BANK OF CANADA
BANQUE DU CANADA

Monetary Policy Report

October 2007

www.bankofcanada.ca

Canada's Inflation-Control Strategy*

Inflation control and the economy

- Inflation control is not an end in itself; it is the means whereby monetary policy contributes to solid economic performance.

- Low inflation allows the economy to function more effectively. This contributes to better economic growth over time and works to moderate cyclical fluctuations in output and employment.

The monetary policy instrument

- Announcements regarding the Bank's policy instrument—the target overnight interest rate—take place, under normal circumstances, on eight prespecified dates during the year.

- In setting a target for the overnight rate, the Bank of Canada influences short-term interest rates to achieve a rate of monetary expansion consistent with the inflation-control target. The transmission mechanism is complex and involves long and variable lags—the impact on inflation from changes in policy rates is usually spread over six to eight quarters.

The targets

- In February 1991, the federal government and the Bank of Canada jointly agreed on a series of targets for reducing total CPI inflation to the midpoint of a range of 1 to 3 per cent by the end of 1995. The inflation target has been extended a number of times. In November 2006, the agreement was renewed for a period of five years to the end of 2011. Under this agreement, the Bank will continue to conduct monetary policy aimed at keeping total CPI inflation at 2 per cent, with a control range of 1 to 3 per cent around the target.

Monitoring inflation

- In the short run, a good deal of movement in the CPI is caused by transitory fluctuations in the prices of such volatile components as fruit and gasoline, as well as by changes in indirect taxes. For this reason, the Bank uses a *core* measure of CPI inflation as an indicator of the underlying trend in inflation. This core measure excludes eight of the most volatile components of the CPI and adjusts the remaining components to remove the effect of changes in indirect taxes.

* See "Joint Statement of the Government of Canada and the Bank of Canada on the Renewal of the Inflation-Control Target." Press Release (23 November 2006) and Background Information. Reprinted in the *Bank of Canada Review* (Winter 2006–2007): 45–59.

Bank of Canada
234 Wellington Street
Ottawa, Ontario
K1A 0G9

CN ISSN 1201-8783

Printed in Canada on recycled paper

BANK OF CANADA

MONETARY POLICY REPORT

— October 2007 —

This is a report of the Governing Council of the Bank of Canada:
David Dodge, Paul Jenkins, Sheryl Kennedy, Pierre Duguay,
David Longworth, and Tiff Macklem.

Canada has enjoyed roughly 15 years of sustained economic growth, with low and stable inflation and increasingly healthy public finances … At least part of the credit for our continued economic performance should go to our sound framework for macroeconomic policy, which includes the transparent monetary policy of inflation targeting … as well as a sound fiscal policy.

David Dodge

Governor, Bank of Canada
12 September 2007

Contents

1. Overview

There have been a number of significant economic and financial developments since the time of the July *Monetary Policy Report Update*. Against a backdrop of robust global economic expansion and strong commodity prices, growth in the Canadian economy has been stronger than projected with considerable momentum in domestic demand. The economy is now operating further above its production potential than had been previously expected. The core rate of inflation, which has been above 2 per cent for the past year, was 2.2 per cent in August. Total consumer price inflation fell temporarily in August to 1.7 per cent, having been above the 2 per cent inflation target since the spring.

Since the July *Update*, the outlook for the U.S. economy has weakened because of greater-than-expected slowing in the housing sector. The Bank has revised down its projection for U.S. GDP growth to 1.9 per cent in 2007 and 2.1 per cent in 2008. U.S. growth is expected to pick up to 3 per cent in 2009.

The Canadian dollar generally traded in a range of 93 to 95.5 cents U.S. in July and August, but since then it has appreciated sharply to as high as US$1.03. In the Bank's new base-case projection, the Canadian dollar is assumed to average 98 cents U.S., the midpoint of the range since the July *Update*. As well, there has been a tightening of credit conditions stemming from financial market developments this summer. For Canada, the Bank assumes that the cost of credit for firms and households relative to the overnight rate will be 25 basis points higher over the projection period than it was prior to the summer.

Despite these tighter credit conditions, momentum in domestic demand in Canada is expected to remain strong. The combined effect of a weaker U.S. outlook and a higher assumed level for the Canadian dollar implies, however, that net exports will exert a more significant drag on the economy in 2008 and 2009 than previously expected. As a result, the Canadian economy is projected to grow by 2.6 per cent in 2007, 2.3 per cent in 2008, and 2.5 per cent in 2009.

With the economy moving back towards balance, and with the direct effect of the stronger Canadian dollar on consumer prices, core inflation is projected to gradually decline to 2 per cent in the second half of 2008—slightly earlier than previously expected—and to remain there for the balance of the projection period. Higher energy prices are expected to push total inflation up sharply in the fourth quarter of 2007 to about 3 per cent. Inflation is then expected to fall back to the 2 per cent target in the second half of next year and to stay there.

A number of the risks identified in the July *Update* have been realized to some extent. Stronger household demand in Canada, a sharper adjustment in the U.S. housing sector, and a stronger Canadian dollar have been reflected in the Bank's new base-case projection.

This report includes information received up to the fixed announcement date on 16 October 2007.

But significant upside and downside risks to the Bank's inflation projection remain. On the upside, excess demand in the Canadian economy could persist longer than projected. This could come from two sources: higher growth in household spending than projected and lower growth in productivity than assumed. On the downside, if the Canadian dollar were to persist above the level of 98 cents U.S. assumed over the projection horizon for reasons not associated with stronger-than-projected demand for Canadian products, this would result in lower output and inflation. In addition, the effect of the past appreciation of the Canadian dollar on demand and inflation could be greater than expected, and the effect of the weakness in the U.S. housing sector could be larger than projected.

All factors considered, the Bank judges that the risks to its inflation projection are roughly balanced, with perhaps a slight tilt to the downside.

In addition, the duration and economic repercussions of recent financial market developments and the possibility of a disorderly unwinding of global imbalances represent an uncertainty for the outlook.

Against this backdrop, the Bank left its key policy rate unchanged on 5 September and 16 October at 4.50 per cent. The Bank judges, at this time, that the current level of the target for the overnight rate is consistent with achieving the inflation target over the medium term.

2. Recent Developments in Inflation

Inflation and the 2 per cent target

The underlying rate of inflation is running above 2 per cent . . .

The underlying rate of inflation has been above 2 per cent over the past year. Total CPI inflation, which has also been running above 2 per cent since the spring, fell temporarily to 1.7 per cent in August as a result of fluctuations in the prices of some of the more volatile components (Chart 1).

. . . reflecting ongoing capacity pressures.

The core rate of inflation,[1] a more reliable indicator of the underlying trend in inflation than total CPI inflation, has averaged 2.3 per cent over the past few months, as projected in the July *Update*. This reflected ongoing pressures on production capacity in the economy. Other measures of the trend rate of inflation that the Bank monitors also stayed above 2 per cent in July and August (Chart 2).[2] The influence of strong domestic demand was particularly evident in the prices of core services (Chart 3). Shelter costs rose somewhat more strongly than projected, with greater-than-expected strength outside Alberta. Core food prices have also continued to rise markedly, owing to the ongoing surge in the prices of grains and oilseeds. The downward pressure on the core rate coming from lower prices for many import-intensive goods (such as semi-durable and household durable goods) eased still further, but price discounting on automobiles increased.

Total CPI inflation eased temporarily to 1.7 per cent in August.

The 12-month rate of increase in the total CPI was below that projected, owing to the prices of some of the more volatile components. This included gasoline prices, which reflected narrower margins as a result of a faster-than-anticipated return of North American production to more normal levels following supply disruptions last spring. Natural gas prices were also weaker.

Key measures of inflation expectations remain close to 2 per cent.

