



BANK OF CANADA  
BANQUE DU CANADA

# Monetary Policy Report

April 2008



# 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 pre-specified 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

# MONETARY POLICY REPORT

— April 2008 —

*This is a report of the Governing Council of the Bank of Canada:  
Mark Carney, Paul Jenkins, Sheryl Kennedy, Pierre Duguay,  
David Longworth, and John Murray.*

At a time of great uncertainty, it is more important than ever that monetary policy act as a stabilizing force . . . keeping inflation low, stable, and predictable. . . . Developments in the financial sector will be important from a monetary policy perspective only to the extent that they are expected to influence developments in the real economy and, therefore, inflation.

Mark Carney

*Governor, Bank of Canada  
13 March 2008*

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## 1. OVERVIEW

Growth in the global economy began to slow in the fourth quarter of 2007 and the first quarter of 2008. This reflected the effects of the slowdown in the U.S. economy and ongoing dislocations in global financial markets.

Growth in the Canadian economy has also moderated. Strong domestic demand has been largely offset by sharply reduced net exports. Both total and core CPI inflation were running at about 1.5 per cent at the end of the first quarter, but the underlying trend of inflation is judged to be about 2 per cent, consistent with an economy that was operating just above its production capacity.

The Bank is projecting a deeper and more protracted slowdown for the U.S. economy than in the January *Monetary Policy Report Update*. This projection reflects a more pronounced impact on consumer spending from the contraction in the U.S. housing market and significantly tighter credit conditions. While a housing-market correction of the size now under way in the United States would typically produce a severe slowdown in GDP growth, several factors are providing some offset. First, the recently legislated fiscal-stimulus package will support the U.S. economy in the third and fourth quarters. Second, the depreciation of the U.S. dollar will help spur exports. Third, substantial easing in U.S. monetary policy should continue to boost GDP growth in 2009 and beyond, particularly as financial market dislocations are worked out.

The deterioration in economic and financial conditions in the United States will have significant spillover effects globally, particularly in the industrial economies. Emerging-market economies should be less affected by the financial turbulence, and their growing domestic demand should help to offset the effect of weaker exports.

These global developments will have consequences for the Canadian economy. First, exports are projected to decline this year, exerting a significant drag on GDP growth through the first half, before picking up gradually in the second half of 2008 and in 2009. Second, turbulence in global financial markets will continue to make financing in capital markets more costly and difficult for Canadian businesses and banks. The increased bank funding spreads are expected to be further passed on to businesses and households, creating tighter credit conditions through the rest of 2008 that then begin to dissipate in 2009. Credit conditions are assumed to return to more normal levels in 2010. The relatively strong capitalization of Canadian financial institutions should mean that credit availability will remain more robust in Canada than in other major markets. Third, business and consumer sentiment in Canada is expected to soften somewhat.

Slowing U.S. domestic demand would be expected to place downward pressure on the prices of many commodities. This effect will, however,

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*This report includes information received up to the fixed announcement date on 22 April 2008.*

likely be offset to some extent by the combination of continued strong demand from commodity-intensive emerging-market economies and tight supply conditions in many commodity markets. Financial investors may also reinforce momentum in commodity prices at the margin. On balance, the prices of non-energy commodities are expected to ease over the projection period from their current very high levels.

Firm commodity prices, high employment levels, and the effect of cumulative easing in monetary policy will continue to support Canada's domestic demand, which is expected to be the key source of economic growth over the projection period.

Overall, the Canadian economy is projected to move into excess supply in the second quarter of this year, and spare capacity will continue to increase through early 2009. A return to growth rates above that of potential output, supported by a gradual strengthening in the U.S. economy, accommodative monetary policy, and a return to more normal credit conditions bring the economy back into balance around mid-2010. In the Bank's base-case projection, average annual real GDP growth is projected to be 1.4 per cent in 2008, 2.4 per cent in 2009, and 3.3 per cent in 2010.

The recent price-level adjustments for automobiles and the effect of past changes in indirect taxes will keep measured inflation below target through 2008. The emergence of excess supply in the economy should keep downward pressure on inflation through 2009. Both core and total inflation are projected to move up to 2 per cent in 2010, as the economy moves back into balance.

The risks around the projection for the U.S. and global economies, as well as for inflation in Canada, appear to be balanced. Still, there are a number of upside and downside risks around the Bank's new base-case projection for inflation in Canada.

On the upside, stronger domestic demand than incorporated in the base-case projection, possibly due to higher commodity prices, could lead to higher inflation in Canada, especially if the growth in potential output is lower than assumed. As well, global inflationary pressures could spill over to Canada through higher import costs.

On the downside, the projected weakness in the United States and other industrialized economies could put greater downward pressure on commodity prices. There are risks from the evolution of financial market dislocations and their effect on the cost and availability of credit. There could also be greater direct downward pressure on the prices of core goods related to the past appreciation of the Canadian dollar.

Against this backdrop, the Bank of Canada lowered its target for the overnight rate by 50 basis points on both 4 March and 22 April, bringing it to 3 per cent. In line with the new outlook, some further monetary stimulus will likely be required to achieve the inflation target over the medium term. Given the cumulative reduction of 150 basis points in the target for the overnight rate since December, the timing of any further monetary stimulus will depend on the evolution of the global economy and domestic demand, and their impact on inflation in Canada.



## 2. RECENT DEVELOPMENTS AFFECTING INFLATION IN CANADA

### Global Developments

After several years of strong growth, the pace of the global economic expansion slowed in the fourth quarter of 2007 and the first quarter of 2008, particularly in the industrialized economies. This slowdown in global economic growth reflects the weakening in the U.S. economy and the dislocations in global financial markets stemming from problems in the U.S. subprime-mortgage market.

Available information suggests that U.S. economic growth stalled in the first quarter of 2008. Broad-based declines in residential investment and house prices, coupled with tighter credit conditions and waning consumer confidence in the face of high gasoline prices and a softening labour market, contributed to the marked slowdown in consumer spending. While strong growth in net exports has provided some offset, business investment has suffered from limited access to credit and weakening consumer demand.

Economic growth in Europe and Japan is slowing. Exports from these countries are being affected by the weaker growth in the United States and the effects of a sharp appreciation of the euro and the yen. In Europe, credit conditions have continued to tighten, restraining consumer and business spending.

In newly industrialized and emerging-market economies, particularly China, GDP growth in recent quarters was stronger than expected. These countries have been less affected by the recent financial turmoil, and their growing domestic demand has so far largely offset the impact of weaker exports to the United States and Europe.

Commodity prices have risen since the January *Update*, largely as a result of continued strong demand from the emerging economies and constraints on supply (Technical Box 1). The prices of non-energy commodities have moved up from already-high levels, with large gains in the prices of grains and oilseeds in response to rising demand for food in emerging economies, increased demand for biofuels, and poor crop yields. Some of the increases in the prices of metals have been linked to temporary supply disruptions in China and South Africa.

Energy prices have continued to rise sharply in 2008. The price of light crude oil (West Texas Intermediate), which was about US\$90 per barrel at the time of the January *Update*, increased to average US\$112 in the ten days ending on 18 April 2008, reflecting the combination of continued vigorous global demand and some weakness in non-OPEC supplies. The rise in natural gas prices was partly associated with increased demand stemming from an unusually cold winter in North America.

***The pace of the global economic expansion slowed in the fourth quarter of 2007 and the first quarter of 2008.***

***Available information suggests that the U.S. economy stalled in the first quarter of 2008.***

***The prices of non-energy commodities have risen since the last Update.***

***Prices for crude oil and natural gas have also moved up.***

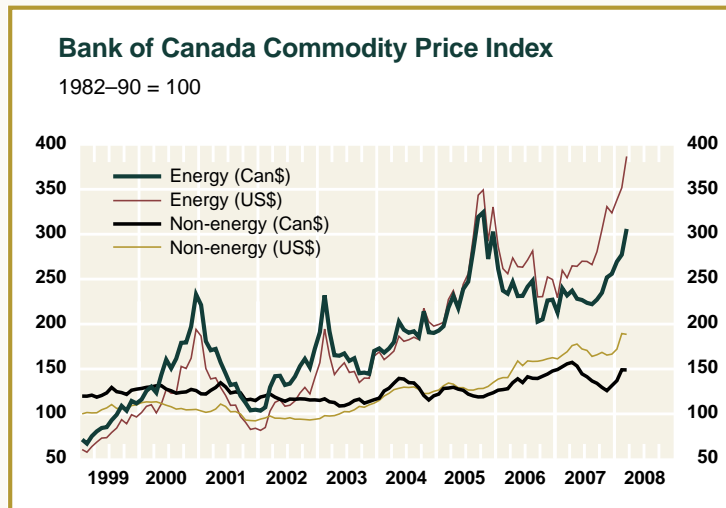
### Technical Box 1 Commodity Prices: An Analysis of Ongoing Developments

Commodity prices have continued to strengthen in 2008 despite the evident slowing in the major industrial economies. Prices for many primary products have reached new highs in nominal U.S.-dollar terms.

