

BANK OF CANADA

MONETARY POLICY REPORT

— April 2003 —

*This is a report of the Governing Council of the Bank of Canada:
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CONTENTS

1. Introduction	5
Why has total CPI inflation exceeded the target?.....	6
2. Recent Developments in Inflation	7
Inflation and the 2 per cent target	7
Factors at work on inflation	10
3. Financial Developments	14
Business and household credit conditions..	14
Policy actions	17
Exchange rate and monetary conditions ...	18
4. The Outlook for Inflation	20
International background	20
Aggregate demand and supply in Canada...	21
Measures of inflation expectations	22
Other factors affecting inflation	25
Implications of money growth for inflation ..	25
Inflation projection	27
5. Conclusions	28
Bibliography	29
Technical Boxes	
1. Interest Rates and the Cost of Household Debt	16
2. Rising Energy Prices: Implications for Economic Activity	23

We in Canada remain convinced of the merits of a monetary policy aimed at medium-term price stability; a fiscal policy aimed at reducing public debt-to-GDP ratios; trade liberalization; and structural reform. Canada's positive economic experience over the past couple of years, in the face of stressful times for the global economy, is strong evidence that this framework is the right one. In Canada, there is a determination to stick with these policies which, especially during these uncertain times, are demonstrating their value.

David Dodge

*Governor, Bank of Canada
18 March 2003*

1. INTRODUCTION

The global economic outlook has been clouded by a high degree of uncertainty, accentuated most recently by the war in Iraq. This uncertainty has been an important factor in the recent marked volatility in world oil prices and financial markets. Some of the geopolitical and financial uncertainty has lifted more recently, and in its base-case scenario the Bank of Canada assumes that these uncertainties will continue to recede. As a result, confidence among businesses, households, and financial markets is expected to improve significantly by year-end. Nevertheless, global economic uncertainty remains important, especially in the near term. The Bank now projects that economic expansion in both the United States and Canada will begin to strengthen towards the end of this year and will be above the growth of potential output during 2004. The scope for above-potential growth is greater in the United States than in Canada because of the larger amount of excess capacity in the United States.

There is, however, a wide range of possible outcomes, both stronger and weaker, around this base-case view. The result will depend critically on the evolution of business and household confidence and global economic uncertainty. The Bank will, therefore, be paying close attention to these factors over the coming months. Nevertheless, most important in these times of uncertainty is the Bank's continued focus on taking the appropriate actions that, cumulatively, will return inflation to our 2 per cent target for inflation control.

This *Monetary Policy Report* examines the factors that are expected to return core inflation to 2 per cent by early next year.

The global economic outlook has been clouded by a high degree of uncertainty.

The Bank remains focused on taking the appropriate actions to return inflation to its 2 per cent target.

* * *

When it renewed the inflation-control target in May 2001, the Bank committed to explaining persistent deviations of inflation from the target. The box on the next page lays out the Bank's explanation of recent inflation developments.

This report includes information received up to the fixed announcement date on 15 April 2003.

Why Has Total CPI Inflation Exceeded the Target?

Total CPI inflation moved up from 2.1 per cent in July 2002 to 4.6 per cent in February 2003 and has been outside the inflation-control target range since last October. When renewing the inflation-control target in May 2001,¹ the Bank made a commitment to explain any such persistent deviations from the target midpoint. When the influences on inflation over the past six months are examined, three factors stand out: a surge in energy prices, large increases in insurance premiums, and an economy that is operating close to its capacity limits.

With tighter global energy markets and the consequent escalation in the prices of crude oil and natural gas from the relatively low levels of late 2001 and early 2002, consumer prices for gasoline, heating oil, and natural gas have risen markedly in Canada since mid-2002. This resurgence is the main factor behind the increase in CPI inflation between July 2002 and February 2003. There has recently been a significant reversal in these prices, and futures prices for crude oil are indicating further declines over the next few months.

Insurance premiums, after having been stable for several years, have also soared since the end of 2001, reflecting marked increases in the value of claims and low returns on portfolio investments by the insurance industry in the last couple of years. By February 2003, premiums had risen 30 per cent for automobiles and 11 per cent for homes, relative to a year earlier. Because insurance premiums have a combined weight of almost 4 per cent in the CPI basket, such movements contributed significantly to the rise in CPI inflation between July 2002 and February 2003. Insurance premiums are included in the Bank's core inflation measure. While their rate of increase has been higher and more persistent than anticipated, the impact on the CPI is expected to abate during 2003.

Pressures on aggregate production capacity have also been more intense than expected. Following the 11 September terrorist attacks in the United States, the Bank lowered interest rates aggressively, dropping the overnight rate 200 basis points between September 2001 and January 2002. This dramatic action was taken to buttress confidence and to avoid a severe slowing of economic activity. Confidence was quickly restored, however, so the considerable monetary stimulus resulted in strong growth, particularly in the demand for interest-sensitive items. With the recovery emerging considerably sooner and stronger than expected, the Bank tightened the stance of monetary policy between April and July 2002. In the second half of 2002, external demand weakened, but domestic demand remained strong, and the level of overall economic activity remained close to capacity limits. Robust domestic demand was reflected in the firmness of some prices, particularly those for shelter, personal care services, and some recreational services. This environment led the Bank to resume tightening in March 2003.

This *Report* examines the factors that are expected to return inflation to the Bank's 2 per cent target by early 2004.

1. See Bank of Canada (2001, 7).

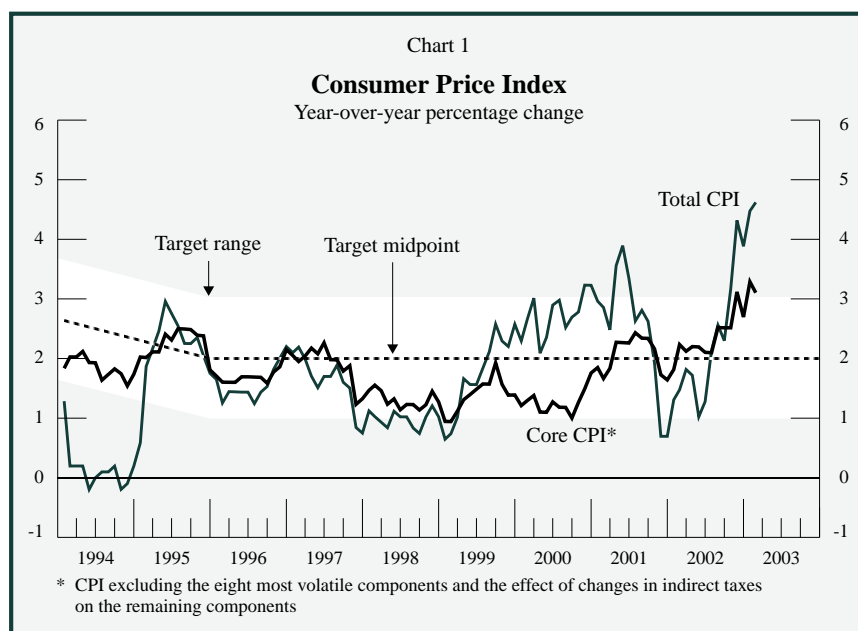
2. RECENT DEVELOPMENTS IN INFLATION

Since November 2002, core CPI inflation has been well above the Bank's 2 per cent inflation-control target. The rate of increase in the total CPI has moved up markedly, chiefly because of a substantial surge in crude oil prices.

Inflation and the 2 per cent target

Core CPI inflation has been higher than projected at the time of the October *Report* (Chart 1).¹ Between August and October of 2002, the 12-month rate of increase in the core CPI was steady at 2.5 per cent. Since November, it has averaged just above 3 per cent and was 3.1 per cent in February. Other measures of the trend rate of inflation that the Bank follows closely have also risen and in February were close to the core rate (Chart 2).

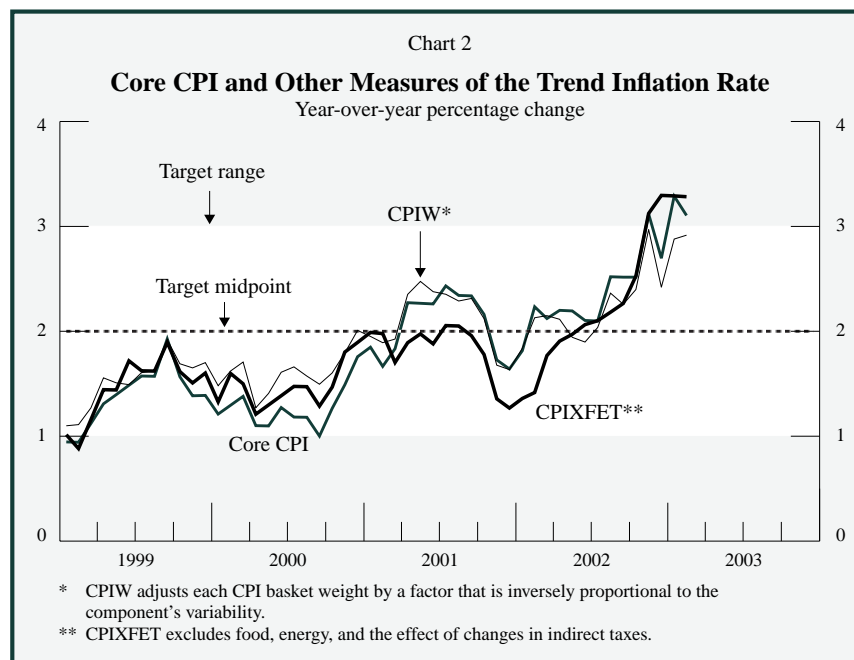
Since November 2002, core inflation has been well above the Bank's 2 per cent inflation-control target. . .