Key measures of inflation expectations remain close to 2 per cent. The average private sector forecast for total CPI inflation in 2008 is just above 2 per cent. In the Bank's autumn *Business Outlook Survey*, over 80 per cent of firms expected CPI inflation to be within a range of 1 to 3 per cent, on average, over the next two

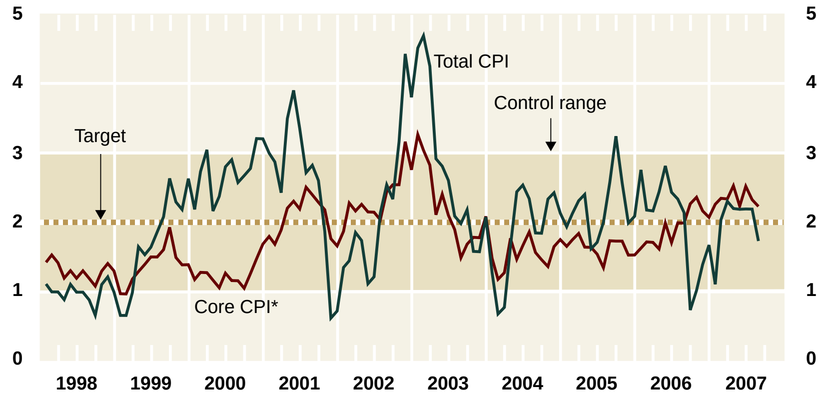
1. The core measure of inflation excludes eight of the most volatile components of the CPI and removes the effect of changes in indirect taxes on the remaining components. The eight volatile components are fruit, vegetables, gasoline, fuel oil, natural gas, intercity transportation, tobacco, and mortgage interest costs.

2. CPIW is affected by changes in the GST and other indirect taxes. If this effect were removed, the rate of change of CPIW would have also been above 2 per cent from February to June of 2007.

years. Consensus forecasts of inflation over the longer term continued to be very close to 2 per cent.

Chart 1 Consumer Price Index

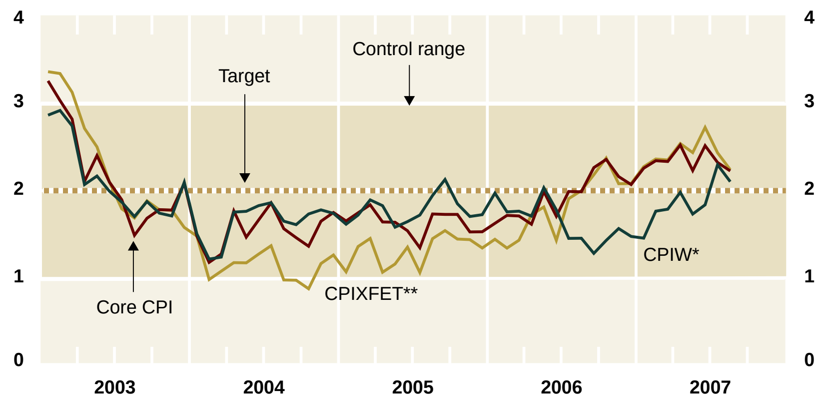
Year-over-year percentage change



* CPI excluding eight of the most volatile components and the effect of changes in indirect taxes on the remaining components

Chart 2 Core CPI and Other Measures of the Trend Inflation Rate

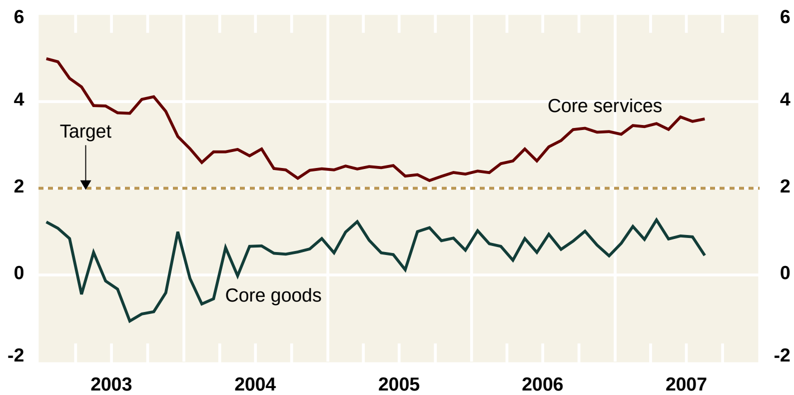
Year-over-year percentage change



* CPIW adjusts each CPI basket weight by a factor that is inversely proportional to the component's variability, but does not exclude the effect of changes in indirect taxes.
** CPIXFET excludes food, energy, and the effect of changes in indirect taxes.

Chart 3 **Goods* and Services** in the Core CPI, Excluding the Effect of Changes in Indirect Taxes**

Year-over-year percentage change



* Excluding fruits, vegetables, gasoline, fuel oil, natural gas, and tobacco
** Excluding mortgage interest costs and intercity transportation

Factors at work on inflation

Aggregate demand

Growth in Canada's real GDP picked up markedly in the first half of 2007, rising at an annual rate of 3.7 per cent. At 3.4 per cent, the increase in real GDP in the second quarter was stronger than the 2.8 per cent projected in the July *Update*. This unexpected strength reflected stronger household spending and a smaller-than-expected drag from net exports.[3] Available information for the third quarter suggests that final domestic demand remained strong but that the drag from net exports increased. Current data also suggest that real GDP is likely to have grown by about 2.5 per cent, slightly less than the 2.7 per cent projected in the last *Update*.

Economic growth in Canada was stronger than expected in the first half of 2007.

Final domestic demand continued to be the major contributor to GDP growth in the first half of 2007 (Chart 4). Real personal disposable income rose solidly, boosted by the strong labour market. Household net worth continued to rise, reflecting the improvement in Canada's terms of trade and substantial increases in house prices. And household credit again increased considerably. These developments underpinned marked increases in household spending, including residential investment (Technical Box 1). In contrast, the growth of capital spending by businesses slowed appreciably.

Final domestic demand continued to be the major contributor to GDP growth . . .

3. As well, growth in the first quarter was revised up slightly to 3.9 per cent from the initial estimate of 3.7 per cent, with import volumes being revised down.

Technical Box 1

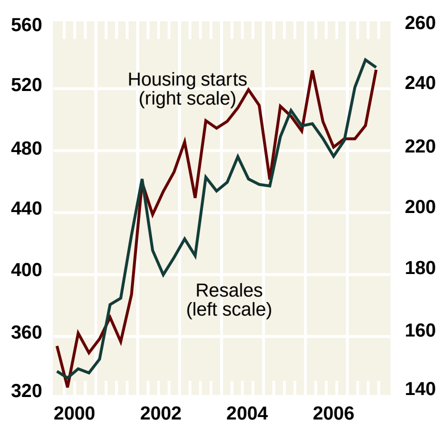
Recent Developments in the Canadian Housing Market

Since the beginning of the year, residential investment in Canada has continued to show substantial momentum, supported by strong employment, sustained income growth, relatively low interest rates, and accommodative mortgage terms and conditions (Chart A). This momentum has exceeded the Bank's expectations.

Accompanying this robust activity has been greater-than-expected strength in prices, particularly in the resale market. Of note has been the large increase in resale house prices in the major markets in Alberta since 2005 (Chart B). While price increases have slowed in Calgary in 2007, with more supply coming on stream, they have accelerated in Edmonton and have only recently shown signs of stabilizing. Price increases in Alberta remain high relative to the national average. But, even as increases in house prices have eased in Alberta, some other major urban centres have seen renewed strength in resale prices in 2007. In particular, prices have shown considerable strength in Saskatchewan, boosted by favourable economic conditions, positive net migration, and a limited supply of housing.

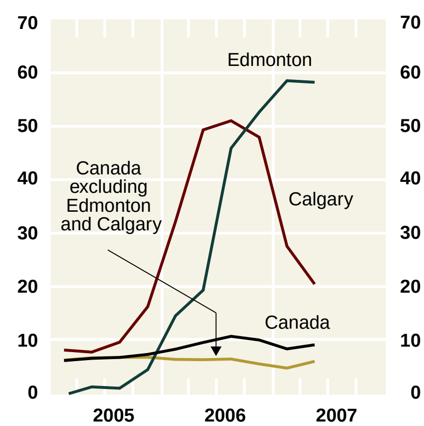
Canadian homeowners have taken advantage of higher house prices in recent years to help finance consumption through home-equity borrowing. The Bank estimates that the increased use of such financing has been an important factor supporting growth in real household spending over the past few years.