One of the key factors pushing commodity prices higher over the past few years has been the strength of demand in emerging-market economies. Bank research suggests that movements in the real prices of oil and base metals since the 1990s have become increasingly influenced by industrial activity in emerging Asia.<sup>1</sup> Demand for commodities from this region has escalated, partly as a result of rising investment in infrastructure to meet the needs of a rapidly expanding urban population. An improvement in urban incomes has also generated an increased demand for food, especially grains and dairy products. In addition, greater regional integration of production processes has shifted a significant portion of world manufacturing activity towards emerging Asia, where firms tend to use more energy per unit of output than in developed economies.

Supply-related developments have also contributed to the strength in commodity prices. These include the global shortage of skilled labour and equipment, as well as the repeated strikes that have increased production costs and limited the adjustment of commodity supplies. For foods, supply rigidities stem partly from restrictions on foreign trade (such as embargos and taxes) and redeployment of agricultural land to meet the rising demand for ethanol and other biofuels. In recent months, droughts have reduced harvests and fed spiralling wheat prices, while exceptionally bad weather in China has made it difficult for the country to be supplied with coal.

The trade-weighted depreciation of the U.S. dollar has also pushed up the U.S.-dollar price of commodities. The demand for commodity-linked assets from both institutional investors (e.g., pension funds) and speculative traders (e.g., momentum traders) may have magnified the recent surge in prices.



1. See C. Cheung and S. Morin, "The Impact of Emerging Asia on Commodity Prices" (Working Paper No. 2007-55, Bank of Canada, 2007).

## Canadian Demand

Economic growth in Canada slowed sharply in the fourth quarter of 2007, following strong expansion through the first three quarters of the year. The drag coming from net exports intensified over the year, more than offsetting the continuing strength in final domestic demand (Chart 1). Real GDP increased by 0.8 per cent in the fourth quarter, below the 1.5 per cent growth projected in the January *Update*.<sup>1</sup> Available data for the first quarter of 2008 suggest that real GDP growth was about 1.0 per cent, with reductions in inventory investment and net exports offsetting most of the growth in domestic demand.

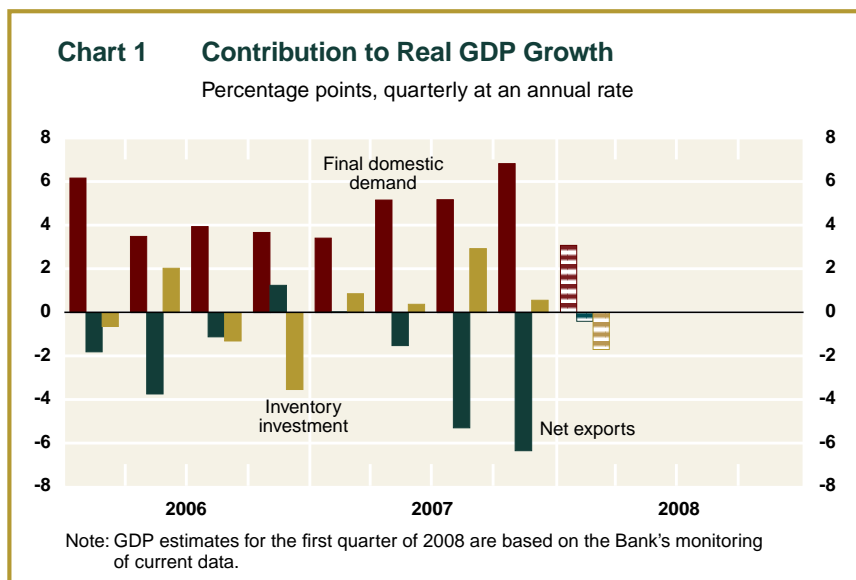
The dampening effect coming from net exports was very pronounced in the second half of 2007. The U.S. economic slowdown and the past appreciation of the Canadian dollar led to a reduction in Canadian export volumes, especially machinery and equipment and consumer goods. At the same time, imports rose very strongly, the result of both robust growth in domestic demand and the past rise in the dollar.

Final domestic demand made even stronger gains in the second half of 2007 than in the first half. Support for domestic demand came from a continued rise in the terms of trade (Chart 2), reflected in an above-average increase in real incomes of nearly 5 per cent between the fourth quarter of 2006 and the fourth quarter of 2007.<sup>2</sup> A continued rise in household net worth (boosted by rising house prices) contributed to substantial increases in household borrowing

*Economic growth in Canada slowed sharply in the fourth quarter of 2007.*

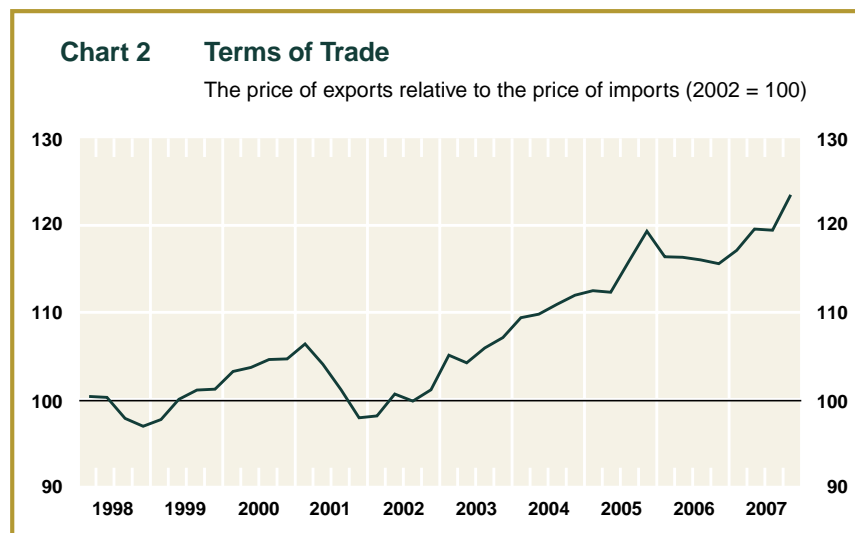
*The drag on growth coming from net exports was very pronounced in the second half of 2007 . . .*

*. . . and the growth of final domestic demand picked up.*



1. GDP growth in the first three quarters of last year was revised up slightly, however, so that the level of real GDP in the fourth quarter was about the same as expected.

2. Real income growth is defined as the difference between the year-to-year rise of nominal GDP and that of the deflator for final domestic demand.



and spending. Spending by businesses on machinery and equipment also picked up markedly, owing to continued strong profitability, solid balance sheets, and considerable decreases in the prices of imported machinery and equipment. The tightening of credit conditions in Canada stemming from developments in global financial markets since last August does not appear to have significantly affected either household spending or business investment in the second half of 2007.

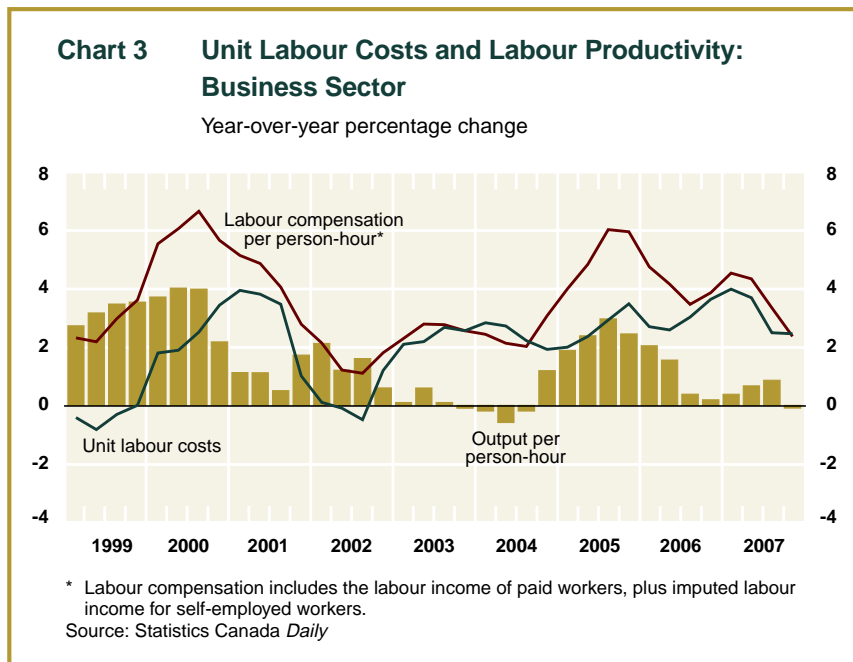
## Canadian Supply

Labour productivity in the business sector declined by 0.1 per cent from the fourth quarter of 2006 to the fourth quarter of 2007 (Chart 3). Despite the slower growth of real GDP during the fourth quarter, total hours worked increased at an unusually strong pace. This puzzling development may reflect factors such as the high adjustment costs associated with reducing employment levels in the manufacturing sector and increased precautionary demand for labour in sectors facing labour shortages. The impact of high labour utilization on aggregate productivity growth was further amplified by a shift in the share of total hours worked towards low-productivity industries.<sup>3</sup>