The unexpectedly marked increases in core inflation reflect a combination of one-off factors, higher costs for key inputs, and robust domestic demand.

Conspicuous among the one-off factors have been unusually large increases in the premiums for both automobile and home insurance, which have boosted inflation considerably, contributing

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



about 1.3 percentage points to the 12-month increase in core CPI in February. In a number of areas, higher prices for key inputs, such as energy and grains, are exerting upward pressure on the prices of final goods and services.

Most important for monetary policy are indications that strong domestic demand in some sectors is pressing up against production capacity. For example, these pressures have resulted in marked increases in the prices of shelter and some services. The judgment that the economy is operating close to capacity is supported by the fact that even measures of core prices that strip out insurance premiums are rising at a rate of about 2 per cent.²

The echo effect of the temporary discounting in the wake of 11 September 2001 is no longer influencing core CPI inflation. While the echo effect did push up the 12-month rate of core CPI inflation in the fourth quarter of 2002, its influence had dissipated by February. The return to regulated pricing of electricity in Ontario has stabilized the cost to consumers, although the introduction of rebates lowered consumer costs in the month they were delivered.³

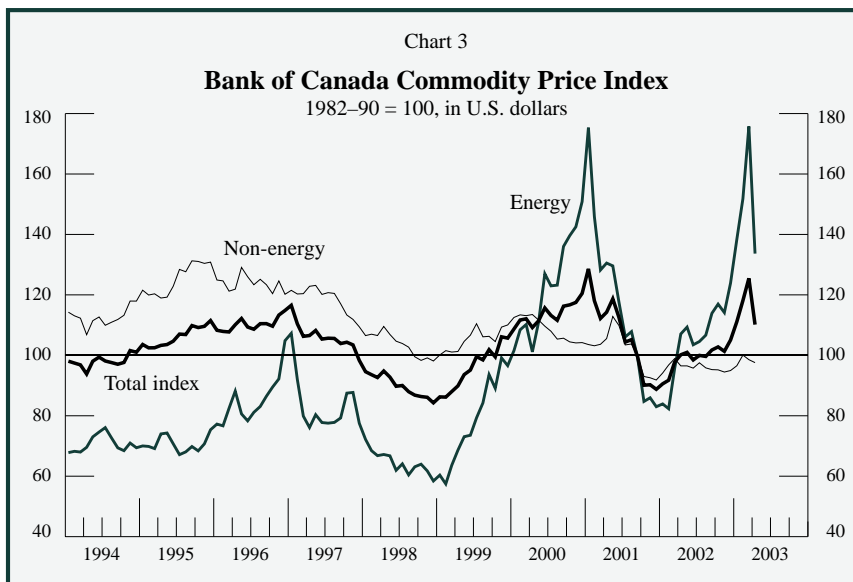
2. The sudden rise in insurance premiums follows several years of exceptionally high returns on portfolio investments that helped cover rising claims and kept insurance premiums down. Had returns been lower, premiums would most likely have risen earlier, and core inflation would have been correspondingly higher in that period. This would also have meant that core inflation today would have been lower, but not as low as the measures that completely strip out these premiums. This is another way of adjusting for the rise in insurance premiums in order to gauge underlying inflation.

3. Electricity prices in Ontario are expected to decline in the second quarter because of a second rebate. This may cause a temporary drop in core inflation.

The 12-month rate of increase in the total CPI was 4.6 per cent in February, up two full percentage points since August. This sharp jump relative to the core rate was mainly caused by substantial increases in the consumer prices of gasoline and fuel oil. Ongoing fears of supply disruptions in the Middle East, in addition to the recent disruption of oil exports from Venezuela and the resulting drop in U.S. oil stocks, had contributed to a further marked rise in crude oil prices up to mid-March. With the easing of the threat of long-lasting disruptions to Iraqi oil production, crude oil prices have subsequently fallen back. The rise in natural gas prices at the consumer level, reflecting both higher transportation charges and stronger demand because of unusually cold weather in North America, also contributed to the recent jump in total CPI inflation.

... and the rate of increase in the total CPI has moved up considerably relative to the core rate.

Prices of non-energy commodities have also risen, on balance, since last autumn (Chart 3). The strength of demand in China helped raise the prices of base metals, while both livestock and pulp prices have recovered in the face of reduced supplies. The recent decrease in the value of the U.S. dollar against most other major currencies has also contributed to the rise in the U.S.-dollar price of commodities.⁴



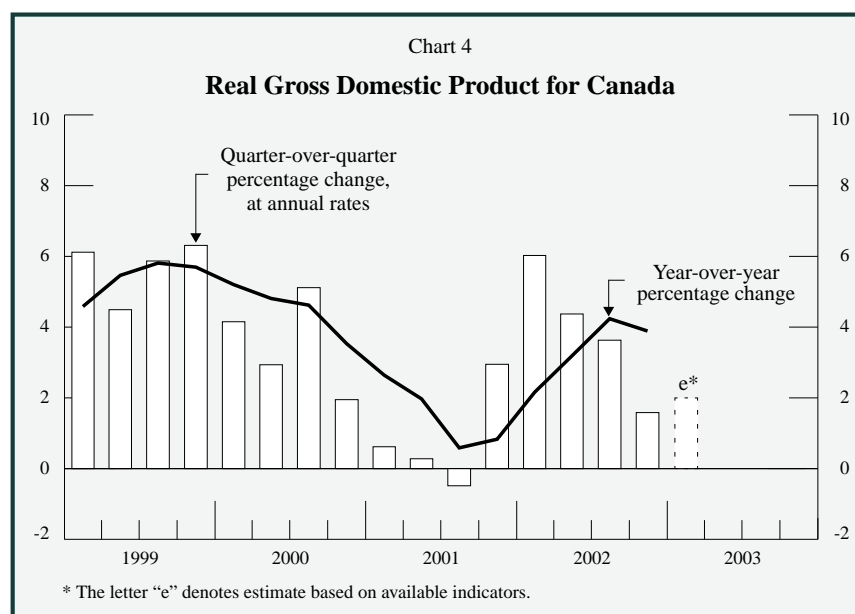
4. Commodities are generally priced in U.S. dollars. Thus, a depreciation of the U.S. dollar lowers the price of commodities in other currencies. This stimulates demand, putting upward pressure on their U.S.-dollar price.

Factors at work on inflation

Aggregate demand

Canada's economic growth slowed to a rate somewhat below the Bank's estimate of potential growth of 3 per cent in the second half of 2002.

In the second half of 2002 and early 2003, Canada's economic growth eased from its earlier vigorous pace. Real GDP, after increasing at an annual rate of 5.2 per cent in the first half of 2002, grew at a rate of 2.6 per cent in the second half, somewhat below the Bank's estimate of the growth of production capacity of 3 per cent (Chart 4). Current indicators of spending and employment suggest that real GDP rose at a pace of around two per cent in the first quarter of 2003.

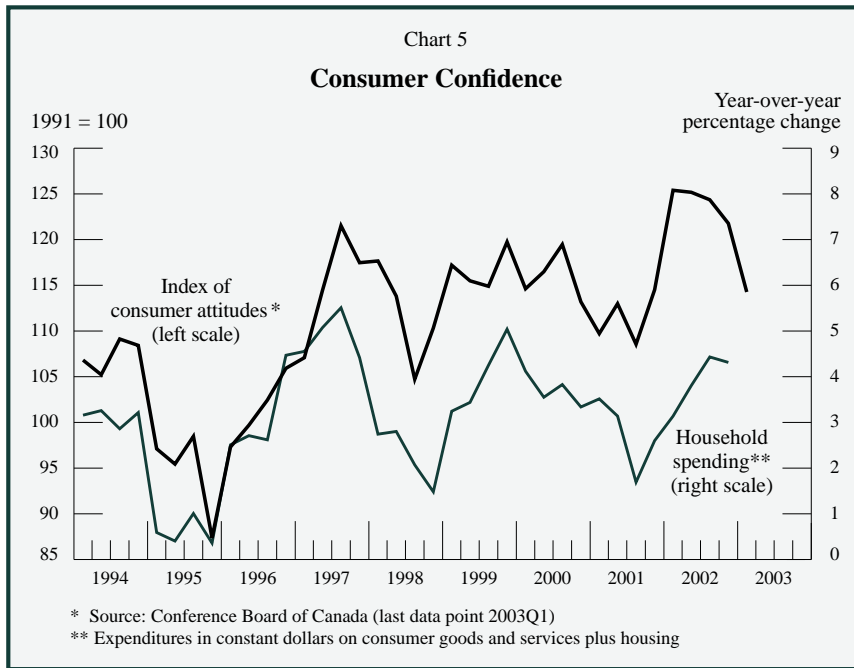


Towards the end of 2002, Canada's exports fell back, after registering strong gains earlier in the year.