Chart A
Housing Activity in Canada
Thousands of units at annual rates



Sources: Canadian Real Estate Association and Canada Mortgage and Housing Corporation

Chart B
Canadian Resale House Prices
Year-over-year percentage change

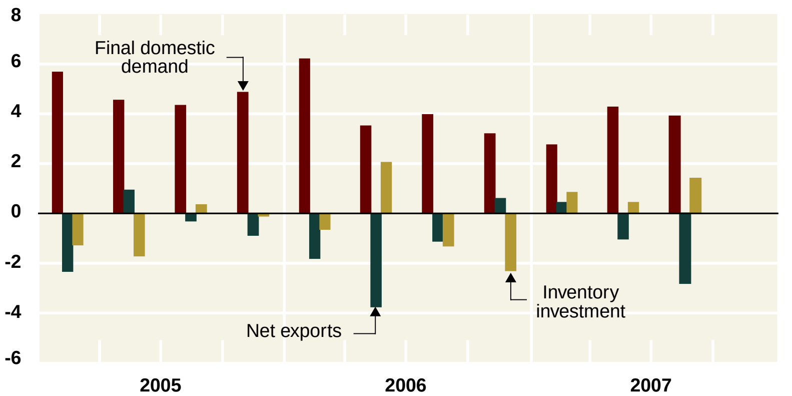


Source: Royal LePage

In particular, spending in the oil and gas industry eased, largely as a result of the impact of lower natural gas prices on conventional drilling activity.

Chart 4 Contribution to Real GDP Growth

Percentage points, quarterly at an annual rate



Note: GDP estimates for the third quarter of 2007 are based on the Bank's monitoring of current data.

. . . while net exports exerted a drag.

Canada's total exports increased moderately in the first half of 2007, with strong gains in exports of energy commodities and products. Weaker sales of U.S. motor vehicles, however, contributed to a decrease in Canadian exports of automotive products, while the downturn in the U.S. housing market held back exports of forest products. At the same time, imports rose more strongly than exports, reflecting the strength of domestic demand and the appreciation of the Canadian dollar over the past few years.

Nevertheless, the drag on growth coming from net exports in the second quarter of 2007 was less than expected. This outcome appears to have been caused by transitory developments, since early information for the third quarter points to a marked reduction in net exports.

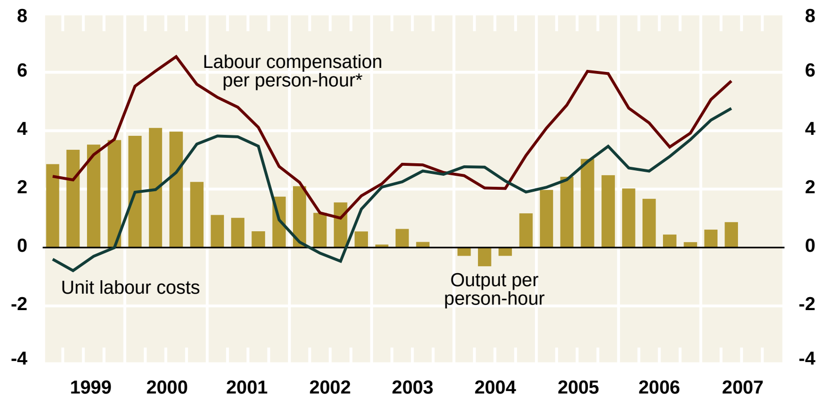
Aggregate supply

Hours worked in the business sector showed a year-over-year rise of 1.6 per cent in the second quarter of 2007, slightly less than the average growth over the previous three years. This slight reduction in the growth of hours worked mainly reflected a decrease in the average workweek, while job creation remained relatively robust.

Labour productivity growth in the business sector rose at 0.9 per cent at annual rates in the second quarter of this year, which was still modestly lower than the average growth over the 2004–06 period (Chart 5). This may be partly attributable to the shift of labour and capital towards the production of both commodities and non-tradable goods and services, since labour and capital may be somewhat less productive during such a period of adjustment. In the resource sector, relatively high commodity prices continued to encourage the production of resources that are more costly to extract, lowering productivity from what would have otherwise been the case.

Chart 5 Unit Labour Costs and Labour Productivity: Business Sector

Year-over-year percentage change



* Labour compensation includes the labour income of paid workers plus imputed labour income for self-employed workers.
Source: Statistics Canada *Daily*

Growth in potential output is estimated to have averaged about 2.5 per cent over the 2004–06 period.

The Bank estimates potential output over history by decomposing movements in labour supply and labour productivity into their trend and cyclical components. After updating its conventional measure with the most recent information, the Bank estimates that potential output growth over the 2004–06 period averaged about 2.5 per cent, marginally less than previously estimated.

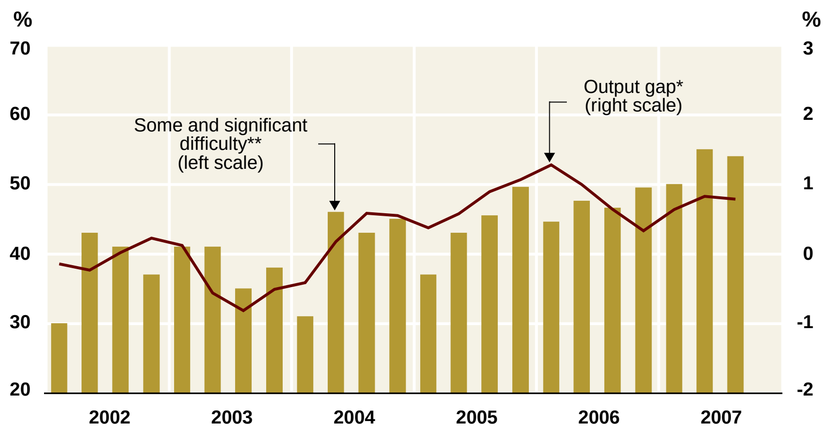
Estimated pressures on capacity

Most indicators suggest that the economy was operating further above its capacity limits in the third quarter than projected.

Most indicators suggest that the Canadian economy is operating further above its production potential than was projected at the time of the July *Update*.

The Bank's autumn *Business Outlook Survey* showed that the percentage of firms reporting that they would have difficulty in meeting an unanticipated increase in demand remained at a high level (Chart 6). The Bank's conventional measure of the output gap indicates that the economy was operating about 0.8 per cent above its production potential in the third quarter of 2007 (Chart 6), slightly higher than projected in the July *Update*.[4] On the other hand, Statistics Canada's measure of capacity utilization in the non-farm, goods-producing sector indicated that pressure on production capacity was somewhat below average in the second quarter of 2007. However, the fact that the core rate of inflation has averaged above 2 per cent since September 2006 supports the assessment that the economy was operating above its production capacity.

Chart 6 Estimated Output Gap and the Response to *Business Outlook Survey* Question on Capacity Pressures



* Difference between actual output and estimated potential output. The estimate for the third quarter of 2007 is based on a projected rise in output of 2.5 per cent (at annual rates) for the quarter.

** Percentage of firms indicating that they would have either some or significant difficulty meeting an unanticipated increase in demand/sales

In September, the employment-to-population ratio matched a record high, while the unemployment rate was at a 33-year low. All measures of wages have picked up in recent months and are now more consistent with other indicators of tightness in labour markets. The 12-month change in average hourly earnings of permanent workers reported by Statistics Canada in the Labour Force

4. The level of excess demand in the third quarter of 2007, estimated using the Bank's conventional measure, is about 0.2 percentage points higher than projected in the July *Update*. This increase reflects a small upward revision in the projected level of real GDP in the third quarter and a small reduction in the estimated level of production capacity.