The Bank's conventional measure of production capacity indicates that growth in potential output averaged 2.6 per cent in 2007, about the same as previously estimated. Strong growth in trend labour supply, which has been about 1.7 per cent, offset the effects

***Growth in potential output is estimated to have averaged 2.6 per cent in 2007.***

3. Inter-industry shifts in the share of total hours worked usually have a limited effect on aggregate productivity growth, while intra-industry shifts exert a much larger influence. This pattern was reversed in the fourth quarter of 2007, however, owing to a sizable reduction in the hours worked in the manufacturing, mining (including oil and gas), and transportation sectors, and a corresponding increase in construction, retail trade, and professional services, which are associated with much lower productivity levels.



of weaker trend productivity growth, which is estimated to have added just under 1.0 per cent to potential output growth.

### Pressures on Capacity

Pressures on production capacity have eased since the third quarter of 2007. In the Bank’s spring *Business Outlook Survey*, the percentage of firms reporting that they would have difficulty in meeting an unanticipated increase in demand has fallen sharply from recent highs to the average level for the survey (Chart 4). In addition, the Bank’s conventional measure of the output gap indicates that the economy was operating about 0.4 per cent above its production potential in the first quarter of 2008, down from just over 1 per cent in the third quarter of last year.<sup>4</sup> Statistics Canada’s indicator of capacity utilization suggests that pressures on production capacity in the non-farm, goods-producing sector were well below average in the fourth quarter of 2007.

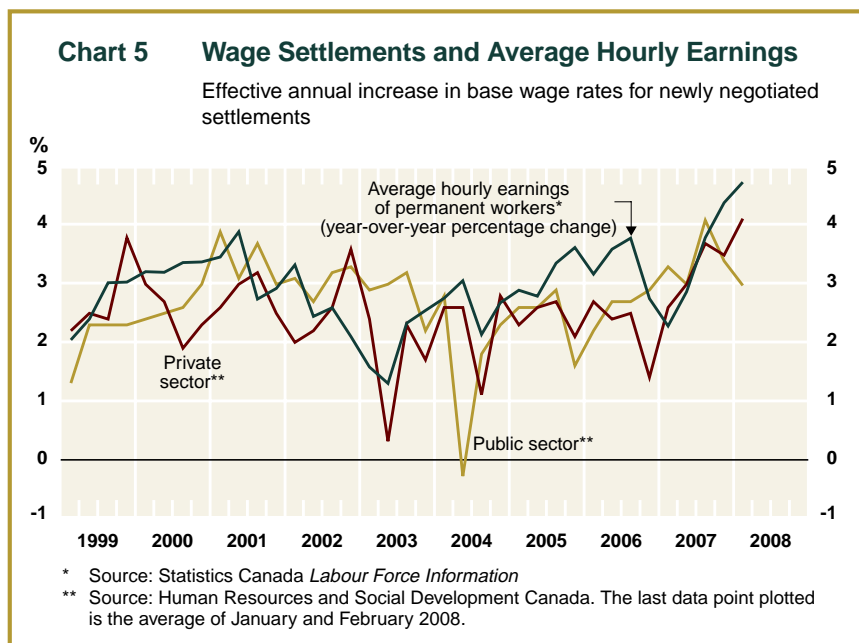
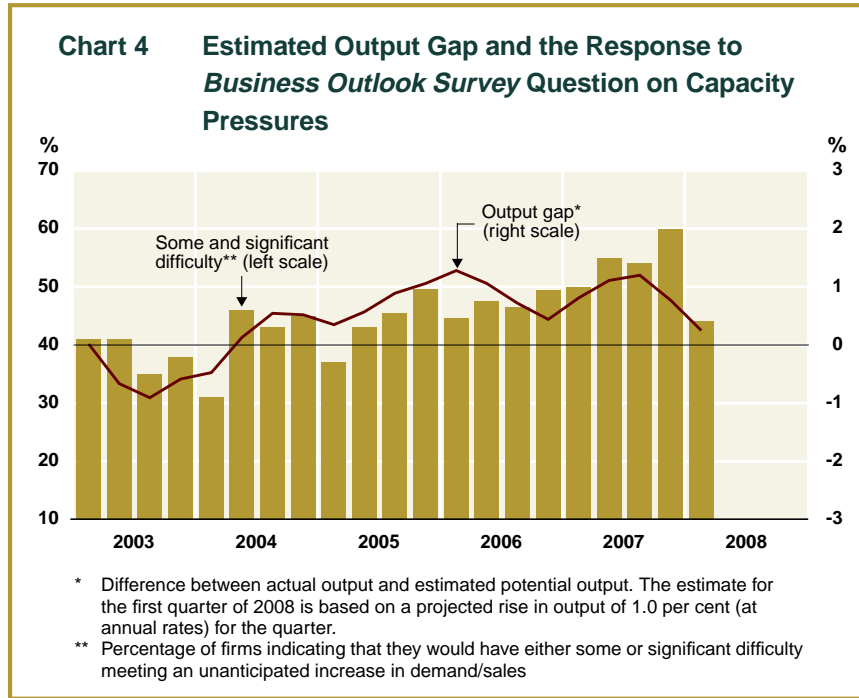
The slowdown in the Canadian economy is not yet evident in most labour market and wage indicators. The employment-to-population ratio was at a record high in both February and March, while the unemployment rate in March was just above a 33-year low. As well, the 12-month change in the average hourly earnings of permanent workers reported by Statistics Canada in the Labour Force Survey (considered a good indicator of the underlying change in wages) picked up markedly after mid-2007 (Chart 5).

*Pressures on production capacity have eased since the third quarter of 2007...*

*... although the economic slowdown is not yet evident in most labour market and wage indicators.*

4. The level of excess demand in the first quarter of 2008, estimated using the Bank’s conventional measure, is about 0.3 percentage points higher than projected in the January *Update*. This increase mainly reflects a small reduction in the estimated level of production capacity.

However, data on hourly labour compensation from the Productivity Accounts and the percentage of firms reporting labour shortages in the Bank's spring survey do indicate some easing in labour market pressures.



After reviewing the indicators of capacity pressures, the Governing Council judges that, overall, the economy was operating just above its production capacity in the first quarter of 2008, and it is expected to move into modest excess supply in the second quarter.

## Inflation and the 2 Per Cent Target

Concerns about rising global inflation have become more evident in recent months, reflecting the impact of higher commodity prices, especially food and energy prices, combined with increased pressures on production capacity in several countries after a period of strong global growth. In Canada, these pressures have been muted to a significant extent by price-level adjustments associated with the high value of the Canadian dollar.