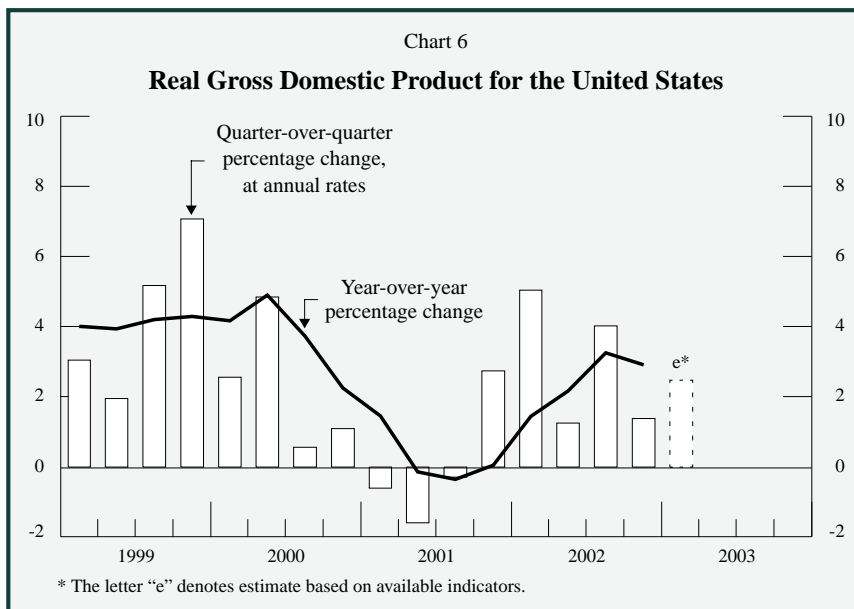
At the same time, household spending continued to rise strongly in the second half of 2002.

After making significant gains in the first three quarters of 2002, Canada's exports fell back in the fourth quarter and in early 2003 as the rate of economic expansion in the United States slowed. In the second half of 2002, the contribution of inventory accumulation to real GDP growth diminished appreciably, while increased uncertainty about the economic outlook led to modest cutbacks in capital spending by firms towards year-end. At the same time, the significant monetary stimulus provided by low interest rates, together with substantial gains in employment and real incomes, contributed to further strong growth in household spending in the second half of 2002 and in the first quarter of 2003 (Chart 5).

Demand in the overseas economies and in the United States has turned out somewhat weaker than anticipated. The marked slowing in the U.S. economy in the fourth quarter of last year,



following a robust third quarter, was caused by weaker growth in household spending and a sharp deterioration in the trade balance (Chart 6). However, total business fixed investment rose during the fourth quarter for the first time in two years and is likely to have risen further in the first quarter of this year. In addition, despite higher oil prices, deteriorating consumer confidence, and inclement weather in February in the northeast region, U.S. consumption growth is believed to have firmed somewhat in the first quarter of 2003.



Estimated pressures on capacity

The level of economic activity in Canada has remained near capacity since early 2002.

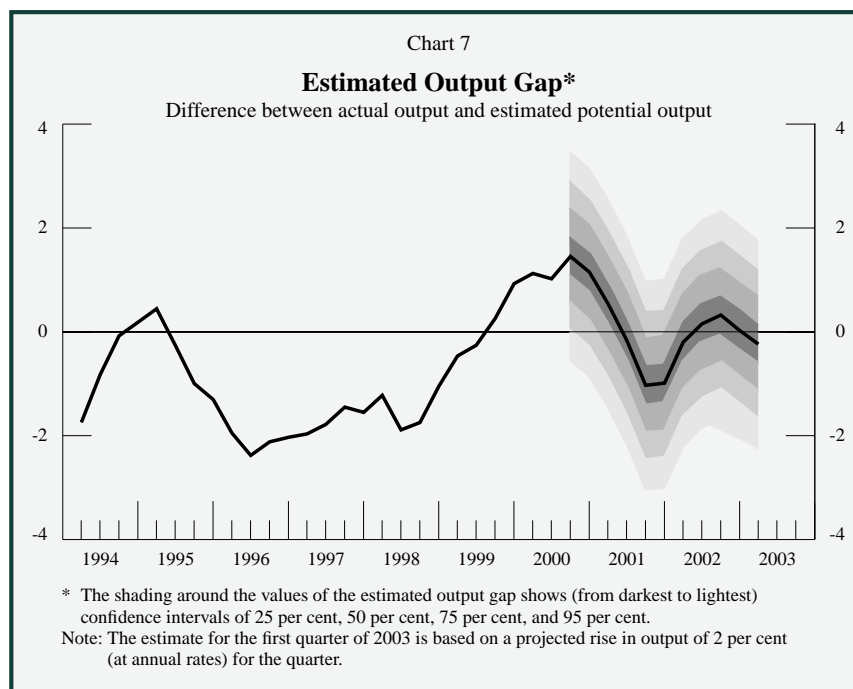
Estimates of the Bank's conventional measures of potential output and the output gap suggest that the economy is operating very close to full production capacity (Chart 7).

Several other indicators are consistent with this assessment. These include Statistics Canada's measure of capacity utilization in the non-farm, goods-producing sector, profits as a share of GDP, and the proportion of firms reporting shortages of labour in the survey conducted by the Bank's regional offices.

Capacity pressures have continued to be particularly evident in the housing market. Since early 2002, a low vacancy rate in residential accommodation has resulted in relatively high rates of increase in the prices of both new and existing homes.

At the same time, some labour market indicators suggest that there may be somewhat more slack than the conventional measure of the output gap would imply. In particular, the considerable rise in employment since the beginning of 2002 was met largely through an increase in labour supply. This is evidenced by a marked rise in the participation rate and an absence of upward pressure on wage increases.

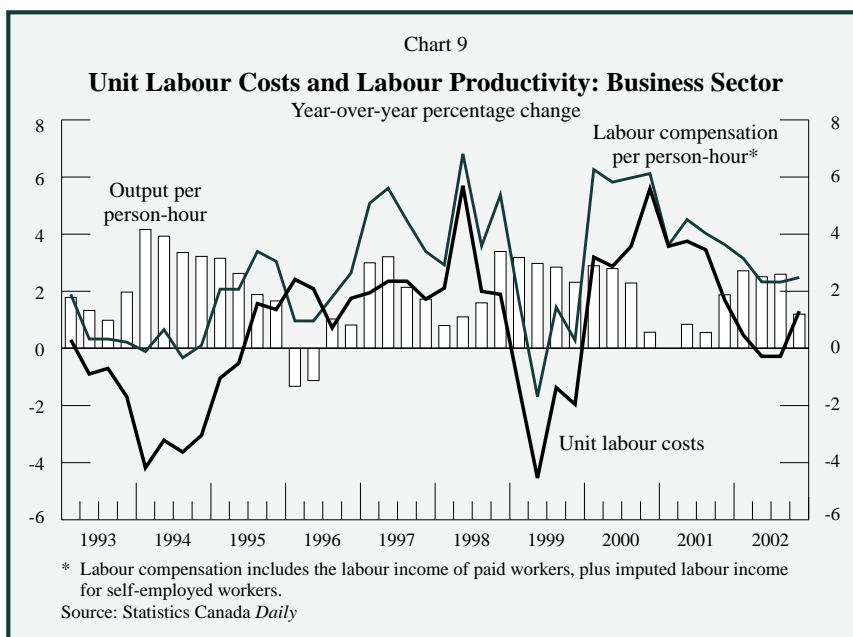
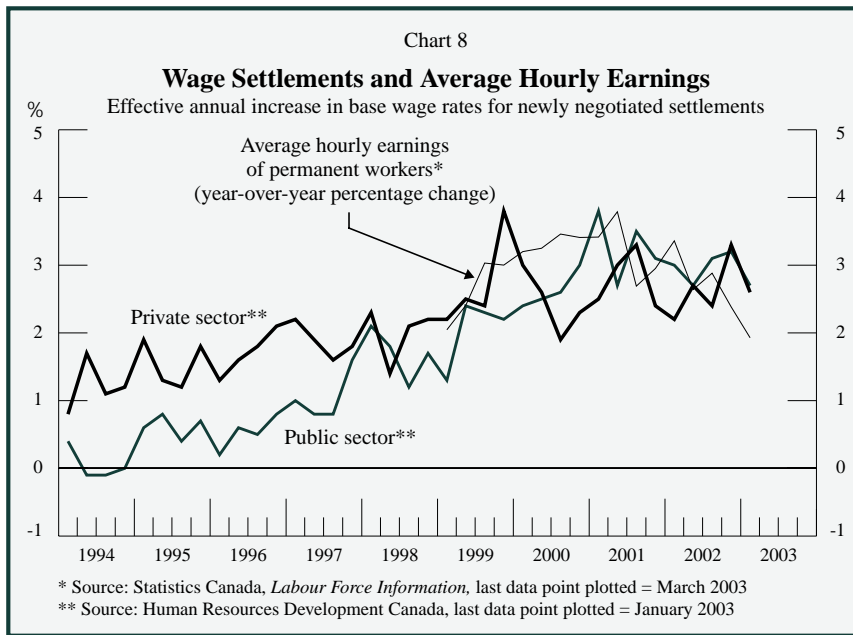
Overall, the above evidence, together with the higher-than-expected rates of inflation, suggests that the economy is currently operating somewhat closer to its production capacity than the Bank believed to be the case at the time of the *October Report*. Moreover, it is the Bank's view that the level of economic activity has been close to capacity since early 2002.