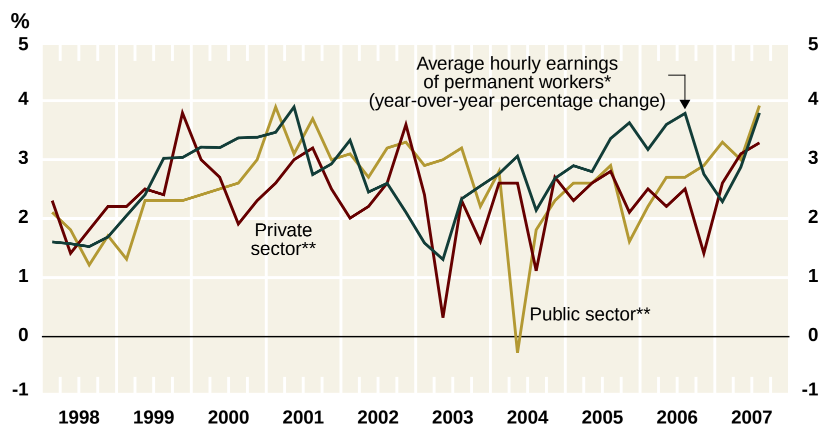
Survey (considered to be a good indicator of the underlying change in aggregate wages) moved back up to between 3 and 4 per cent over the June to September period (Chart 7). The year-to-year rise in hourly labour compensation from Statistics Canada's Productivity Accounts—a more volatile indicator—also increased even more markedly to 5.7 per cent in the second quarter of 2007 (Chart 5). With the strong gains in hourly compensation in the business sector, unit labour costs in the second quarter of 2007 were up 4.8 per cent from their level a year earlier. The percentage of firms reporting labour shortages in the Bank's autumn survey was up from the preceding survey.

The Governing Council judges that the economy was operating about 3/4 of a per cent above its production capacity in the third quarter of 2007.

After reviewing all the indicators of capacity pressures, it is the Governing Council's judgment that, overall, the economy was operating about 3/4 of a per cent above its production capacity in the third quarter of 2007.

Chart 7 Wage Settlements and Average Hourly Earnings

Effective annual increase in base wage rates for newly negotiated settlements



* Source: Statistics Canada *Labour Force Information*

** Source: Human Resources Development Canada. The last data point plotted is the average of July and August 2007.

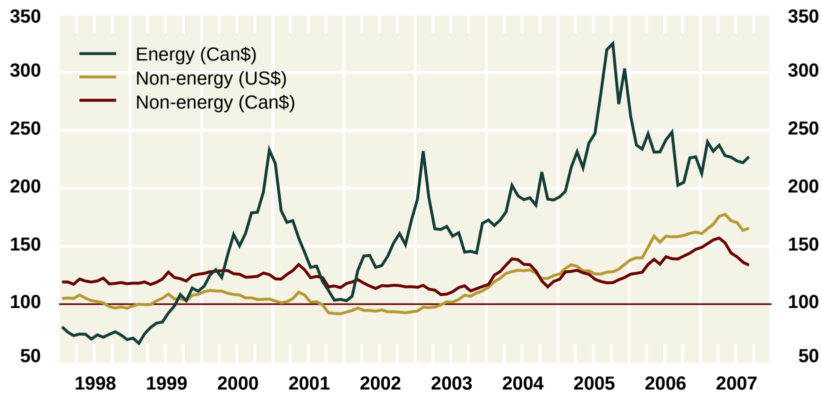
Commodity and output prices and the terms of trade

The prices of non-energy commodities have eased slightly since the peak reached last May. . .

Over the past few months, global prices for non-energy commodities have eased a little from the peak reached in May, but, overall, remain at high levels (Chart 8). Metals prices fell back, partly reflecting the tightening in global credit conditions, but have since recovered. As well, the ongoing downturn in the U.S. housing market has contributed to further reductions in the demand for lumber. In contrast, grains

Chart 8 Bank of Canada Commodity Price Index

1982–90 = 100



and oilseeds prices have continued to strengthen, owing mainly to the impact of unfavourable weather conditions on global supplies.

. . . but crude oil prices have moved up.

The price of light crude oil (West Texas Intermediate), which was about US$72 per barrel at the time of the July *Update*, averaged US$81 in the 10 days ending on 12 October 2007. This increase chiefly reflected the combination of continued vigorous global demand and relatively little adjustment in short-term supply.

A rebound in the terms of trade will support income growth through 2007.

Canada's terms of trade rebounded in the first half of 2007, reflecting substantial gains in the prices of non-energy commodities (Chart 9). As a result, the four-quarter change in the chain price index for GDP (a broad price measure of the goods and services produced in Canada) increased from 0.9 per cent in the fourth quarter of 2006 to 3.5 per cent in the second quarter of 2007 (Chart 10). With the chain price index for domestic demand growing at a slower 2.5 per cent pace in the second quarter, this implies a boost in real incomes in Canada.

The terms of trade are expected to stay high in the second half of 2007, and this should contribute to sustained growth in nominal GDP and, hence, in corporate profits and government tax revenues.

Chart 9 **Terms of Trade**

The price of exports relative to the price of imports (2002 = 100)

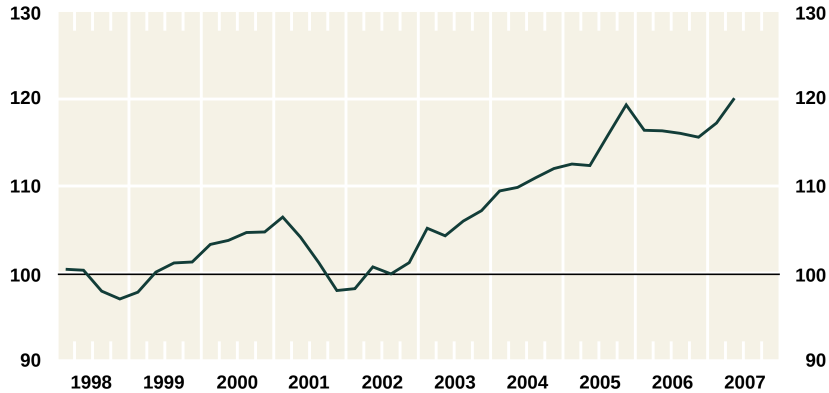
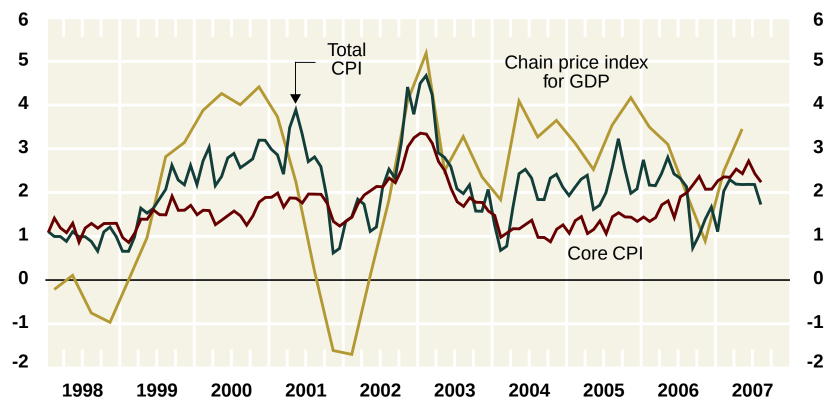


Chart 10 **Chain Price Index for GDP, Core CPI, and Total CPI**

Year-over-year percentage change

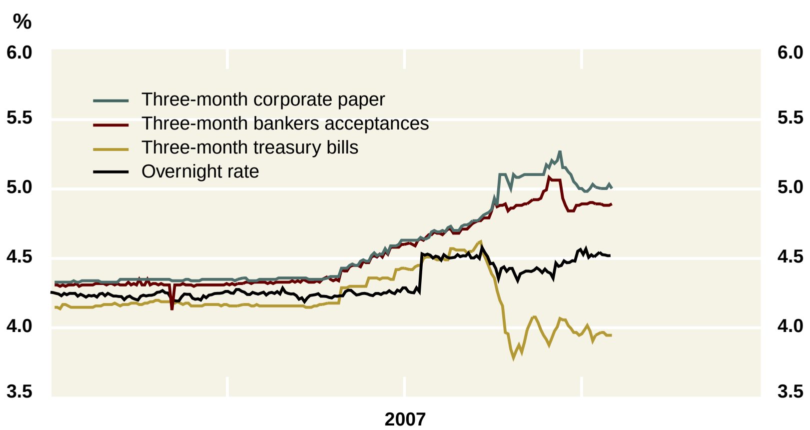


3. Financial Developments

Recent financial market developments have led to increases in credit spreads.