Total CPI inflation averaged 1.8 per cent in the first quarter of 2008, down from 2.4 per cent in the last quarter of 2007 (Chart 6). If the effect of changes in indirect taxes is excluded, the rate of increase in the total CPI in the first quarter was 2.4 per cent, unchanged from the preceding quarter.<sup>5</sup>

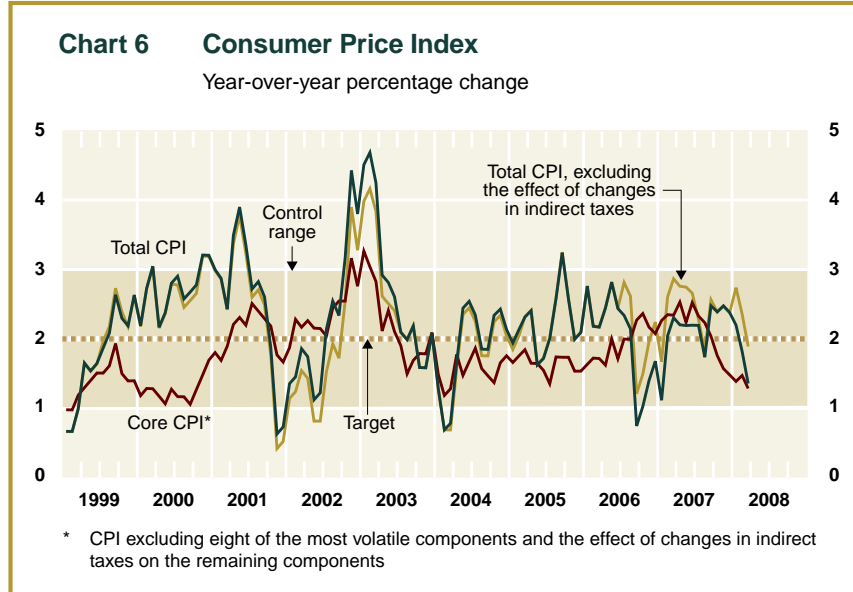
After averaging just above 2 per cent in the period between September 2006 and August 2007, the core rate of inflation has moved down and averaged 1.4 per cent in February and March 2008<sup>6</sup> (Technical Box 2). A significant part of this reduction appears

*The Governing Council judges that the economy was operating just above its production capacity in the first quarter of 2008.*

*Concerns about rising global inflation have become more evident in recent months.*

*In contrast, total CPI inflation in Canada averaged 1.8 per cent in the first quarter of 2008.*

*The core rate of inflation averaged 1.4 per cent in February and March ...*



5. The combined direct effect of the 1-percentage-point GST reduction and small increases in indirect tobacco taxes is estimated to have been a decrease of 0.5 per cent in the total CPI in the first quarter of 2008.

6. The core measure of inflation (CPIX) 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.

### Technical Box 2

#### Core Inflation in Canada: An Interpretation of Recent Developments

Since the middle of 2007, core inflation in Canada has declined significantly. This decline has been widespread across the various components of CPIX, but has been especially large for motor vehicle prices, which accounted for almost half of the decline (Table A).

The recent decrease in motor vehicle prices reflects a price-level adjustment related to increased competitive pressures stemming from movements in the Canadian dollar. With last autumn's appreciation of the Canadian dollar to near parity with the U.S. dollar, the potential benefits to Canadians of cross-border shopping became large enough that car companies were pressured to reduce price differentials with the United States.

An examination of prices for comparable Canadian and U.S. durable goods (excluding autos) and semi-durable goods indicates that the narrowing of the price gap has been limited. This is likely the result of strong domestic demand in Canada, as indicated by high profit margins in the wholesale and retail sectors. However, there is a possibility that further competitive pressures could bring down the prices of more goods.

Other factors have also contributed to the recent decrease in core inflation. Core food prices have likely been affected by heightened competition in the retail food sector, an increased supply of meat, and possibly some exchange rate pass-through. The prices of core shelter services have moderated with the stabilization of house prices in Alberta.

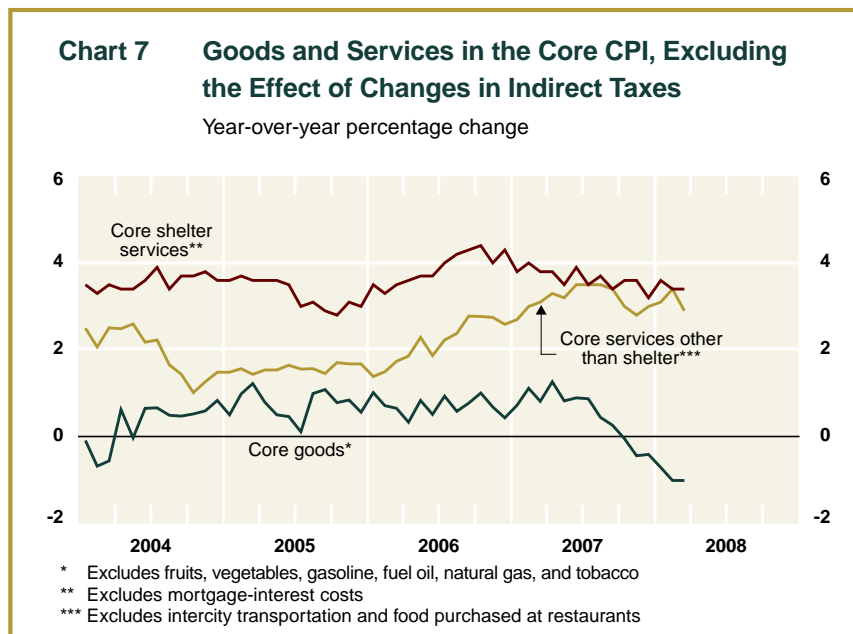
**Table A: Contribution to Year-Over-Year Growth in CPIX between 2007Q2 and 2008Q1<sup>a</sup>**

Component	Contribution (percentage points)
Motor vehicles	-0.42
Core food (excludes fruit and vegetables)	-0.13
Durables excluding motor vehicles	-0.12
Electricity	-0.06
Semi-durables	-0.06
Core shelter services (excludes mortgage-interest costs)	-0.04
Core services excluding shelter (excludes intercity transportation and food purchased at restaurants)	-0.04
Non-durables (excludes food, energy, and tobacco)	-0.03
Variation in CPIX	-1.0 <sup>b</sup>

a. The effect of changes in indirect taxes is excluded from each component.

b. The contributions of individual components are approximations. The sum of the contributions does not equal the total variation in CPIX because of rounding and the nature of the approximations.





to reflect greater competitive pressures following the rise of the Canadian dollar to near parity with the U.S. dollar, which led to a downward level adjustment in the prices of some goods, particularly automobiles. Additionally, the rate of change in core food prices has eased markedly, owing to such factors as increased competition in the retail food sector. At the same time, the 12-month rate of increase in the prices of core services has remained quite high, owing to the continued strength in domestic demand (Chart 7).

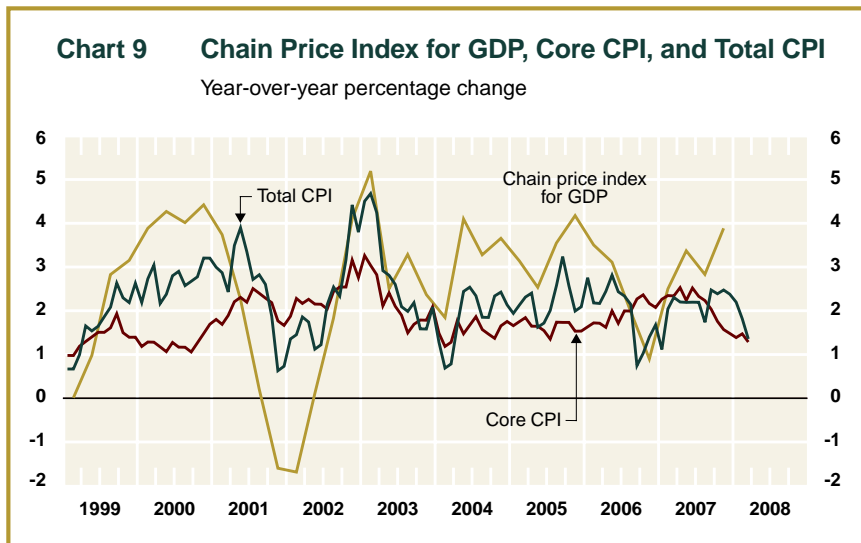
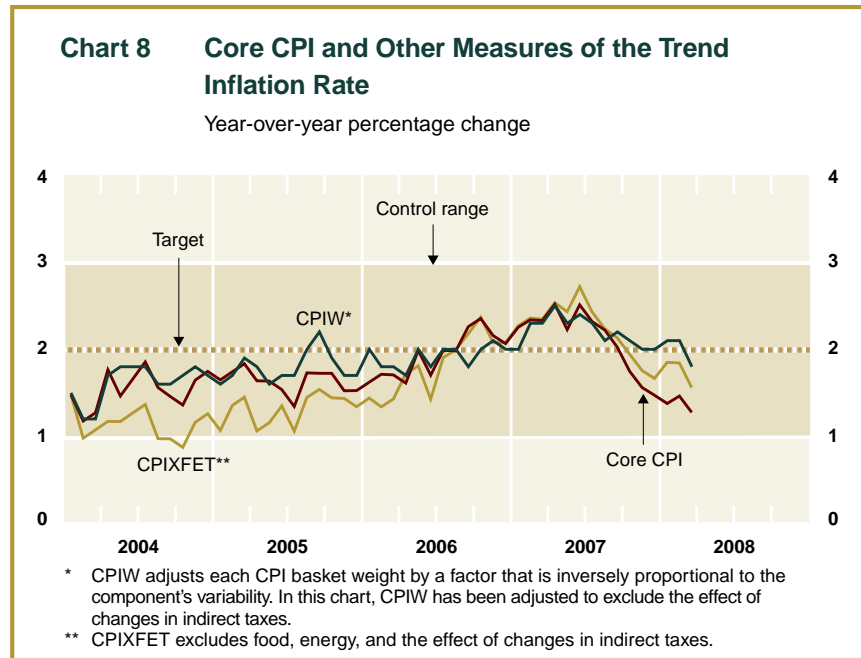
Other measures of the trend rate of inflation that the Bank monitors, when adjusted to exclude the effect of changes in indirect taxes, were somewhat higher than the core inflation rate in the first quarter of 2008 (Chart 8). Given that the recent weakening in core inflation appears to be largely the result of one-time price-level adjustments and after considering alternative measures as well, the Governing Council judges that the underlying trend in inflation was about 2 per cent in the first quarter.