Cost control

Based on both the average hourly earnings of permanent workers and hourly labour compensation in the business sector, the underlying rate of increase in average labour compensation seems to have eased by late 2002 to a range of 2.0 to 2.5 per cent (Charts 8 and 9). However, with a slowing in productivity growth during 2002, the year-over-year rate of increase in unit labour costs in the business sector picked up in the fourth quarter to around 1.5 per cent (Chart 9).

With reduced growth in labour productivity, the rate of increase in unit labour costs picked up to around 1.5 per cent at year-end.

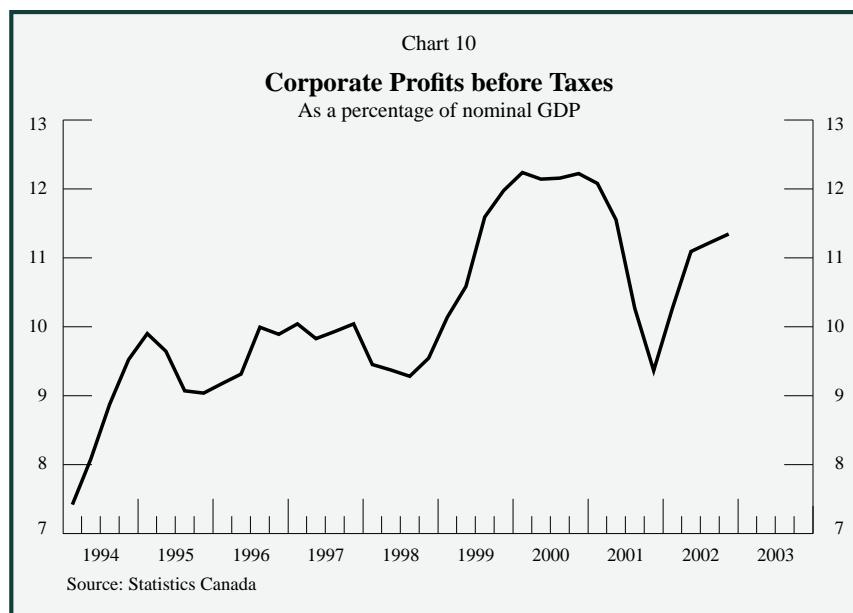


3. FINANCIAL DEVELOPMENTS

Business and household credit conditions

Growth in the demand for total non-financial business credit has been slow...

The combination of healthy corporate profits (Chart 10) and some delay by businesses in carrying out their investment plans in the face of economic and geopolitical uncertainty has resulted in very slow growth in the demand for total non-financial business credit over the past few months (Chart 11). While longer-term credit, buoyed by the issuance of income trusts, has expanded at a moderate pace, short-term business credit has continued to decline. And banks remain cautious in their lending to riskier firms.

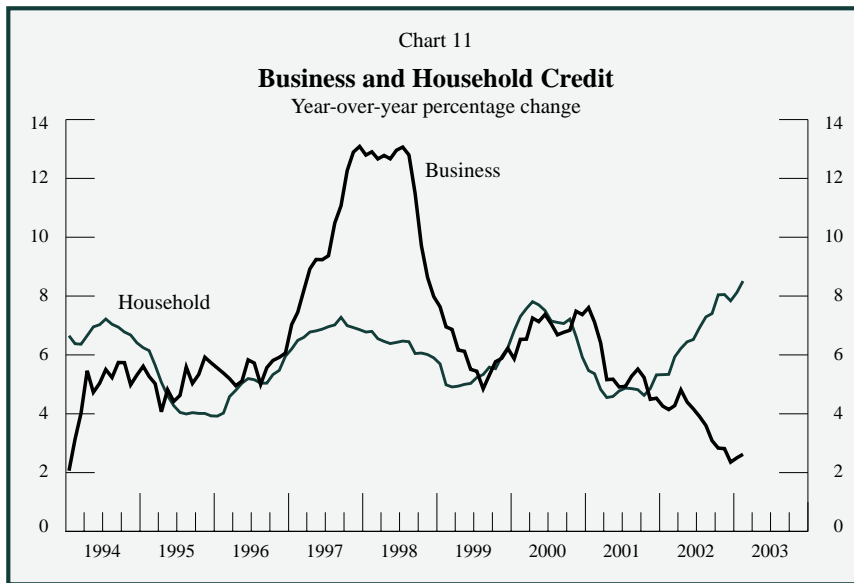


Most spreads between the yields on corporate bonds and government bonds have narrowed since the peak reached last October, although some have recently widened again owing to a number of industry-specific concerns (Chart 12). Nonetheless, spreads are still high compared with their historical averages, especially for non-investment-grade issuers.

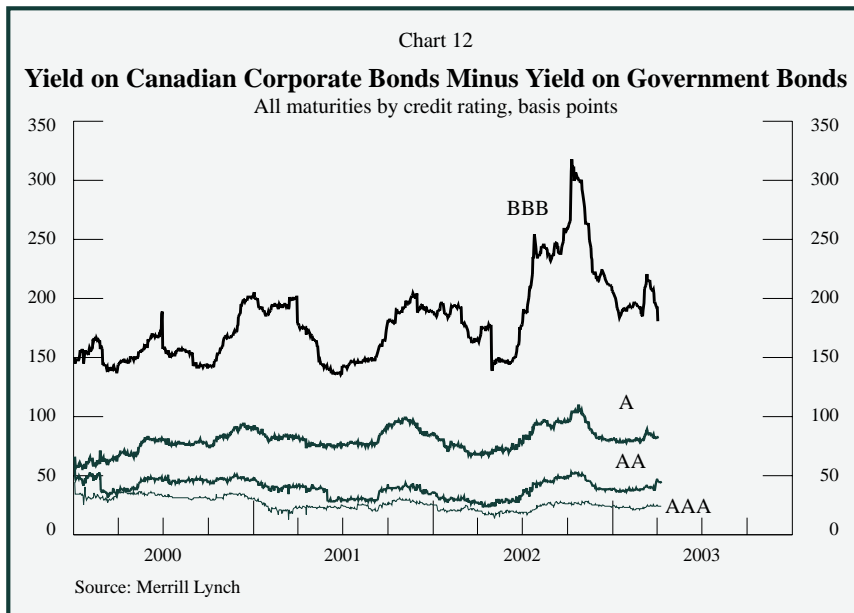
Stock prices have picked up from the lows reached in October 2002 but remain sensitive to geopolitical developments. Equity market volatility rose in March, but has declined more recently. Weak equity issuance suggests a lack of investor enthusiasm for new stock issues and a difficult environment for riskier borrowers.

... while growth in household credit remains at a high level.

In sharp contrast to business credit, growth in household credit remains at a high level, supported by low interest rates and strong employment growth. Although Canadian households are



accumulating debt, their financial situation remains sound and is not acting as a drag on their consumption. Higher debt levels have been partly matched by higher income levels, and with interest rates at very low levels, the debt-service ratio remains low by historical standards. It thus appears that, while higher interest rates would dampen consumption, the effect would not be significantly magnified by the size or composition of household debt (Technical Box 1). Moreover, gains in house prices continue to offset the capital losses from the stock market, contributing to healthy household balance sheets.