In recent months, greater-than-anticipated losses related to U.S. subprime mortgages have triggered a number of developments in global financial markets. There has been greater uncertainty about the valuation of structured financial products, and investors have shifted into lower-risk government bonds and treasury bills, causing credit spreads to increase. Financial institutions and businesses in major industrialized countries, including Canada, have faced higher short-term interest rates (Chart 11). Against the background of these developments, the Bank of Canada has undertaken routine operations on a number of occasions to provide liquidity in support of the efficient functioning of Canada's financial markets and to maintain the overnight rate close to the 4.50 per cent target (Technical Box 2). Although the dislocations in financial markets have diminished somewhat since August, heightened uncertainty is still affecting money markets.

Chart 11 Canadian Short-Term Interest Rates



Credit conditions

Financial institutions are facing unusually high funding needs.

Canadian financial institutions are facing substantially increased funding needs. With the recent disruptions in securitization markets, banks have taken steps to support their own asset-backed commercial paper programs and, as a result, most are holding substantially higher-than-normal amounts of this paper in inventory. In addition, banks are being called upon to provide loans and backup credit under pre-committed lines to corporations that have stopped accessing market funding. While Canadian

Technical Box 2

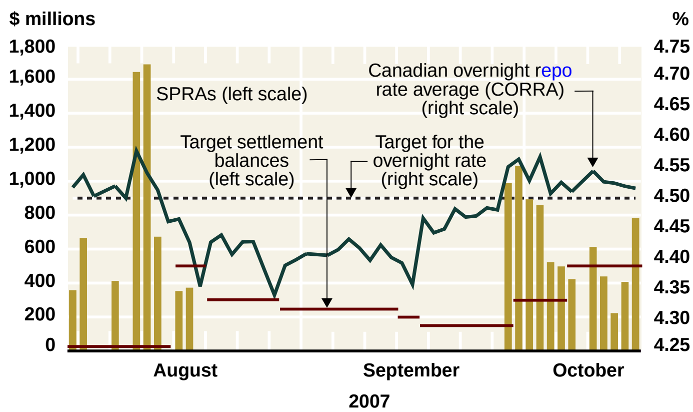
Implementing Monetary Policy: Targeting the Overnight Rate

The Bank of Canada's monetary policy implementation framework centres on keeping the overnight rate close to its target.[1] The Bank's primary influence on the overnight rate is through the 50-basis-point operating band, reinforced through its standing facilities for loans and deposits. In order to reinforce the target when the overnight rate deviates from it, the Bank uses open market buyback operations and changes in the level of settlement balances provided to the financial system. If the overnight rate is generally trading above the target rate, the Bank will intervene with special purchase and resale agreements (SPRAs). If the overnight rate is generally trading below the target rate, the Bank will intervene with sale and repurchase agreements (SRAs). In addition, to influence the overnight rate, the Bank can adjust the targeted level of settlement balances higher or lower than the typical $25 million setting.

SPRAs are routinely conducted around month-, quarter-, and year-end periods, and when large payment flows are going through the system. The Bank used SPRAs, SRAs, and adjustments to settlement balances, as appropriate, during episodes in 1999, during the transition to the Large Value Transfer System (LVTS), and in early 2006, when there was persistent downward pressure on the overnight rate.

Since early August, the Bank has again been using these tools to counter upward pressure on the overnight rate and keep it close to target.

Special Purchase and Resale Agreements and Settlement Balances



1. See "The Bank of Canada's Target for the Overnight Interest Rate: Policy Implementation Framework," appendix to an article by Christopher Reid in the spring 2007 issue of the *Bank of Canada Review*, available at http://www.bankofcanada.ca/en/monetary/monetary_framework.html. Further information is available at http://www.bankofcanada.ca/en/lvts/lvts_primer_2007.pdf.

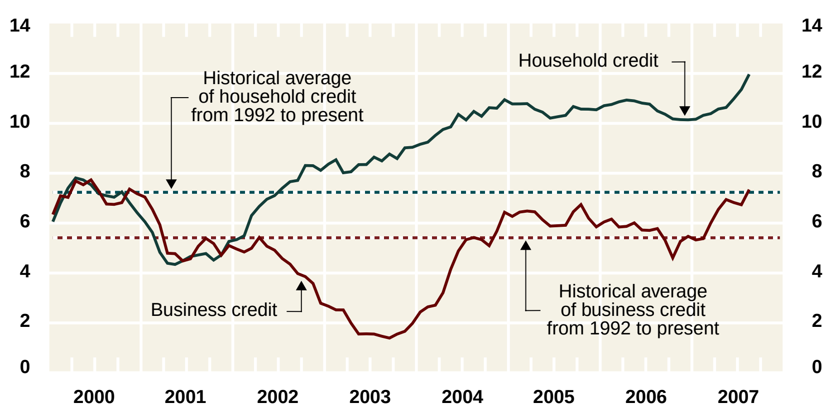
banks have sufficient capital and liquidity available to meet their funding commitments, they are incurring higher funding costs, which have led to tighter credit conditions. This tightening is reflected in the price, availability, and terms of credit for businesses and households (Technical Box 3). For some businesses, however, the upward pressure on the overall cost of capital emanating from higher borrowing costs has been mitigated somewhat by some downward pressure on the cost of equity financing, given buoyant stock markets.

Credit conditions have tightened modestly.

Growth of both business and household credit accelerated in July and August from already robust levels (Chart 12). Since then, banks have modestly tightened their terms of credit to firms and the pricing of credit to both firms and households. These developments are likely to have a dampening effect on borrowing.

Chart 12 Business and Household Credit

Year-over-year percentage change



Growth of the broad monetary aggregates has remained robust since the July *Update* and points to upward pressure on inflation through 2008 (Chart 13).

Technical Box 3

The Cost and Availability of Credit in Canada

Credit conditions in Canada have tightened since late July, reflecting a repricing of risk as investors have become less willing to hold a wide variety of private sector securities, most notably asset-backed commercial paper (ABCP). The degree of tightening in terms of changes in the availability and cost of financing for financial institutions, firms, and households is difficult to estimate. Since the situation is still evolving, estimates are subject to a high degree of uncertainty. But what is clear is that the costs of borrowing from the market or from banks has increased, and credit conditions have tightened.

The cost of funding for Canadian banks through various market instruments has risen 10 to 35 basis points relative to the rates observed at the end of July. Increases in the costs of deposits have been more modest.

Some borrowing rates posted by financial institutions have increased over the past few months. Effective borrowing rates for both business and consumers have also increased as the extent to which discounts on posted rates offered to households and businesses, such as the prime rate, have diminished. In addition, some financial institutions have increased covenants on new loans, and others have indicated some reduction in new loan originations. All told, the effective costs of household and business loans from financial institutions are estimated to have increased by about 20 to 35 basis points.