The four-quarter change in the chain price index for GDP (a broad price measure of the goods and services produced in Canada) edged up from 3.4 per cent in the second quarter of 2007 to 3.9 per cent in the fourth quarter, reflecting greater improvements in Canada's terms of trade (Chart 9).

Key measures of inflation expectations continue to be well anchored at 2 per cent. The mean private sector forecast for total

*... but other measures of the trend rate of inflation were somewhat higher than the core rate in the first quarter.*

CPI inflation in 2009 is 2 per cent, and about 80 per cent of firms in the Bank's spring *Business Outlook Survey* expected CPI inflation to be within a range of 1 to 3 per cent over the next two years. Consensus forecasts of inflation over the longer term also remained very close to 2 per cent.



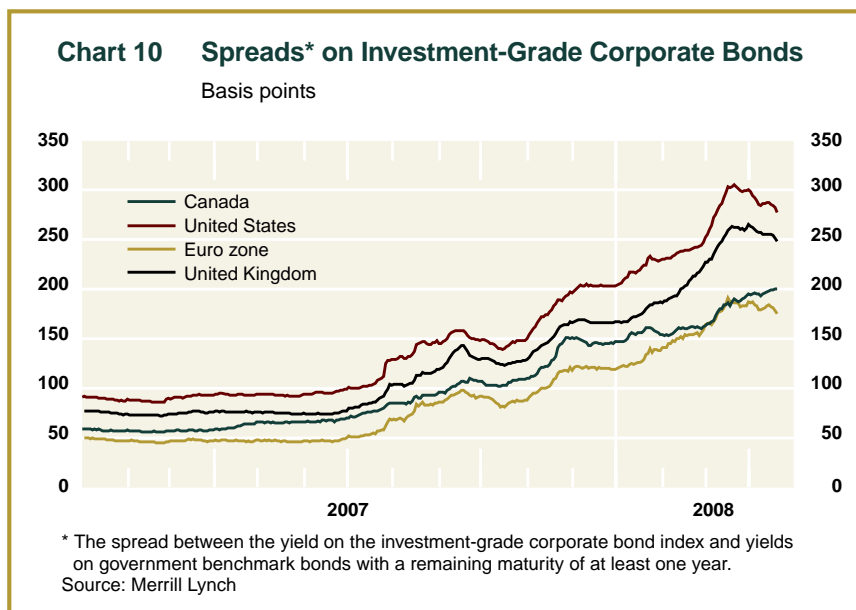
### 3. FINANCIAL DEVELOPMENTS

#### Global Financial Market Conditions

Strains in the global financial system have broadened and become more severe in recent months. Estimates of losses from exposure to U.S. mortgage and structured credits have increased, and problems in these markets have spread to other credit markets. Yield spreads between corporate and government bonds have widened significantly (Chart 10) and debt issuance in several key fixed-income markets has been constrained. These difficulties have been heightened by a lack of liquidity, a widespread process of deleveraging by financial institutions, and the deteriorating outlook for the U.S. economy.

*Strains in global credit markets have become more severe.*

Widespread uncertainty about the distribution of credit losses among financial institutions has continued to feed concerns over counterparty risk and has contributed to higher borrowing spreads in term money markets. In March, amid renewed signs of pressure in term money markets, central banks again intervened in a coordinated effort to support the financial system through the introduction of a number of additional measures to address the liquidity needs of financial institutions. Steps taken recently by several large international banks to improve disclosure of potential losses and to strengthen their balance sheets have also led to some lessening of uncertainty about counterparty risk.



## Policy Interest Rates

***The Federal Reserve has lowered the federal funds rate by 300 basis points since September 2007.***

***Markets expect a further 25-basis-point reduction in the Canadian policy rate by year-end.***

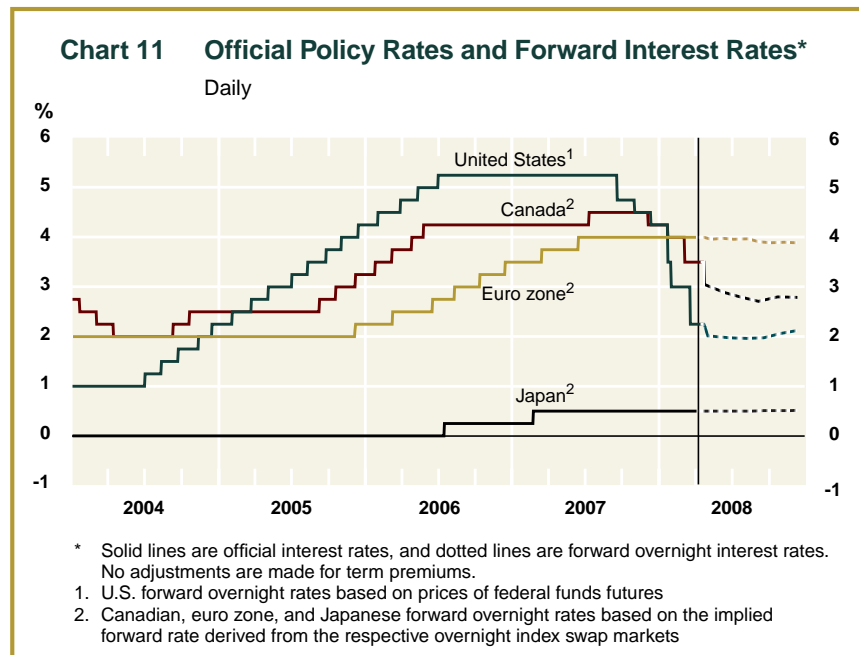
The U.S. Federal Reserve has lowered its target for the federal funds rate by 300 basis points since September 2007 (Chart 11) in response to the slowing in the U.S. economy and the increased cost and reduced availability of credit to businesses and households. Short-term rates in the United States embody expectations of a further reduction in the federal funds rate over the course of the year. The Bank of England has also lowered its policy interest rate. In contrast, the European Central Bank and the Bank of Japan have not changed their respective policy rates since the beginning of the financial turmoil.

Policy rates in Canada have been lowered by 150 basis points since December. Market expectations are for a further 25-basis-point reduction in the overnight rate by the end of the year.

## Canadian Credit Conditions

***The impact of financial market turbulence on credit conditions has been more moderate in Canada than in the United States.***

The turmoil in global financial markets has led to tighter credit conditions in Canada, but strains in Canadian credit markets have been somewhat less intense than those in the United States. Canadian financial institutions, businesses, and households have healthier balance sheets. Canadian banks are less exposed to the subprime-mortgage market than their U.S. counterparts. Furthermore, Canadian banks are less dependent on securitization for their financing and on capital markets for their revenues. Thus far, their losses have been limited, and their exposure to structured products backed by subprime mortgages quite manageable.

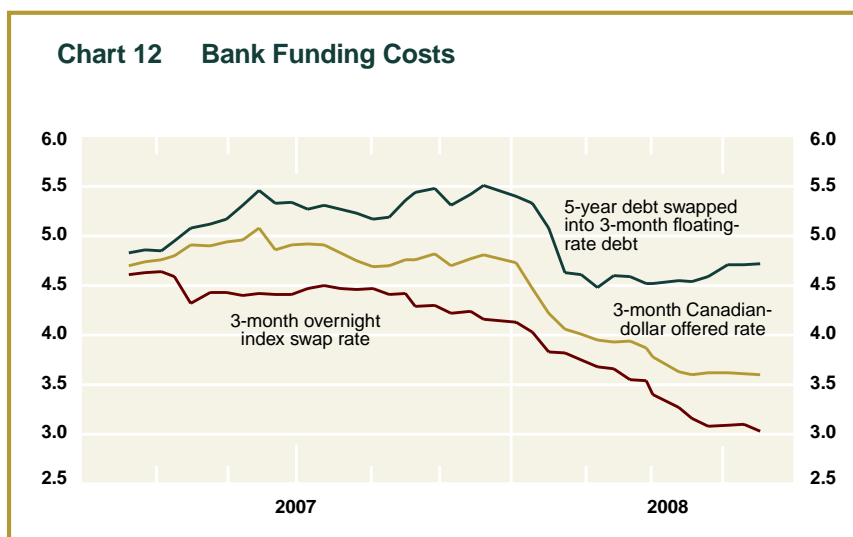


Nonetheless, from the beginning of the financial market turbulence last summer until 21 April, the average spreads for the different types of market financing for banks increased by about 75 basis points relative to the overnight rate.<sup>7</sup> The tightening in credit conditions is most evident in the spreads paid by banks to issue bonds and senior deposit notes. Banks have shown a willingness to borrow at these higher spreads in order to secure longer-term financing, but have not yet fully passed these increased spreads on to businesses and households. Nevertheless, the absolute cost of borrowing by banks has declined, given that the overnight rate was reduced by 100 basis points over the period (Chart 12).