Technical Box 1

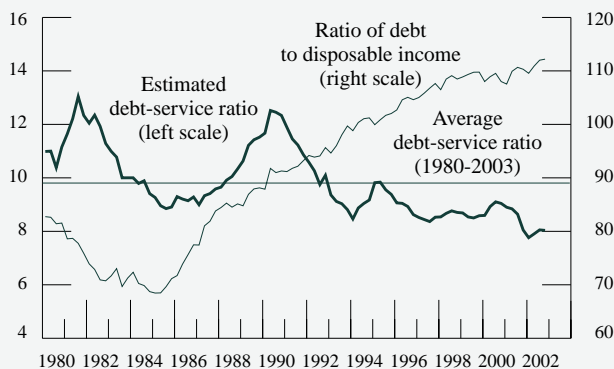
Interest Rates and the Cost of Household Debt

The growth of household debt has accelerated in the last year, partly reflecting the consumer response to sustained low interest rates. Since the mid-1990s, consumer debt (i.e., non-mortgage debt) has grown rapidly, particularly variable-rate lines of credit, which have become increasingly popular. In fact, consumer debt now accounts for 31 per cent of household debt, compared with 25 per cent in 1994. Very low short-term interest rates have also permitted lenders to market variable-rate mortgages more aggressively and have made those mortgages more popular among households.

Growing debt loads and the trend towards variable-rate vehicles have raised the question of whether an increase in interest rates would affect the household sector to a greater degree and more rapidly than in the past. One factor lessening the impact on interest outlays, however, is that variable-rate mortgages tend to cap households' debt-service payments, with changes in interest rates affecting mainly the rate at which principal is repaid. In addition, a significant fraction of household debt continues to be contracted at interest rates that are fixed for 3- to 5-year terms.

One measure of the cost of household indebtedness is the share of disposable income required to make interest payments on existing debt. Higher debt-service costs arising from higher interest rates would tend to divert income from consumer spending and reduce the access of some households to credit.

Personal Debt Burden



Source: Statistics Canada, Bank of Canada calculations

The estimated debt-service ratio is currently at historically low levels because the impact of the increased household debt has been more than offset by the combination of higher incomes and lower interest rates. (See chart.) This is partly because low interest rates on longer-maturity, fixed-rate debt have reduced the costs of new mortgages and renewals. In addition, with short-term rates well below long-term rates, the increased use of variable-rate debt has tended to further reduce the debt-service burden. Alternative measures of the debt-service ratio that include principal repayments (based on assumptions about the average term of household debt) have been flat in recent years and are also well below the peaks reached in the early 1990s.

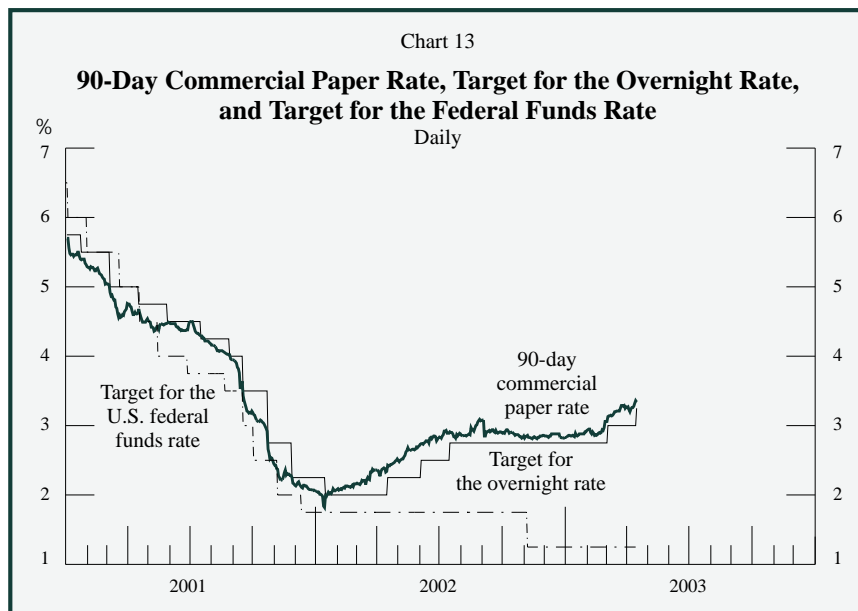
The greater importance of variable-rate debt has likely increased the potential impact of short-term interest rates on consumer spending. Nonetheless, higher interest rates would lead neither to a pronounced deterioration in the creditworthiness of households, given the current low level of the debt-service ratio, nor to sharply reduced cash flow. Hence, they would not likely result in unusually large cuts in household expenditures.

Policy actions

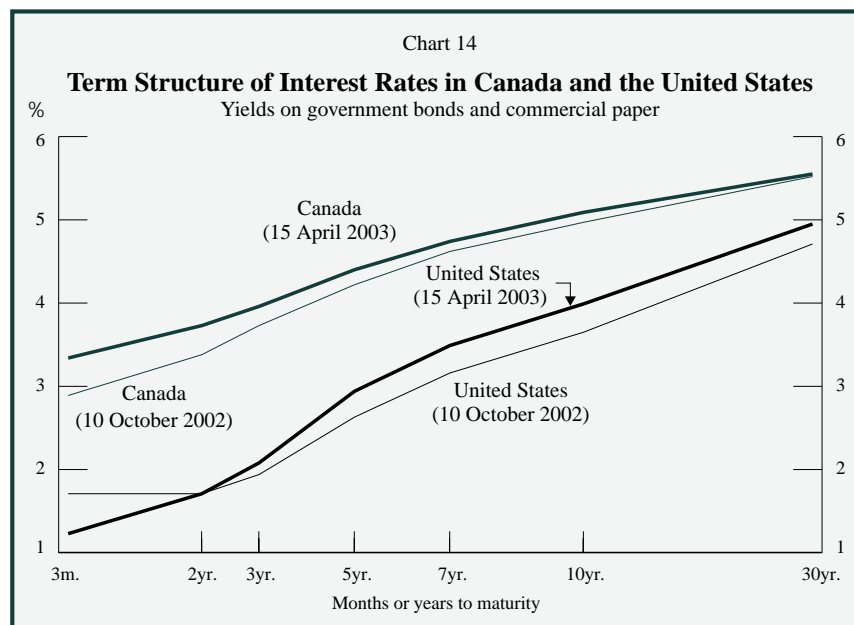
On the October and December 2002 announcement dates, the Bank decided to keep its key interest rate unchanged, in light of the weakening global economic situation and the economic, financial, and geopolitical uncertainties. Although the policy rate also remained unchanged in January, the Bank drew attention in the press release to its view that the greater-than-anticipated increases in core and total CPI indicated that the economy might be operating closer to its production capacity than previously believed. On both the March and April announcement dates, the Bank raised its target for the overnight rate by 25 basis points, bringing it to 3.25 per cent. These decisions were taken against the backdrop of persistently high inflation rates, the expectation that Canadian economic activity would remain near potential, and the stimulative stance of monetary policy (Chart 13).

Developments in the target for the overnight rate since the October Report:

- Oct. 16 — no change
- Dec. 3 — no change
- Jan. 21 — no change
- Mar. 4 — up 25 basis points to 3.00 per cent
- Apr. 15 — up 25 basis points to 3.25 per cent



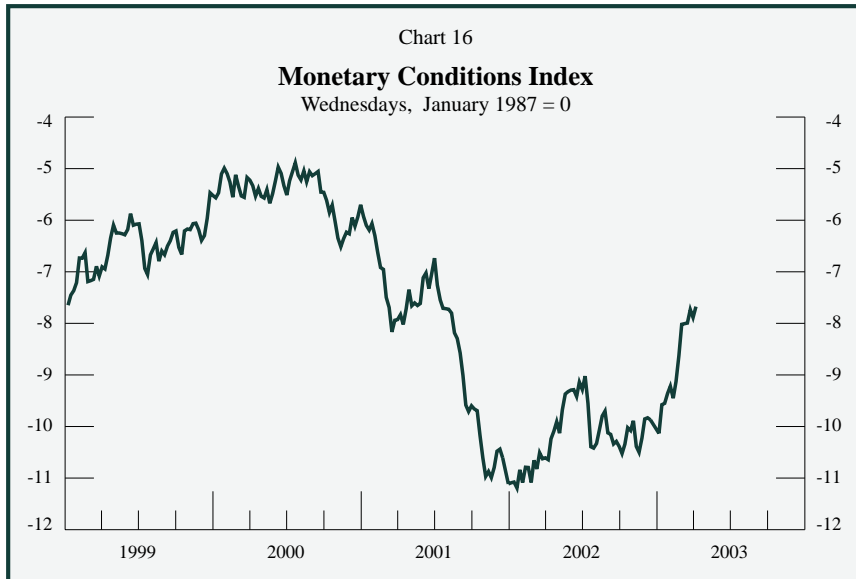
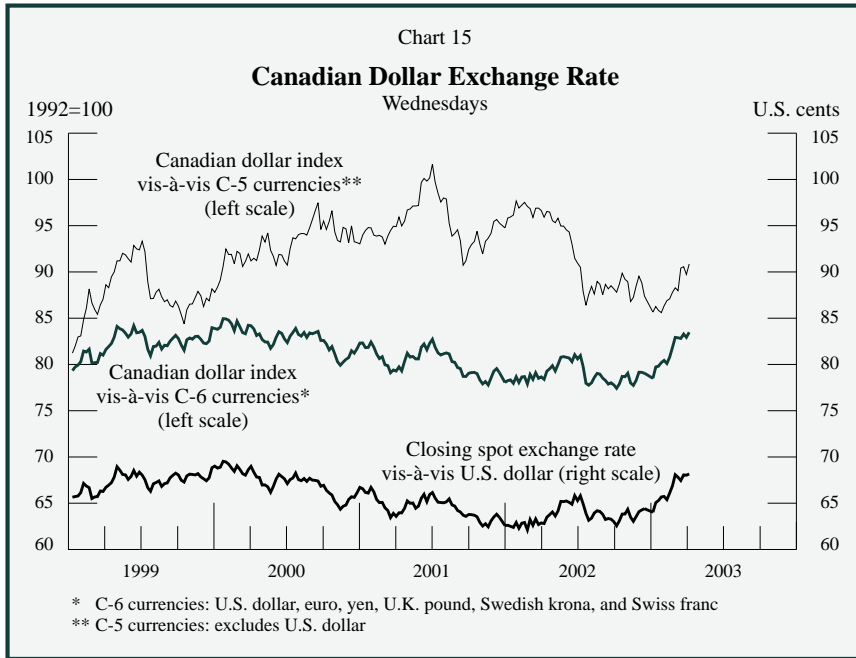
The yield curve in Canada has continued to flatten since October (Chart 14). Short-term market interest rates have moved higher, reflecting not only higher current policy rates, but also market expectations of further increases. Medium- and longer-term rates, on the other hand, have remained relatively stable. In contrast, the yield curve in the United States has steepened, with the decline in U.S. short-term interest rates reflecting market expectations of lower policy rates in the near future.