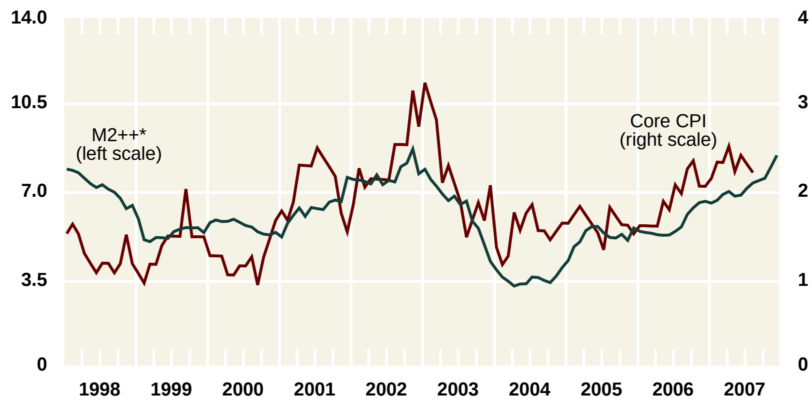
Businesses' cost of borrowing through financial markets has also increased somewhat since July. The overall cost of issuing short-term market debt is estimated to have increased by roughly 20 to 30 basis points. Based on observed prices, the cost of long-term debt is estimated to have remained largely unchanged, but the actual amount of issuance has been relatively small and remains limited to investment-grade borrowers.[1] As a result, observed prices likely do not fully reflect actual borrowing conditions. When the different components of bank and market borrowing are aggregated, the weighted average cost of borrowing for non-financial firms has increased by at least 15 to 25 basis points.

Overall, the cost of borrowing for households and businesses is estimated to be about 25 basis points higher, relative to the overnight rate, than it was prior to the summer developments, and availability and terms of credit have tightened modestly.

1. Given that the yields on government debt have fallen slightly more than the increase in risk spreads over the past few months, the interest cost on corporate debt to investment-grade corporations has fallen.

Chart 13 Core Inflation and Broad Money Growth

Year-over-year percentage change



* Growth in M2++ one year earlier. M2++ has been adjusted to remove the effect of clone funds.

Policy interest rates and exchange rates

In the United States, the Federal Reserve lowered the target for the federal funds rate by 50 basis points on 18 September, and short-term rates embody expectations of a further modest reduction in coming months. Markets are pricing in a likelihood of a modest hike in policy rates by the European Central Bank and the Bank of Japan in coming months (Chart 14). In Canada, market expectations, based on short-term interest rates, currently suggest little change in the policy rate in the coming months.

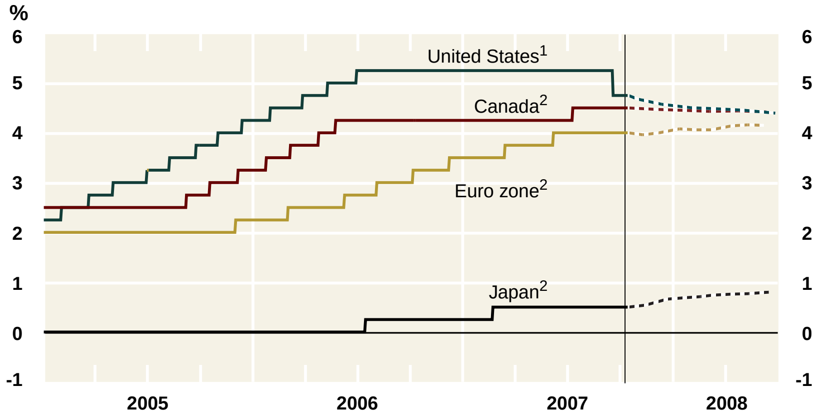
The U.S. policy rate was lowered by 50 basis points on 18 September, and short-term rates incorporate expectations of modest rate cuts.

Through July and August, the Canadian dollar generally traded in the range of 93 to 95.5 cents U.S. assumed in the July *Update*, but since then has appreciated sharply, moving as high as US$1.03 (Chart 15). The recent movement partly reflects the broad-based weakness in the U.S. dollar (against the currencies of its main trading partners with flexible exchange rates). This has occurred against the background of a weaker outlook for economic growth and inflation and a lower policy interest rate in the United States. In addition, the Canadian dollar continues to be supported by firm commodity prices, particularly oil, and strong domestic demand. That said, the magnitude of the recent appreciation appears to have been stronger than historical experience would have suggested.

The Canadian dollar has appreciated considerably since the last* Update *against a backdrop of broad-based weakness in the U.S. dollar.

Chart 14 Official Policy Rates and Forward Interest Rates*

Daily

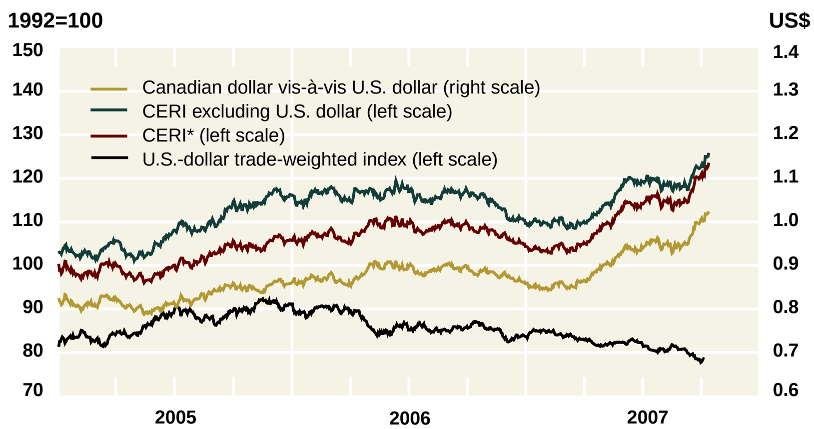


* Solid lines are official interest rates, and dotted lines are forward overnight interest rates. No adjustments are made for term premiums.

1. U.S. forward overnight rates based on prices of federal funds futures
2. Canadian, euro zone, and Japanese forward overnight rates based on the implied forward rate derived from the respective overnight index swap markets

Chart 15 Exchange Rates

Wednesdays



* CERI: Canadian-dollar trade-weighted index (against U.S. dollar, euro, yen, U.K. pound, Mexican peso, and Chinese renminbi)

4. The Outlook

This section describes the Bank's outlook for the global and Canadian economies through 2009. Underlying the base-case projection are a number of key assumptions. First, it is assumed that over the projection period, the Canadian dollar will average 98 cents U.S., the midpoint of the range since the July *Update* of 93 to 103 cents U.S. Second, energy prices are assumed to evolve along a path that is consistent with current futures prices. Third, global credit conditions are assumed to remain tighter. For Canada, it is assumed that the cost of credit to firms and households, relative to the overnight rate, will remain around 25 basis points higher overall than it was prior to the recent financial market turbulence. Fourth, trend labour productivity in Canada is assumed to grow at 1 1/2 per cent over the projection period. Finally, an orderly adjustment of global imbalances is assumed.

International background

The global economy continues to grow at a solid pace.

The global economy expanded at a strong pace in the first three quarters of 2007, led by developing economies. Annual average global economic growth for 2007 is now projected to be somewhat higher than in the July *Update*. Over 2008 and 2009, the strength of global economic growth is still expected to ease modestly (Table 1).

Table 1 Projection for Global Economic Growth

	Share of real global GDP[a] (per cent)	Expected growth (per cent)[b]			
		2006	Projection		
			2007	2008	2009
United States	20	2.9 (3.3)	1.9 (2.1)	2.1 (3.0)	3.0 (3.0)
European Union	19	2.9 (2.8)	2.6 (2.6)	2.0 (2.2)	2.2 (2.1)
Japan	6	2.2 (2.2)	2.0 (2.6)	1.7 (1.9)	1.8 (1.8)
China and Asian NIEs[c]	18	10.0 (9.8)	10.0 (9.3)	9.4 (9.0)	8.0 (8.2)
Others	37	6.3 (6.2)	6.3 (5.9)	5.8 (5.7)	5.1 (5.3)
World	100	5.4 (5.4)	5.2 (5.0)	4.8 (4.8)	4.5 (4.6)

a. GDP shares are based on the purchasing-power-parity (PPP) valuation of country GDPs for 2006. Source: IMF, WEO Database, April 2007

b. Numbers in parentheses are projections used for the July 2007 *MPR Update*.

c. NIEs are newly industrialized economies. These include Hong Kong (Special Administrative Region), South Korea, Taiwan (Province of China), and Singapore.

Source: Bank of Canada

Economic growth in Japan and the euro zone is projected to be close to potential growth.