The spread between the cost of borrowing for non-financial businesses and the overnight rate as of 21 April has risen by about 50 basis points since the middle of 2007. This widening has been more than offset by reductions in the overnight rate. Nevertheless, the terms and conditions of credit have tightened, and access to bank financing for new clients has been reduced. Debt issuance by non-financial corporations remains difficult, and new debt issues are generally being priced at rates higher than indicative rates in secondary markets. On the whole, the growth of business credit has remained elevated in the first quarter of 2008 (Chart 13). This partly reflects a substitution away from market financing towards bank financing in the current turbulent environment.

*The spreads for market financing for banks, relative to the overnight rate, remain elevated.*

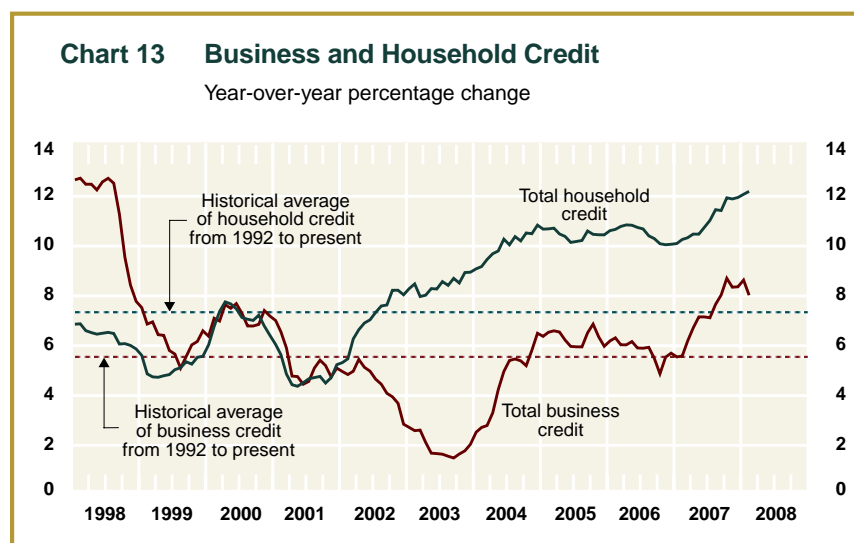
*Terms and conditions for credit have tightened for businesses.*



7. The widening of the spread against the overnight rate understates the rise in credit spreads since it does not make allowance for market expectations of future declines in the overnight rate. Between August 2007 and 21 April, relative to the expected future overnight rate, the short-term funding spreads for banks increased by about 50 basis points, and the spreads on 5-year debt swapped into floating-rate debt increased by about 150 basis points.

***Growth in household and business credit remains strong.***

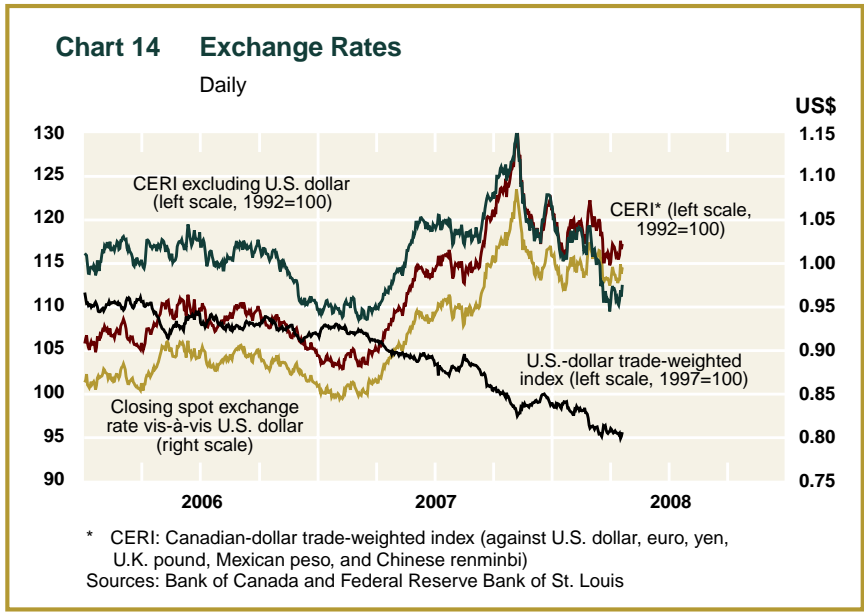
The spread between the costs of borrowing by households and the overnight rate has also remained elevated and, as of 21 April, is estimated to be around 50 basis points higher than it was last summer. But the terms and conditions of household credit have not tightened to any extent, and the cost of borrowing is lower, given the declines in the overnight interest rate. Growth in household borrowing remains strong despite some deceleration thus far in 2008. Continued vigorous demand for credit by households is associated with robust growth in employment, sustained wage increases, increases in home equity, and decreases in the effective cost of borrowing.



## Exchange Rates

***The Canadian dollar has recently been trading in a range of roughly 97 to 100 cents U.S.***

Since the January *Update*, the Canadian dollar has averaged 100 cents U.S. but more recently has been trading in a range of roughly 97 to 100 cents U.S. (Chart 14). High prices for energy and metals continue to support the currency. While the actual policy interest rate spread between Canada and the United States has widened since January, the spread expected by the third quarter of 2008 has narrowed, leading to some modest downward pressure on the currency. The trade-weighted CERI-ex U.S. has declined by about 4.2 per cent since the *Update*, reflecting the strength of both the euro and the Japanese yen, as well as concern about the negative effects of the U.S. economic slowdown on the Canadian economy.



## 4. THE OUTLOOK

The outlook for the Canadian economy through to the end of 2010 has been revised down from that in the January *Update* to reflect the effects of the weaker U.S. and global economies, and the tightening of credit conditions resulting from continuing strains in financial markets. The base-case projection incorporates a number of key assumptions. First, the Canada/U.S. exchange rate is assumed to average 98 cents U.S., within the recent trading range. Second, energy prices evolve in line with current futures prices. Third, the tighter global credit conditions are assumed to persist until 2009. Fourth, potential output growth is assumed to be 2.8 per cent in 2008, 2.7 per cent in 2009, and 2.6 per cent in 2010.<sup>8</sup> Finally, the base case is predicated upon a gradual and orderly resolution of global imbalances.

### International Background

***Global economic growth is expected to slow considerably in 2008 and 2009.***

Global economic growth is expected to slow considerably in 2008 and 2009 (Table 1) as a result of a deepening of the U.S. economic slowdown and its spillover to other economies, particularly those of the other major industrialized countries. In 2010, the global economy is projected to grow more strongly, as the turbulence in credit markets subsides, housing markets in the United States and Europe stabilize, and economies begin to rebuild domestic demand and reduce excess supply.

***U.S. domestic demand is projected to remain subdued over the coming year.***

The Bank now expects U.S. GDP to decline marginally in the first half of 2008 before growth picks up gradually through 2009. Domestic demand in the United States is projected to remain subdued over the coming year as a result of declines in employment, sharp increases in gasoline prices, weaker consumer confidence, further weakening in the housing sector and tightening in credit conditions. The fall in housing activity and house prices is projected to continue until the second half of 2009. Increased borrowing spreads, reductions in the availability of credit, and tighter terms and conditions are assumed to persist through 2008 and gradually dissipate through 2009. In 2010, as the housing market stabilizes, heightened risk aversion dissipates, and financial institutions improve their capital positions, credit conditions are assumed to be back to more normal levels.

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8. Trend labour supply growth is still assumed to decline by about 0.1 per cent per year in each of 2009 and 2010 given demographic trends. While the mix of trend labour supply growth and trend labour productivity growth has been different from that used in the Bank's assumption for potential output, the aggregate has been closer to the assumption than the individual components.