Exchange rate and monetary conditions

The Canadian dollar has recently been trading above 68 cents U.S., reaching a three-year high (Chart 15). Fundamental factors supporting the Canadian dollar against the U.S. dollar include a resilient domestic economy, favourable interest rate differentials, and firm commodity prices. Since the *October Report*, the Canadian dollar has appreciated by 8.2 per cent, on average, against the currencies of its major trading partners. Over this period, the U.S. dollar has weakened significantly against other major currencies, most notably the euro and the Swiss franc. These currencies benefited from safe-haven flows in the prevailing uncertain environment.

The Bank's monetary conditions index has risen sharply since the *October Report*, owing to the rise in the target for the overnight rate and the appreciation of the Canadian dollar (Chart 16).



4. THE OUTLOOK FOR INFLATION

International background

Near-term global economic growth is likely to be subdued, but the risks are better balanced.

The global economy continues to expand, but at a slower pace than projected in the *October Report* and the *January Update*. Given that economic uncertainty remains an important factor, global economic growth over the near term will likely remain subdued. But with geopolitical uncertainty lessening, world oil prices down significantly, and financial conditions improving, the risks confronting the global economy are better balanced. Looking further out, the Bank expects a more robust economic environment, particularly in the United States.

U.S. GDP growth is expected to pick up to a rate of about 4 per cent in 2004.

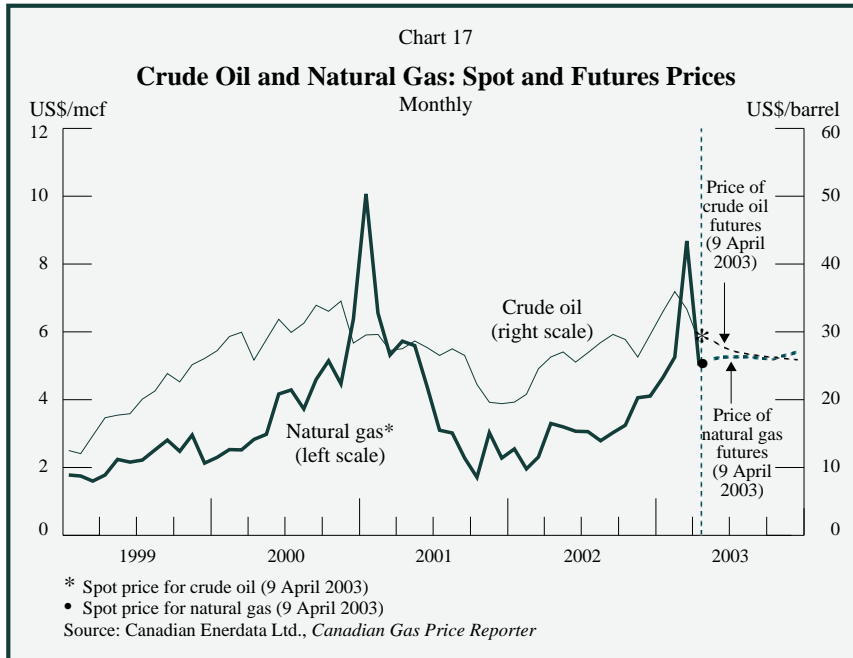
U.S. economic growth is now projected to increase at a rate below that country's growth potential in the first three quarters of the year. As confidence levels improve, however, the stimulative stance of monetary policy, together with tax cuts and increased defence spending, should support an expansion to a rate above the economy's growth potential towards the end of the year and through 2004. Both consumer spending and business expenditures on capital equipment are expected to strengthen over this projection horizon. On an average annual basis, real GDP should thus increase by about 2 1/2 per cent in 2003. This is less than was projected in the *October Report* and the last *Update*. The Bank believes that U.S. economic activity will pick up to a rate of about 4 per cent in 2004.

A similar rebound in the pace of expansion is less certain in other industrialized countries, where there are signs of persistently weak growth in domestic demand. In the euro area, economic growth is expected to be about 1 per cent, on an average annual basis, in 2003 (weaker than our October projection) and to rise to about 2 1/4 per cent in 2004. In Japan, ongoing structural difficulties will continue to weigh on economic growth for some time, with a modest expansion of about 1/2 per cent expected in 2003 and growth of close to 1 per cent foreseen in 2004.

With weaker global demand, prospects for several emerging-market economies have deteriorated. In Asia, growth is expected to remain comparatively robust, although the possible spread of Severe Acute Respiratory Syndrome (SARS) increases the uncertainty surrounding this projection. The outlook for Latin America remains clouded.

The expected pickup in global economic growth should lead to further gains in the U.S.-dollar price of non-energy commodities during 2004. With crude oil prices having fallen markedly since mid-March, the Bank's base-case scenario assumes that the price

of West Texas Intermediate (WTI) crude oil will average about US\$28 per barrel in the second quarter of 2003, and will ease after mid-year. Natural gas prices are likely to remain near their current high levels over the remainder of 2003. These assumptions are broadly consistent with current market expectations (Chart 17).



Aggregate demand and supply in Canada

While indicators point to a weaker near-term global economic outlook, domestic demand in Canada has remained firm with continued employment gains. Given the underlying strength of domestic demand and with the expected pickup in U.S. economic activity towards year-end, the Bank continues to see the need for further removal of monetary stimulus over time to return inflation to its 2 per cent target and to maintain output levels close to capacity.

Economic growth in Canada is now expected to average near 2 1/2 per cent over the first three quarters of 2003. The recent climate of uncertainty has led many businesses to delay decisions to invest in fixed capital, and the effects will be felt over the coming months. Inventory accumulation is also likely to ease, since some of the recent inventory buildup appears to have been unintended. The growth in household expenditures is also expected to decrease from the strong pace registered in 2002. While continued U.S. economic growth, albeit moderate, in the first three quarters of 2003 should underpin the demand for exports, the higher level of the Canadian dollar will have a dampening effect. Spending on

While indicators point to a weaker near-term global economic outlook, domestic demand in Canada has remained firm.

goods and services by all levels of government is expected to rise solidly during this period.

The growth of aggregate demand in Canada should begin to strengthen appreciably towards year-end and through 2004. The anticipated pickup in the U.S. economy is expected to boost Canadian exports. With the assumed recovery in confidence and further improvement in financial conditions, investment spending should also pick up. Moreover, conventional drilling by the oil and natural gas sector is likely to increase considerably during 2003, reflecting the high prices of crude oil and natural gas (Technical Box 2). Household spending is also projected to grow at a healthy rate, although the pace of expansion will be moderated somewhat by the withdrawal of monetary stimulus.

Economic growth in 2003 is expected to average about 2 1/2 per cent. This projection is lower than that in the *January Update* and than the average private sector consensus forecast for 2003. It is also below the projection in the *October Report*, largely because of weaker growth prospects in 2003 for the United States and overseas economies.

During 2004, with strengthening demand, Canada's economy is projected to grow somewhat above the economy's 3 per cent growth potential. In terms of the level of economic activity, this scenario implies that by the end of 2004 most of the small amount of slack that is likely to open up over the first two or three quarters of this year will have closed. On an annual average basis, this would mean growth of around 3 per cent, below the latest private sector consensus forecast.