Economic growth in Japan and the euro zone has been slightly weaker than expected, but the slowdown in investment that underlies this weakness is likely to be short lived, since business balance sheets and profits are generally strong. In addition, ongoing improvements in labour markets will continue to support household spending. Overall, economic growth in Japan and the euro zone is expected to be close to their growth in potential over the next few years, despite some near-term effects related to current financial conditions and weaker U.S. demand. Economic growth in the United Kingdom has been stronger than anticipated in the first half of the year, but recent financial events are expected to slow growth to closer to potential over the near term.

Growth remains strong in China and emerging Asia.

In China and emerging Asia, growth remains strong. Inflationary pressures appear to be building in China, with higher prices for basic commodities such as food and energy. Chinese authorities have implemented measures to restrain aggregate demand and price increases, although further actions are assumed.

The projection for U.S. GDP growth has been revised down for 2007 and 2008.

The projection for U.S. GDP growth has been revised down to 1.9 per cent in 2007 and 2.1 per cent in 2008, considerably weaker than the 2.1 and 3.0 per cent projected in the July *Update.* The economy is then expected to rebound in 2009. The outlook for the U.S. economy now incorporates a more pronounced and protracted slowdown in domestic demand. The recent evidence of larger-than-expected declines in activity in the U.S. housing sector implies a deeper and more prolonged adjustment in residential investment relative to earlier projections. The weakness in the housing sector is expected to reduce other consumption expenditures, but this impact will be somewhat mitigated by the recent lowering of U.S. interest rates. At the same time, the cumulative real effective depreciation of the currency will continue to boost U.S. net exports and will also provide some offset to the weaker domestic demand overall. In light of recent downward revisions to historical growth in real GDP and labour productivity in the United States, the Bank has revised down its estimate of potential output growth to 2.8 per cent for 2007 and to 2.6 per cent over the rest of the projection period. This implies that the excess supply currently present in the U.S. economy is expected to be eliminated by the end of 2009.

Prices of non-energy commodities are likely to remain relatively high, although declining somewhat further.

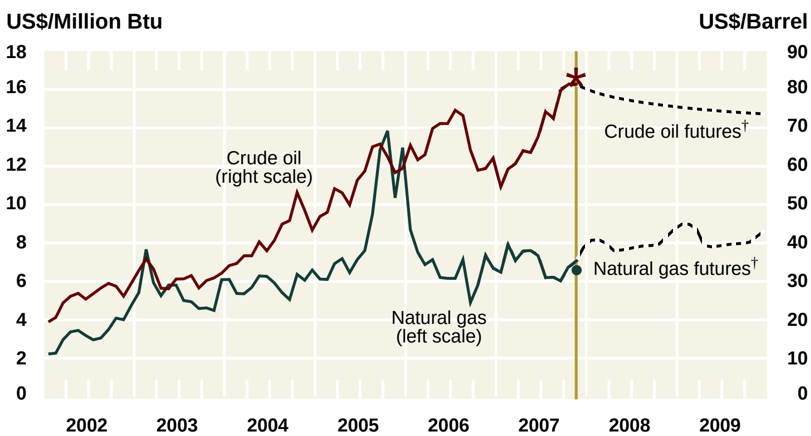
Consistent with the outlook for global growth, the price index for non-energy commodities is expected to decline somewhat over the projection horizon but still be higher than was anticipated in the July *Update*. In particular, increases in the global capacity to produce metals are likely to be slower than was earlier expected, but some further modest easing of prices from the very high level reached in the second quarter is still projected. The prices for grains and oilseeds are now expected to be higher than previously envisaged, while lumber prices are expected to remain low.

Oil prices futures suggest a gradual decline in oil prices to around US$74 in 2009.

Spot prices and futures prices for crude oil have moved up since July (Chart 16). Prices for crude oil are expected to be near US$80 per barrel through early 2008, before easing to around US$74 per barrel in 2009. On the other hand, futures prices for natural gas are lower than in the last *Update*, especially over the near term.

Chart 16 Crude Oil and Natural Gas: Spot and Futures Prices

Monthly



* Spot price for crude oil (12 October 2007)
• Spot price for natural gas (12 October 2007)
† Based on an average of futures contracts over the 10 days ending 12 October 2007

Aggregate demand and supply in Canada

Canada's GDP growth is projected to be 2.6 per cent in 2007, 2.3 per cent in 2008, and 2.5 per cent in 2009.

The Bank's current base-case projection for Canada, when compared with that in the July *Update*, sees the level of economic activity higher at mid-2007, but growth somewhat weaker through the second half of 2007 and the first half of 2008 (Table 2). Continued robust growth in incomes, supported by high commodity prices and tight labour markets, is expected to sustain robust growth in domestic demand. But three factors are expected to dampen the projection for GDP growth: the weaker U.S. economic outlook, the higher assumed level for the Canadian dollar and, to a much lesser degree, the impact of the modest tightening of credit conditions. Quarterly growth is expected to average just over 2 per cent in the second half of 2007 and the first half of 2008, before edging up close to the growth of production capacity by

Table 2 Contributions to Average Annual Real GDP Growth Percentage points*				
	2006	2007	2008	2009
Consumption	2.3 (2.3)	2.1 (2.1)	2.1 (1.9)	2.0 (1.8)
Housing	0.1 (0.1)	0.2 (0.1)	-0.1 (-0.1)	0 (-0.1)
Government	0.8 (0.8)	0.6 (0.6)	0.7 (0.7)	0.6 (0.6)
Business fixed investment	1.2 (1.2)	0.5 (0.6)	0.5 (0.6)	0.5 (0.4)
Subtotal: Final domestic demand	4.4 (4.4)	3.4 (3.4)	3.2 (3.1)	3.1 (2.7)
Exports	0.3 (0.3)	0.5 (0.6)	0.2 (0.9)	0.4 (0.9)
Imports	-1.6 (-1.6)	-1.2 (-1.4)	-1.2 (-1.5)	-1.0 (-1.2)
Subtotal: Net exports	-1.3 (-1.3)	-0.7 (-0.8)	-1.0 (-0.6)	-0.6 (-0.3)
Inventories	-0.3 (-0.3)	-0.1 (-0.1)	0.1 (0.1)	0 (0)
GDP	2.8 (2.8)	2.6 (2.5)	2.3 (2.6)	2.5 (2.4)

* Figures in parentheses are from the base-case projection in the July *Monetary Policy Report Update*.

the beginning of 2009 (Chart 17). GDP growth, on an average annual basis, is projected at 2.6 per cent in 2007, before easing to 2.3 per cent in 2008 and then moving up to 2.5 per cent in 2009.

Growth in final domestic demand is expected to contribute importantly to economic expansion.

Growth in final domestic demand is expected to continue to contribute importantly to economic expansion in the second half of 2007 and through 2008 and 2009.

Consumer spending is projected to grow solidly over the projection period as a result of ongoing gains in both real disposable income and household net worth. Housing investment, after a further moderate increase to a very high level this year, is projected to decline slightly in 2008. In this base-case outlook, the tightening of credit conditions is tempering the momentum in household spending.

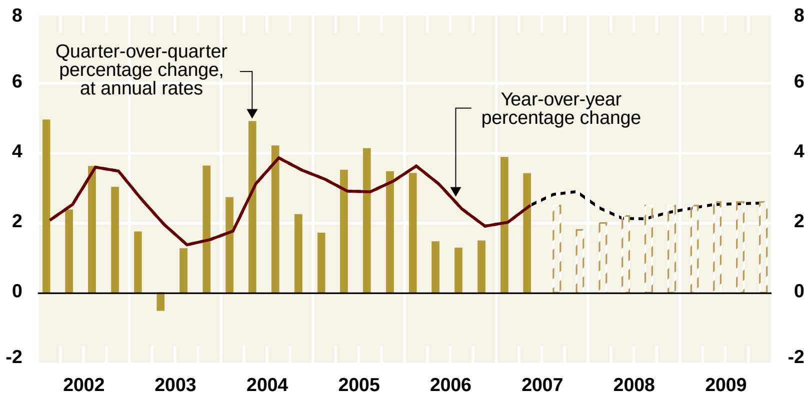
The tightening of credit conditions is also expected to lead some businesses to postpone some capital spending into 2009. Factors contributing to continued growth in business investment include pressures on production capacity, high levels for many commodity prices, strong profitability and solid balance sheets, and decreased prices of imported machinery and equipment.

