BANK OF CANADA

Monetary Policy Report

– November 1999 –

Library of Parliament centennial silver dollar. *The reverse of the 1976 silver dollar was used to commemorate the 100th anniversary of the completion of the Library of Parliament. This attractive building was the only part of the original centre block of the Parliament Buildings that was saved during the disastrous fire of 1916. It is still in use and is a popular tourist attraction in Ottawa.*

The design is the work of John Mardon.

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In facing the various challenges that may arise over the next year, it will be crucial to ensure that the Bank continues to deliver a trend of inflation that is inside our target range of 1 to 3 per cent. It is only when Canadians can count on inflation staying low and stable that our economy performs best.

– Gordon Thiessen

The Challenges for Canadian Monetary Policy in the Year 2000

Remarks by Gordon Thiessen
Governor of the Bank of Canada
to the Greater Charlottetown Area
Chamber of Commerce
Charlottetown, Prince Edward Island
2 November 1999

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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 and thereby contributes to better growth over time.
- Inflation-control targets ensure that monetary policy works to moderate cyclical fluctuations in income and employment. These targets help the Bank to make more accurate judgments about the growth potential of the economy.

The monetary policy instrument

- The Bank of Canada uses its influence on short-term interest rates to achieve a rate of monetary expansion consistent with the inflation-control target range. The transmission mechanism is complex and involves long and variable lags—the impact on inflation from changes in monetary conditions is usually spread over six to eight quarters.

The targets

- In February 1991, the federal government and the Bank of Canada jointly announced a series of targets for reducing inflation to the midpoint of a range of 1 to 3 per cent by the end of 1995. In December 1993, this target range was extended to the end of 1998. In February 1998, it was extended again to the end of 2001.
- By the end of 2001, the government and the Bank plan to determine the long-run target for monetary policy consistent with price stability.

Monitoring inflation

- In the short run, there is a good deal of movement in the CPI caused by transitory fluctuations in the prices of food and energy, as well as by changes in indirect taxes. For this reason, the Bank focuses on the CPI excluding food, energy, and the effect of indirect taxes. This measure is referred to as the *core* CPI.
- Over longer periods, the measures of inflation based on the total CPI and the core CPI tend to follow similar paths. In the event of persistent differences between the trends of the two measures, the Bank would adjust its desired path for core CPI inflation so that total CPI inflation would come within the target range.

1. Introduction

In an improving international setting, the Canadian economy has gained momentum and maintained low inflation.

Since the May *Report*, the international economic environment has continued to improve. Economic activity abroad grew faster than expected, while inflation in the major economies remained subdued. Japanese output increased sharply, following two years of severe recession. In Europe, growth picked up, and a number of the Asian economies that bore the brunt of the 1997–98 financial crisis have staged a remarkable recovery. The U.S. economy again showed surprisingly strong increases in spending and output, as well as low inflation, despite tight labour market conditions and high levels of economic activity.

Against this background, Canada's exports grew strongly. Domestic spending also gained momentum, and the margin of unused capacity in the economy declined. Inflation increased moderately, moving towards the middle of the Bank's 1 to 3 per cent target range, and inflation expectations seem to be settling around this level. With core inflation in the lower half of the target range and a degree of slack in the economy, the Bank of Canada kept its target for the overnight interest rate unchanged.

Given the strength of the U.S. economy and the momentum of demand here in Canada, the Bank will need to pay very close attention to a wide range of indicators of potential inflation pressures.

In determining the future conduct of monetary policy in Canada, two key issues will have to be faced. First, there is the risk of a buildup of inflation pressures in the United States and the implications for Canada. Second is the momentum of demand in the Canadian economy from both domestic and international sources, combined with the uncertainty surrounding estimates of the potential level of output. These issues will require the Bank to pay very close attention to a wide range of coincident and leading indicators of pressures on inflation in order to make timely policy judgments.

This report includes information received to 5 November 1999.