	Share of real global GDP <sup>a</sup> (per cent)	Projected growth (per cent) <sup>b</sup>			
		2007	2008	2009	2010
United States	22	2.2 (2.2)	1.0 (1.5)	1.7 (2.5)	3.4
European Union	20	2.7 (2.7)	1.3 (1.8)	1.6 (1.9)	2.2
Japan	7	2.0 (1.9)	1.4 (1.6)	1.6 (1.8)	1.8
China and Asian NIEs <sup>c</sup>	14	10.2 (9.7)	8.4 (8.9)	7.2 (7.5)	7.3
Others	37	6.3 (6.1)	5.2 (5.5)	4.6 (4.8)	5.5
World	100	4.9 (4.8)	3.7 (4.1)	3.5 (3.9)	4.4

- a. GDP shares are based on IMF estimates of the purchasing-power-parity (PPP) valuation of country GDPs for 2006. Source: IMF, WEO Update, January 2008.
- b. Numbers in parentheses are projections from the January 2008 *Update* adjusted using revised estimates for purchasing-power parity.
- 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

Several factors are helping to mitigate the weakness in the U.S. economy in 2008, and will contribute to the recovery through 2009 and 2010. First, monetary policy has eased considerably in recent months, which will provide some support for domestic demand. Second, the cumulative effect of the depreciation of the real effective U.S. exchange rate, coupled with solid economic growth in the rest of the world, will help to underpin export growth. Third, easing in credit conditions and the gradual elimination of excess housing supply will support a resumption of economic growth in the latter part of the projection period. The U.S. government's fiscal-stimulus package is expected to temporarily boost economic growth in mid-2008.

Owing to the weaker profile for U.S. GDP growth and tighter credit conditions, projected rates of GDP growth in Europe and Japan have been reduced for 2008 and 2009, but are expected to move slightly above potential rates in 2010.

Growth in China and in the newly industrialized Asian economies is projected to remain strong but to moderate over the projection horizon, as demand from the United States and other industrialized countries weakens, and tighter monetary policies are introduced to curb mounting inflationary pressures.

Prices for non-energy commodities are higher in the near term than projected in the last *Update*, but are expected to ease by about 15 per cent between now and the end of 2010. Supplies of these commodities should gradually adjust as new production capacity comes online and reductions arising from weather-related factors

***The depreciation of the U.S. exchange rate will help to underpin export growth.***

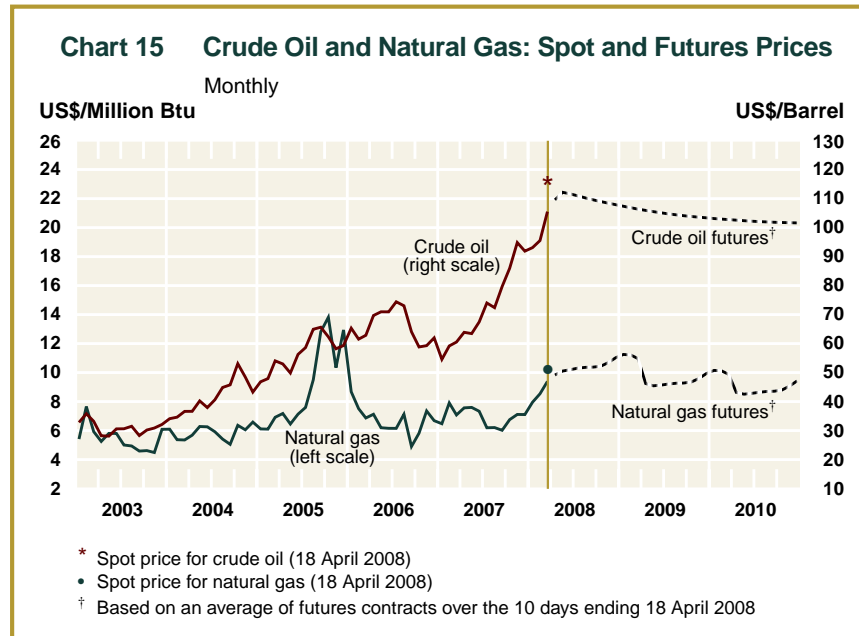
***GDP growth in Europe and Japan is expected to slow more than previously projected.***

***Prices of non-energy commodities are expected to ease by about 15 per cent over the projection horizon.***

***Oil price futures point to a decline in oil prices to about US\$102 per barrel by 2010.***

unwind. In addition, global demand for commodities should ease as a result of the slowing in world economic growth.

Futures prices for crude oil are also higher than those in the January *Update* (Chart 15). Based on futures prices as of the 10 days ending 18 April, prices for crude oil should ease by about 10 per cent from their current level of just over US\$112 per barrel to around US\$102 per barrel in 2010. Futures prices for natural gas are also somewhat higher than in the January *Update*.



## Aggregate Demand and Supply in Canada

***The Canadian economy is projected to grow by 1.4 per cent in 2008, 2.4 per cent in 2009, and 3.3 per cent in 2010.***

The outlook for the Canadian economy has been directly affected by the downward revision to the economic outlook in the United States and by the continuing strains in credit markets as institutions deleverage and risk is repriced. While credit conditions for households and firms have tightened, lending rates do not yet fully reflect the higher funding spreads for banks. It is assumed that these higher spreads will be passed on and that tighter credit conditions will persist through 2008. Credit spreads are then assumed to narrow gradually over the course of 2009 and to stabilize in 2010 at 25 basis points higher than their levels prior to the turmoil.

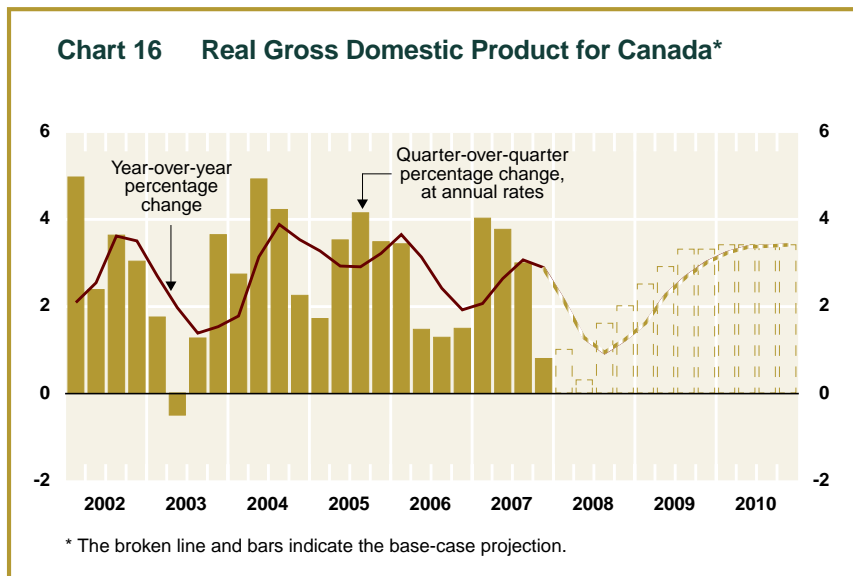
The Bank's base-case projection for Canada is now weaker for both 2008 and 2009 than that in the January *Update* (Table 2). On an average annual basis, the economy is projected to expand by 1.4 per cent in 2008, 2.4 per cent in 2009, and 3.3 per cent in 2010 (Chart 16).

	2007	2008	2009	2010
Consumption	2.6 (2.2)	2.5 (2.2)	2.3 (2.4)	2.3
Housing	0.2 (0.2)	0.1 (-0.1)	-0.1 (0)	-0.1
Government	0.8 (0.6)	0.9 (0.7)	0.6 (0.6)	0.6
Business fixed investment	0.6 (0.6)	0.4 (0.5)	0.4 (0.5)	0.4
<i>Subtotal: Final domestic demand</i>	4.2 (3.6)	3.9 (3.3)	3.2 (3.5)	3.2
Exports	0.4 (0.6)	-1.3 (-0.1)	0.1 (0.4)	1.2
Imports	-1.9 (-1.7)	-1.1 (-1.3)	-0.9 (-1.1)	-1.1
<i>Subtotal: Net exports</i>	-1.5 (-1.1)	-2.4 (-1.4)	-0.8 (-0.7)	0.1
Inventories	0 (0.1)	-0.1(-0.1)	0 (0)	0
<b>GDP</b>	<b>2.7 (2.6)</b>	<b>1.4 (1.8)</b>	<b>2.4 (2.8)</b>	<b>3.3</b>

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

The slowdown in Canadian activity in 2008 results mainly from further declines in exports in the first half of the year, owing to weak U.S. demand and the past appreciation of the Canadian dollar. Although growth in exports is expected to resume in the second half of this year, solid advances are not expected before 2010, given the gradual recovery of demand in the United States.