The real growth of government spending on goods and services is expected to average just under 3 per cent through 2009.

***Net exports are projected to exert a larger drag on growth than was the case in the July* Update.**

While the growth in imports is expected to be robust over the projection period, the growth of Canadian exports is expected to be weak, owing to the projected slower growth of U.S. domestic demand to the end of 2008 and to the higher assumed level of the

Chart 17 Real Gross Domestic Product for Canada*



* The broken line and bars indicate the base-case projection.

Canadian dollar. In particular, the tightening of credit conditions in the U.S. mortgage market will have a larger and more persistent adverse impact on demand for Canadian exports, especially building materials and consumer goods.[5] On balance, net exports are expected to exert a larger drag on overall growth than was the case in the last *Update*.

With labour supply growth declining by about 0.1 per cent per year from 1 1/4 per cent in 2008, and trend productivity assumed to grow at a rate of 1 1/2 per cent, the assumption for potential output growth is 2.8 per cent in 2008 and 2.7 per cent in 2009, as in the July *Update*.

The Canadian economy is projected to remain in excess demand through to early 2009.

The degree of pressure on production capacity at the beginning of the projection period is slightly higher than in the July *Update*. With these growth profiles for GDP and potential output, the economy would remain in excess demand through to early 2009. In this base-case projection, there is no change in the policy interest rate. The effects of a weaker U.S. outlook and the higher assumed Canadian dollar, combined with a modest tightening in credit conditions, more than offset the stronger momentum in domestic demand, bringing aggregate demand back into line with aggregate supply a little more quickly than projected in the July *Update*.

5. The Bank's base-case projection for the United States incorporates a decrease in real residential investment of about 15 per cent in 2007 and 11 per cent in 2008. Estimates based on reduced-form models suggest that, all else being equal, this would translate into an adverse impact on Canadian real GDP of about 0.4 percentage points in 2007 and 0.3 percentage points in 2008. See Technical Box 1 in the April *Monetary Policy Report* for similar analysis.

The outlook for inflation

Core inflation is expected to return to 2 per cent in the second half of 2008.

The core rate of inflation is expected to remain above 2 per cent through mid-2008, and then ease to 2 per cent in the second half of next year, staying there for the remainder of the projection period (Table 3). With weaker economic growth, excess demand pressures are expected to gradually dissipate. This should contribute to more moderate growth in the price of services, and the contribution to inflation coming from rising house prices is expected to diminish. The direct impact of the stronger Canadian dollar is also expected to contribute to modest additional downward pressure on inflation through lower import prices, and, as a result, the core rate is expected to return to the 2 per cent target a little earlier than in the last *Update*.

Total CPI inflation is expected to move up temporarily to about 3 per cent in late 2007 and then move back close to 2 per cent in the second half of 2008.

The outlook for the 12-month rate of increase in the total CPI reflects both the slightly revised projected track for core inflation and expectations for energy prices. Total CPI inflation in the first half of 2008 is somewhat higher than in the last *Update*, owing to higher futures prices for crude oil. Total CPI inflation is expected to rise sharply over the remainder of this year to about 3 per cent in the fourth quarter. This reflects both the impact of the reduction in gasoline prices in late 2006 and the recent rise in spot and futures prices for crude oil, although this latter effect is tempered by the exchange rate appreciation and narrower margins seen recently. Thereafter, total CPI inflation is expected to move back close to the 2 per cent target in the second half of 2008 and stay there over the remainder of the projection period.

Table 3 Summary of the Base-Case Projection*

	2007				2008		2009
	Q1	Q2	Q3	Q4	H1	H2	
Real GDP (quarterly growth or average quarterly growth at annual rates)**	**3.9** (3.7)	**3.4** (2.8)	**2.5** (2.7)	**1.8** (2.6)	**2.1** (2.6)	**2.5** (2.4)	**2.6** (2.5)
Real GDP (year-over-year percentage change)	**2.0** (2.0)	**2.5** (2.3)	**2.8** (2.6)	**2.9** (2.9)	**2.3** (2.6)	**2.2** (2.5)	**2.5** (2.4)
Core inflation (year-over-year percentage change)	**2.3** (2.3)	**2.4** (2.4)	**2.2** (2.3)	**2.3** (2.2)	**2.2** (2.2)	**2.0** (2.1)	**2.0** (2.0)
Total CPI (year-over-year percentage change)	**1.8** (1.8)	**2.2** (2.3)	**2.2** (2.6)	**3.0** (3.0)	**2.7** (2.4)	**1.9** (2.1)	**2.0** (2.0)
Total CPI (excluding the effect of changes in indirect taxes) (year-over-year percentage change)	**2.3** (2.3)	**2.7** (2.8)	**2.3** (2.7)	**3.0** (3.0)	**2.7** (2.4)	**1.9** (2.1)	**2.0** (2.0)
WTI *** (level)	**58** (58)	**65** (65)	**75** (71)	**81** (71)	**78** (72)	**76** (73)	**74** (73)

* Figures in parentheses are from the July *Monetary Policy Report Update*.
** For half and full years, the number reported is the average of the respective quarter-to-quarter percentage growth at annual rates.
*** Assumption for the price of West Texas Intermediate crude oil (US$ per barrel), based on an average of futures contracts over the two weeks ending 12 October 2007

Risks to the outlook

There have been a number of significant economic and financial developments since the July *Update*. Reflecting these developments, a number of the risks to the Bank's projection identified at that time have been realized to some extent. Stronger household demand, a sharper adjustment in the U.S. housing sector, and a stronger Canadian dollar have been reflected in the Bank's new base-case projection. This being said, significant upside and downside risks to the Bank's projection for inflation remain.

The main upside risk relates to the persistence of excess demand in the economy.

On the upside, the excess demand in the domestic economy may persist longer than projected, putting upward pressure on inflation. This risk could come from two sources: higher growth in household spending than projected and lower growth in productivity than assumed. The solid growth in household income, the acceleration in the growth of household credit and broad monetary aggregates, and the continued strength in house prices all point to the risk of greater momentum in household spending.

Weaker growth in labour productivity would translate into lower potential output growth than assumed in the base-case projection and, hence, greater upward pressure on unit labour costs and inflation.

The main downside risk is that the Canadian dollar could be persistently higher than the assumed average level.

On the downside, if the Canadian dollar exchange rate were to persist above the assumed level of 98 cents U.S. over the projection horizon for reasons not associated with stronger-than-projected demand for Canadian products, Canadian output and inflation would be lower. In addition, the base-case projection might underestimate the implications for demand for Canadian goods and services of the cumulative effect of the past appreciation of the exchange rate, given the considerable adjustment it entails for the Canadian economy. Prices for consumer goods could be lower than projected if competitive pressures induce a greater pass-through of the exchange rate appreciation. There is also a possibility that the more pronounced slowdown in the U.S. housing sector could have a larger-than-projected impact on consumption, further reducing U.S. demand for Canadian exports.

The risks to the inflation projection are roughly balanced, with perhaps a slight tilt to the downside.

All factors considered, the Bank judges that the risks to the projection for inflation are roughly balanced, with perhaps a slight tilt to the downside.

The future evolution and economic repercussions of ongoing global financial market developments represent an uncertainty for the outlook. There also remains a small probability of a disorderly resolution of global imbalances.

The Bank of Canada's *Monetary Policy Report* is published semi-annually in April and October. Regular *Updates* are published in July and January. Copies of the full *Report,* the *Summary,* and the *Update* may be obtained by contacting Publications Distribution, Communications Department, Bank of Canada, Ottawa, Ontario, Canada K1A 0G9.

Telephone: 613 782-8248; toll free in North America: 1 877 782-8248;
email: publications@bankofcanada.ca
website: www.bankofcanada.ca