Measures of inflation expectations

In the regular survey reported in the Conference Board of Canada's spring *Index of Business Confidence*, 53 per cent of respondents expected prices, in general, to rise over the next six months at a rate of over 2 per cent. This proportion is up from 25 per cent last autumn (Chart 18). The survey of firms conducted by the Bank's regional offices indicates that 83 per cent of the businesses surveyed were expecting inflation over the next two years to be above the Bank's 2 per cent target, compared with 66 per cent of businesses surveyed last September. And the average private sector consensus forecast for the rate of increase in the total CPI in 2003 is 3 per cent, compared with 2.4 per cent last October. These near-term inflation expectations have undoubtedly been influenced by recent increases in energy prices at the consumer level.

While near-term inflation expectations have risen, the average private sector forecast for total CPI inflation in 2004 has remained

Growth in 2003 is expected to average about 2 1/2 per cent . . .

. . . and to be somewhat above the economy's production potential during 2004.

Measures of near-term inflation expectations have edged up.

Technical Box 2

Rising Energy Prices: Implications for Economic Activity

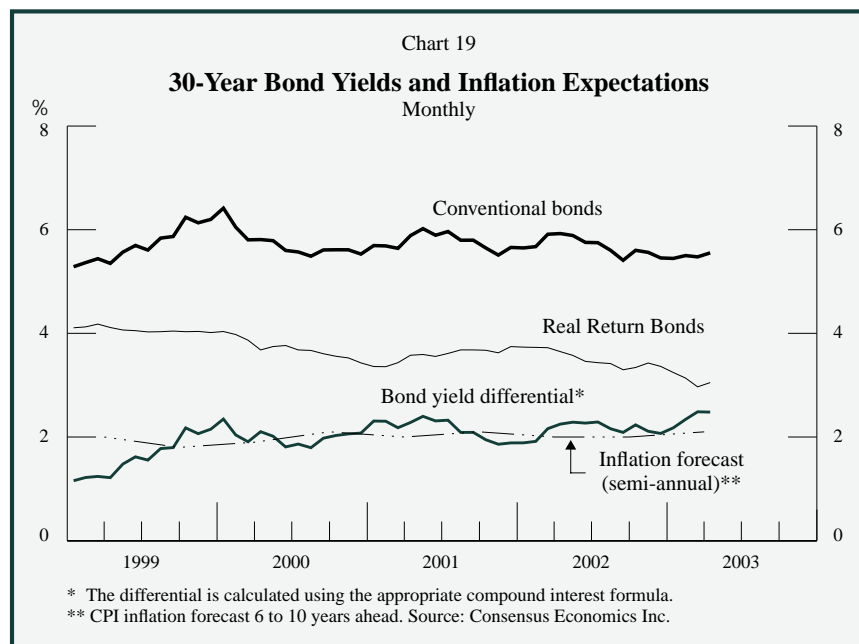
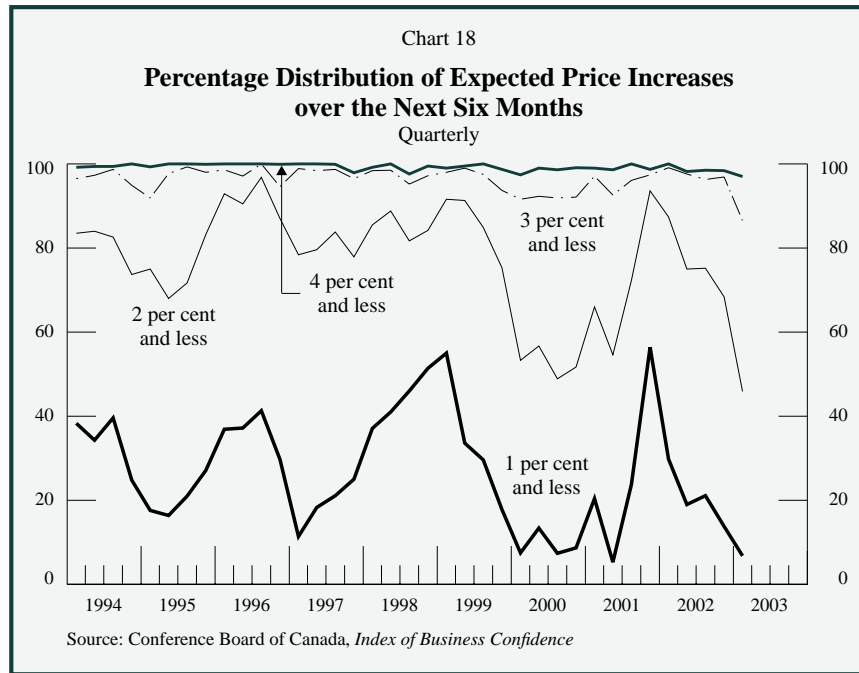
Large movements in energy prices affect economic activity through various channels (Stuber 2001). First, they redistribute real income between energy-importing countries (such as the United States) and energy-exporting countries (such as Canada). Because of the marked increase in Canada's net trade surplus in energy goods relative to GDP, our exposure to gains and losses in real income through fluctuating energy prices has risen since the early 1980s (a "real-income" or "terms-of-trade" effect). Moreover, if energy producers expect higher prices to be long-lasting, they would be more likely to raise their own investment expenditures. Higher energy prices also raise the operating costs of Canadian businesses and reduce the real incomes of households, while transferring income to energy producers. On balance, the short-run impact on Canadian aggregate economic activity of this "income-reallocation" might well be negative if energy producers raise their investment spending more gradually than other firms and households reduce their expenditures. Since most of Canada's important trading partners are net importers of energy, substantially higher energy prices could be expected to reduce the demand for Canada's exports to these countries (a "foreign-demand" effect). Finally, a large and persistent rise in energy prices could lead to a substantial increase in uncertainty, especially if the price rise was not simply a rebound from an earlier price decline. Firms and households would be less sure about the long-term costs of energy-intensive equipment and about the near-term outlook for the economy as a whole. They would therefore be inclined to postpone some capital spending and purchases of big-ticket consumer items.

Large increases in world energy prices have tended to have a significant dampening effect on the pace of global economic expansion, especially since the 1970s. However, this impact is likely to be smaller than that arising from the price shocks of the 1970s and early 1980s, largely because the intensity of energy use in industrial economies has declined markedly since that time.

If the price of West Texas Intermediate crude oil remained near US\$28 per barrel for the rest of 2003, this would represent an increase of about 7 per cent (US\$2 per barrel) from the average level in 2002. Similarly, if natural gas prices settled at a level of about US\$5 per mcf for the rest of the year, this would imply a rise of close to 65 per cent from the 2002 level. Such price increases could raise Canada's real income by just over 1 per cent. On the other hand, estimates published by the IMF and the OECD suggest that such a shock to energy commodity prices could reduce real GDP in the United States by about 0.1 per cent after one year. The combined impact on Canada's real GDP of the real-income and foreign-demand effects of such a rise in energy prices could be a very small increase of about 0.3 per cent, although there would be a wide band of uncertainty around such an estimate.¹

1. For more details on how the effect of an energy-price shock on Canada's real GDP is estimated, see Stuber (2001). The above estimate does not take into account the short-run impact on economic activity arising from higher uncertainty.

close to 2 per cent. Typical forecasts of longer-term inflation similarly continue to be centred tightly around 2 per cent. On the other hand, the yield differential between 30-year conventional and Real Return bonds has crept up close to 2.5 per cent (Chart 19). Liquidity and technical factors are, however, making this spread difficult to interpret.



Other factors affecting inflation

The one-off factors that have recently pushed core inflation up to around 3 per cent will likely continue to hold the core rate up over the near term. However, the combined effect of these factors is expected to have largely run its course by early 2004.

The impact on the core rate of recent hikes in insurance premiums is expected to persist through mid-2003, before gradually diminishing into early 2004. The effects of last year's drought in western Canada and elsewhere are expected to put further upward pressure on the prices of some food components in the core CPI through most of 2003.

There is some risk of a pass-through of the recent substantial increases in energy costs to the prices of other goods and services. Recent experience suggests, however, that this pass-through effect is likely to be relatively small.

Similarly, the effect on core inflation of the recent appreciation of the Canadian dollar is likely to be small, since the pass-through from the exchange rate to this index has been modest throughout the past decade. The effect of the exchange rate movement on total CPI will be somewhat larger than on core CPI, reflecting the different baskets of goods and services included.

Wage increases are expected to rise slightly through 2004. For example, the Bank's latest survey of businesses shows that a greater percentage of firms expect larger wage increases over the next 12 months than anticipate smaller wage gains. Labour productivity growth is expected to be near 2 per cent over the next two years, with growth in unit labour costs edging up towards 2 per cent through 2004.