***Growth in Canadian exports is expected to resume slowly after mid-2008.***



***Growth in final domestic demand is expected to provide important support to economic expansion.***

With growth in imports expected to remain strong, net exports exert a larger drag on overall growth in 2008 than was the case in the last *Update*.

Growth in final domestic demand is expected to provide important support to economic expansion. The growth of consumer spending should remain strong in the first half of 2008, before easing a little over the remainder of the projection period. These solid gains are supported by continued growth in real disposable income and household net worth, as well as the stimulus provided by monetary policy, although reduced U.S. growth will dampen consumption growth in Canada slightly through its effects on real income, net worth, and confidence. Housing investment is projected to decline slightly over the projection period from the very high level reached last year (Technical Box 3). The tightening of credit conditions in Canada is also expected to have a slight moderating effect on the growth of household spending, which should largely dissipate by 2010.

The growth of business investment should ease during the projection period from the strong pace registered in 2007, owing to the effects of slowing global economic growth, the tightening of credit conditions, and increased uncertainty resulting from the financial market turbulence. Overall, gains in capital spending will, nevertheless, stay quite robust, given the projects that have already started, the still-high levels of commodity prices, strong profits and solid balance sheets, and ongoing reductions in the prices of imported machinery and equipment.

The real growth of government spending on goods and services is projected to decelerate and to average just over 3 per cent through 2010.

***The Canadian economy is projected to be in modest excess supply from the second quarter of 2008 to mid-2010.***

Weaker near-term growth causes the Canadian economy to move into a position of excess supply in the second quarter of 2008, and spare production capacity continues to increase through early 2009. In this base-case projection, accommodative monetary policy, including some further monetary stimulus in 2008, a gradual recovery in the U.S. economy, and the eventual return to more normal credit conditions globally and in Canada, all help to bring aggregate demand back into balance with aggregate supply around mid-2010.

## **The Outlook for Inflation**

***Core inflation is projected to return to 2 per cent in 2010.***

Owing largely to the recent price-level adjustments for automobiles, the core rate of inflation is projected to remain at about 1.3 per cent through the third quarter of 2008 (Table 3). With the effect of the price-level adjustments falling out of the year-over-year calculation in the fourth quarter of 2008, the core rate moves up to about 1.7 per cent. Excess supply in the economy acts to keep the core rate below 2 per cent through 2009. As the amount of excess supply diminishes, and with the continuing upward pressure from higher

### Technical Box 3 Recent Developments in House Prices

The Canadian housing market remained strong over the past 18 months, with house prices continuing to rise—albeit at a slower pace.<sup>1</sup> This contrasts with the experience in the United States where house prices have fallen steadily over the same period. The pace of increase in house prices in Canada should moderate somewhat further in the coming year.

The upward movement in Canadian house prices in recent years was largely related to income growth from strong employment, rising commodity prices, relatively low interest rates, and rising construction costs. Product innovation since 2006, such as mortgages with longer amortization periods, zero down payments, and insured mortgages for Alt-A borrowers, have also reinforced the demand pressure in the housing market.<sup>2</sup> A substantial proportion of new mortgages in Canada contain some of these features.

The Canadian subprime-mortgage market remains small, however, accounting for less than 5 per cent of the residential mortgage market, and it did not exhibit the excesses witnessed in the United States.

The growth in house prices is expected to moderate further in Canada over the next year. The construction of new homes remains elevated, and supply has been increasing in the resale market. Demand should ease, since affordability has deteriorated and economic growth is expected to slow. However, a general reversal in house prices is unlikely, as there are few signs of excess housing supply<sup>3</sup>: the proportion of newly completed unoccupied dwellings remains below its historical average and well below its level in the early 1990s in most Canadian cities.

The last two *Monetary Policy Reports* indicated that rising house prices have been an important contributor to growth in real household spending (through home-equity borrowing).<sup>4</sup> Going forward, the continued moderation in the growth of house prices should reduce the support to household spending coming from home equity, but this merits continued careful monitoring so that financial factors driving activity are fully taken into account.

1. The rapid escalation and subsequent deceleration in house prices were particularly marked in Alberta, as a result of the oil-related boom in that province.

2. See the June 2007 *Financial System Review* (FSR), pp. 23–24, for a list of product innovations in the mortgage-insurance market and the December 2007 FSR, Box 1, p. 8, for developments in the subprime-mortgage market.

3. This does not exclude the possibility of imbalances in some segments of local markets.

4. See Box 2 in the April 2007 *Monetary Policy Report*.

**Total CPI inflation, excluding the effect of changes in indirect taxes, is expected to average above 2 per cent for the rest of 2008.**

labour and energy costs, core inflation subsequently rises to 2 per cent in 2010, a little later than in the last *Update*.

The outlook for the 12-month rate of increase in the total CPI reflects the revised projection for core inflation, assumptions for energy prices based on current futures prices, and the impact of past changes in indirect taxes. Total CPI inflation in 2008 is projected to be higher than in the last *Update*, owing to the effect of higher futures prices for crude oil. Excluding the impact of the recent changes in indirect taxes, total CPI inflation is projected to average just under 2.5 per cent through the remainder of 2008 and then move slightly below 2 per cent in early 2009, before returning to the target in 2010.

	2007	2008			2009		2010
	Q4	Q1	Q2	H2	H1	H2	
Real GDP (quarterly growth or average quarterly growth at annual rates)**	<b>0.8</b> (1.5)	<b>1.0</b> (0.6)	<b>0.3</b> (2.0)	<b>1.8</b> (2.3)	<b>2.7</b> (3.1)	<b>3.3</b> (3.2)	<b>3.4</b>
Real GDP (year-over-year percentage change)	<b>2.9</b> (2.9)	<b>2.1</b> (2.2)	<b>1.3</b> (1.7)	<b>1.1</b> (1.7)	<b>1.9</b> (2.5)	<b>2.8</b> (3.1)	<b>3.3</b>
Core inflation (year-over-year percentage change)	<b>1.6</b> (1.6)	<b>1.4</b> (1.4)	<b>1.3</b> (1.3)	<b>1.5</b> (1.6)	<b>1.7</b> (1.9)	<b>1.8</b> (2.0)	<b>2.0</b>
Total CPI (year-over-year percentage change)	<b>2.4</b> (2.4)	<b>1.8</b> (1.7)	<b>1.7</b> (1.4)	<b>1.9</b> (1.5)	<b>1.8</b> (1.9)	<b>1.8</b> (2.0)	<b>2.0</b>
Total CPI (excluding the effect of changes in indirect taxes) (year-over-year percentage change)	<b>2.4</b> (2.4)	<b>2.4</b> (2.2)	<b>2.2</b> (1.9)	<b>2.4</b> (2.0)	<b>1.8</b> (1.9)	<b>1.8</b> (2.0)	<b>2.0</b>
WTI *** (level)	<b>91</b> (91)	<b>98</b> (93)	<b>111</b> (92)	<b>109</b> (90)	<b>106</b> (89)	<b>104</b> (87)	<b>102</b>

\* Figures in parentheses are from the January *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 10 days ending 18 April 2008.

## Risks to the Outlook

There are a number of risks around the Bank's base-case projection for inflation in Canada. The risks around the U.S. and global economic projections are considered to be balanced.

On the upside, stronger domestic demand than assumed in the base-case projection, driven by solid wage gains in a tight labour market and continued improvements in the terms of trade, could

lead to higher inflation. Given the persistent weakness in Canada's labour productivity growth, potential output growth could also be lower than assumed and could intensify the upward pressure on inflation. Furthermore, if demand for commodities from emerging markets remains robust and the ability of producers to increase global supplies is constrained, upward pressure on many commodity prices may intensify.

Global inflationary pressures also pose an upside risk. They could spill over to Canada and lead to higher-than-projected inflation through increased costs for imports.

On the downside, weakness in the United States and other industrialized countries may result in greater downward pressure on commodity prices than assumed in the base case. This would have the effect of slowing the rate of increase in real incomes and domestic demand in Canada, putting downward pressure on inflation.

There is also the risk that market funding for Canadian banks and firms could be more difficult than assumed, which could further increase the cost and restrict the availability of credit for business investment and consumption.

As well, there is the risk of greater direct downward pressure on core goods prices related to the past appreciation of the Canadian dollar. The increased competitive pressures, which have been seen most importantly in the prices of automobiles, could spread to other sectors.

Overall, the risks to the base-case projection for inflation appear balanced.

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