehicles*

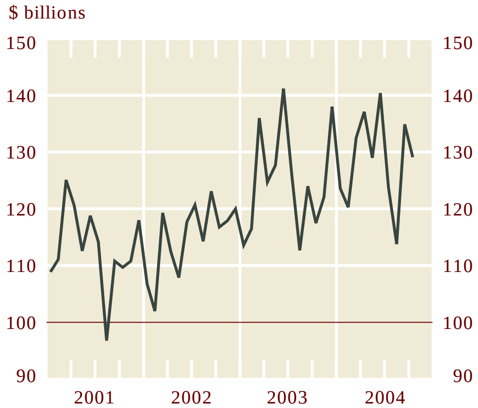
Annual index (1992=100)



* Figures represent the average premium across six provinces: ON, ALTA, NS, NB, NFLD, and PEI
Source: Insurance Bureau of Canada

Chart 40 Value of Payments Processed by the LVTS

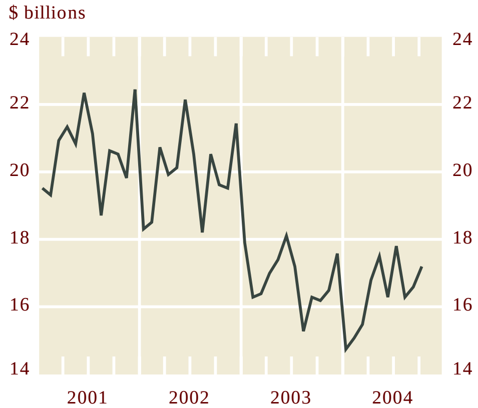
Average daily amount per month



Source: Canadian Payments Association

Chart 41 Value of Payments Processed by the ACSS

Average daily amount per month



Source: Canadian Payments Association

and settle. The Bank of Canada supplies services to a number of these systems, including the Large Value Transfer System (LVTS), for settling large-value or time-sensitive payments; the Automated Clearing Settlement System (ACSS), used mostly for smaller-value retail and some electronic payments; the CDSX, Canada's securities settlement system; and the Continuous Linked Settlement Bank (CLS), an international system for the settlement of foreign exchange transactions. Because of their systemic importance, the Bank has formal oversight responsibilities for the LVTS and the CDSX, and shares oversight responsibilities with other central banks whose currencies are included in the CLS Bank.[32]

Recent developments

Payment flows in the LVTS grew modestly in the first three quarters of 2004 compared with the same period in 2003, increasing by 3 per cent from year-earlier levels to an average of $129 billion per day (Chart 40). On 2 July, the first day following the 1 July holiday—a day generally associated with large payment flows—a record number of transactions (about 29,000 with a value of $163 billion) settled through the LVTS.

A continuing factor in the growth of LVTS payment flows has been the migration of large-value payments from the ACSS. The average daily value of payments sent through the ACSS fell by about $0.7 billion compared with the same period in 2003, to average about $16 billion in the first three quarters of 2004 (Chart 41). ACSS payment flows, which are not as well protected against risk as those in the LVTS, have been on a downward trend in the last four years and are now about $5 billion below the daily average in 2000.

On 18 October, a new participant, State Street Bank and Trust Company, began operating in the LVTS, bringing the number of LVTS participants to 15 (including the Bank of Canada). This is the first new participant to join the LVTS since it began operations in February 1999.

October 2004 signalled the successful completion of a 12-month transition period of the risk model for CDSX, Canada's system for settling virtually all securities denominated in Canadian

32. The Federal Reserve is the lead overseer for the CLS Bank.

dollars. In March 2003, CDSX became operational for the settlement of debt. Equities were added in July 2003. To complete the transition period, The Canadian Depository for Securities Ltd. (which owns and operates CDSX), participants, and regulators worked on several issues, proposing solutions that ultimately led to rule amendments and technical adjustments to implement the new features of the system.

Foreign exchange trades settled by the CLS Bank continue to grow. For the 11 eligible CLS currencies combined, the volume of sides settled in the first three quarters of 2004 averaged 126,000 per day, up 70 per cent from a year earlier, for an average daily value of US$1.4 trillion.[33] The value of sides settled reached a record US$2.5 trillion on 15 September.

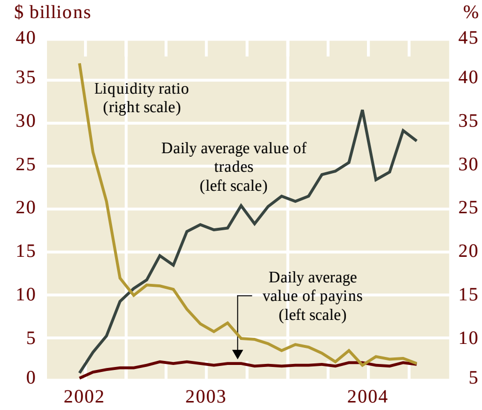
For transactions involving the Canadian dollar, the value of trades settled by the CLS averaged Can$25 billion per day in the first three quarters of 2004, an increase of about 58 per cent from year-earlier levels (Chart 42). The value of funds required to settle these transactions, relative to the value of the transactions themselves, has trended down to average about 7.5 per cent in the third quarter of 2004. This ratio represents a measure of the liquidity savings provided by CLS settlement and compares with a liquidity ratio for trades settled by the CLS in all currencies combined of just over 2 per cent. In June 2004, an additional Canadian bank began settling trades through the CLS. It is still the case, however, that the majority of large Canadian banks do not yet settle the bulk of their foreign exchange trades through the CLS.

Preparations are underway to include four additional currencies in CLS settlement. These are the Hong-Kong dollar, the Korean won, the New Zealand dollar, and the South African rand. Settlement will begin once all technical requirements are met and assuming all regulatory and CLS approvals are received.

On 31 May 2004, a major Canadian bank experienced a computer problem whose effects were not fully resolved until 8 June. The most severe consequence of this problem was at the retail

Chart 42 Canadian-Dollar Foreign Exchange Trades Settled by the CLS Bank

Average daily amount per month



Source: The CLS Bank

33. The 11 currencies currently eligible for settlement by the CLS Bank are the Australian dollar, the Canadian dollar, the Danish krone, the euro, the U.K. pound, the Japanese yen, the Norwegian krona, the Singapore dollar, the Swedish krona, the Swiss franc, and the U.S. dollar.

level, because the problem affected the ability of this bank to update its client accounts (which had widespread repercussions across Canada). These events did not, however, cause significant disruptions to the operation of systemically important clearing and settlement systems in Canada. More recently, two other banks experienced technical problems affecting their retail activity.

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