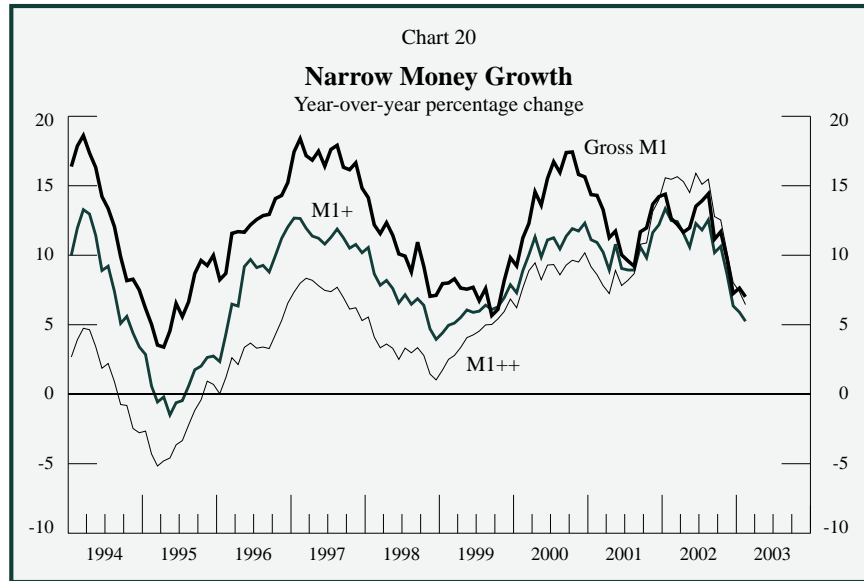
A number of one-off factors will continue to hold core inflation up over the near term.

Wage gains are expected to rise slightly through 2004.

Implications of money growth for inflation

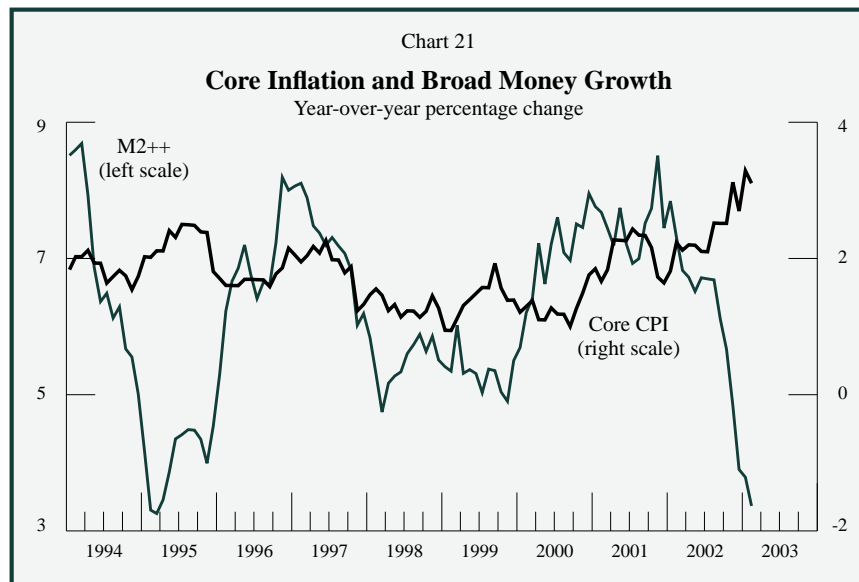
During most of the second half of 2002 and early 2003, growth in the narrow monetary aggregates—gross M1, M1+, M1++—has been slowing from its earlier very strong pace (Chart 20). The accumulation of precautionary balances by both households and firms that occurred earlier at a time of sharp declines in equity prices, increasing financial turbulence, and rising geopolitical uncertainty appears to have stopped. Nevertheless, households and firms continue to hold high levels of money balances.

Households have been readjusting their portfolios to a significant extent in the last few months. There have been outflows from equity mutual funds since June 2002, owing in part to a shift by households from such funds towards fixed-term deposits and fixed-income mutual funds. There has also been an increased demand for real assets, as evidenced by the strength of the



housing market over the last year. The weakening of the narrow aggregates and of a number of components of M2++ has contributed to a pronounced decline in the growth rate of M2++ (Chart 21).

The sharp deceleration in the monetary aggregates in recent months does not present a significant risk to the inflation outlook. The growth rate of narrow money is still above the rate consistent with 2 per cent inflation, and households continue to hold unusually high levels of precautionary balances. Thus, continuing slow money growth would be consistent with inflation returning to its 2 per cent target for inflation control.



Inflation projection

The core rate of inflation is expected to remain near 3 per cent through mid-2003, largely because of the persistence of the one-off factors described earlier. But the combined effect of these factors should decrease significantly after that and will likely have largely run its course by early 2004.

With the balance of aggregate demand and supply likely to be a source of slight downward pressure on inflation over the projection horizon, and given that the effect of one-off factors is expected to diminish after mid-2003, core inflation is projected to move down to about 2 1/2 per cent in the second half of 2003 and to about 2 per cent by early 2004. It should remain there over the rest of next year (Table 1).⁵

Although core inflation is expected to remain near 3 per cent through mid-2003 as a result of a number of one-off factors . . .

. . . it should move back to 2 per cent in early 2004 and remain there through to the end of the year.

Table 1							
Projections for Core and Total CPI Inflation							
Year-over-year percentage change							
	2003				2004		
	Q1	Q2	Q3	Q4	Q1	Q2	Second half
Core inflation	3.1	2.9	2.5	2.4	2.0	2.0	2.0
Total CPI	4.5	3.7	2.8	2.4	1.2	1.5	1.8
Assumptions for the Price of WTI Crude Oil (US\$ per barrel)							
Base-case scenario	34	28	27	25	25	25	25

The outlook for the 12-month rate of increase in the total CPI will continue to be heavily influenced by developments in markets for crude oil (Chart 17). If oil prices were to average about US\$28 per barrel in coming months, total CPI inflation would be expected to ease to around 3 3/4 per cent in the second quarter. If crude oil prices were then to settle down at about US\$25 per barrel, broadly consistent with futures prices, total CPI inflation would likely fall temporarily below the core rate in the first half of next year, before steadying out at a rate close to core inflation.

The projection for total CPI inflation depends importantly on the outlook for oil prices.

5. Both core and total CPI inflation are expected to jump temporarily in December 2003 as a result of an echo effect associated with the first rebate on Ontario electricity prices in December 2002.

5. CONCLUSIONS

Since the Bank's last *Monetary Policy Report*, both core and total CPI inflation have been well above the 2 per cent inflation target. While one-off factors, particularly higher insurance premiums, and increased costs for some key product inputs have contributed importantly to high inflation, price pressures arising from strong domestic demand have also been at play. Indeed, although external demand for Canadian products has weakened, our economy has continued to operate close to full production capacity because of strong domestic demand. In this environment, inflation expectations have edged up.

In view of the domestic inflation situation and the underlying momentum of domestic demand, the Bank raised its target overnight rate on each of its last two policy announcement dates by 25 basis points, bringing it to 3.25 per cent.

Economic, financial, and geopolitical uncertainty has also figured prominently in the global economic picture over the past six months. Some of the geopolitical and financial uncertainty has lifted more recently, and the Bank expects that it will continue to recede. Global economic uncertainty remains important, however, especially over the near term.

Overall, the risks confronting the world economy now appear to be better balanced compared with last autumn, and by year-end, business and household confidence levels should be much higher. Thus, while global economic uncertainty will likely continue to dampen growth over the near term, activity should begin to strengthen towards the end of this year and through 2004, particularly in North America.

Given the underlying momentum of domestic demand, and an expectation that external demand for Canadian products will strengthen as uncertainties recede and confidence improves, the Bank continues to believe that further reductions in monetary stimulus will be necessary over time to return inflation to its 2 per cent target and to sustain output levels close to capacity. The timing and pace of further increases in policy interest rates will depend on the strength of domestic demand, the evolution of inflation expectations, and the pace of economic expansion in the United States and in overseas economies.

BIBLIOGRAPHY

- Bank of Canada. 1991. "Targets for reducing inflation: Announcements and background material." *Bank of Canada Review* (March): 3–21.
- _____. 1991. "Targets for reducing inflation: Further operational and measurement considerations." *Bank of Canada Review* (September): 3–23.
- _____. 2001. "Joint Statement of the Government of Canada and the Bank of Canada on the Renewal of the Inflation-Control Target." Press Release (17 May 2001) and Background Information. Reprinted in *Bank of Canada Review* (Summer): 57–67.
- Conference Board of Canada. 2003. *Index of Business Confidence* (Spring).
- Consensus Economics Inc. 2003. *Consensus Forecasts*. Various issues.
- Crawford, A. 2001. "Predictability of Average Inflation over Long Time Horizons." *Bank of Canada Review* (Autumn): 13–20.
- Macklem, T. 2001. "A New Measure of Core Inflation." *Bank of Canada Review* (Autumn): 3–12.
- Stuber, G. 2001. "The Changing Effects of Energy-Price Shocks on Economic Activity and Inflation." *Bank of Canada Review* (Summer): 3–14.

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