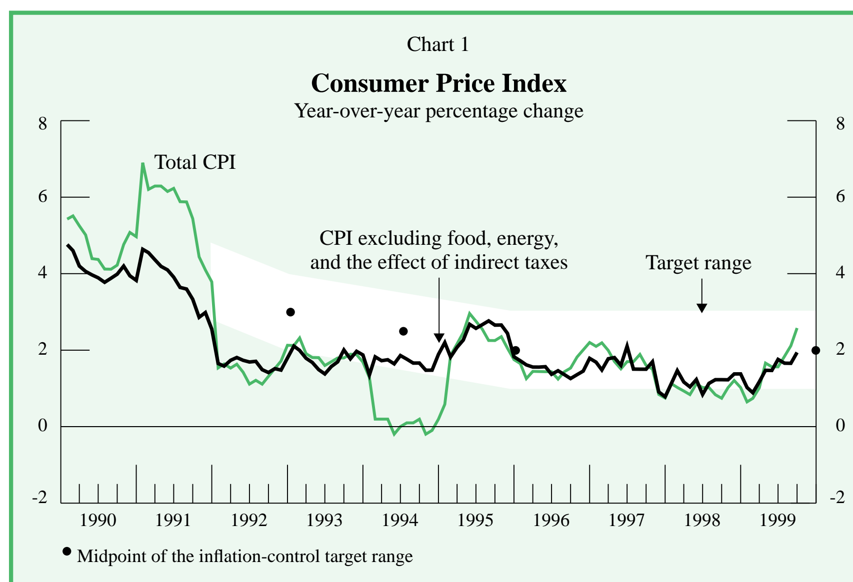
2. Recent Developments in Inflation

Core inflation has moved broadly in line with expectations towards the midpoint of the target range . . .

In the last six months, core inflation (CPI excluding food, energy, and the effect of changes in indirect taxes) has moved upwards from the lower part of the Bank's inflation-control target range towards the midpoint. This move was broadly in line with expectations but occurred more quickly than expected because of the timing of certain transitory factors.

Inflation and the target range

The 12-month rate of increase in the core CPI was 1.9 per cent in September, compared with 1.2 per cent last March (Chart 1). Two other statistical measures of the trend rate of inflation (CPIX and CPIW)[1] are currently at the same level as core inflation (Chart 2).



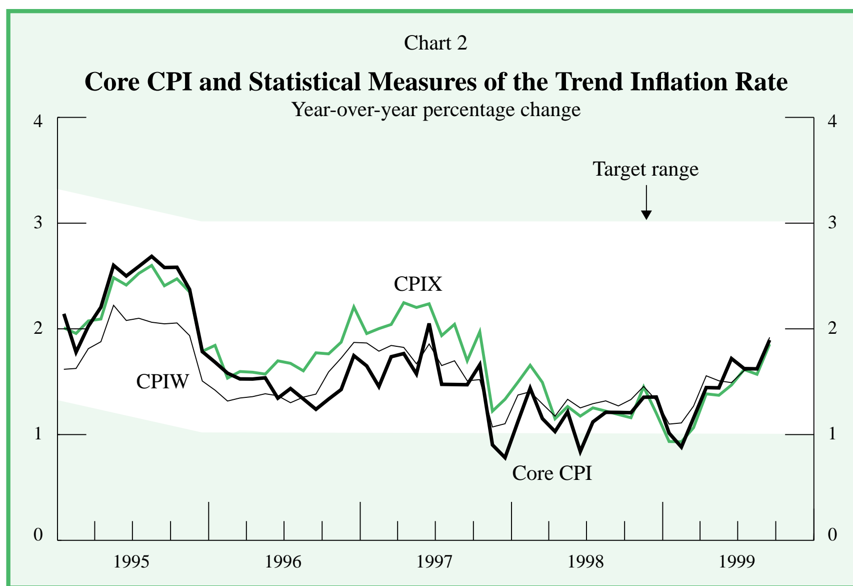
. . . reflecting, among other factors, the effects of the earlier depreciation of the dollar.

Several developments contributed to the rise in core inflation over the past six months. Prices for most imported consumer goods and services rose markedly as a result of the depreciation of the Canadian dollar between the autumn of 1997 and the latter part of 1998, contributing significantly to higher consumer prices.

1. CPIX excludes the eight most volatile components from the CPI as well as the effect of indirect taxes on the remaining components. CPIW uses an additional adjustment to each CPI basket weight that is inversely proportional to the component's variability. For more details, see Technical Box 1 in the November 1997 *Report.*

Core inflation continued to be held up by the general expectation that longer-term inflation would be close to the middle of the inflation-control target range. The brisk pace of price cuts for both computer products and long-distance telephone service, which has been an important feature of overall price developments, began to slow. In addition, airfares rose considerably and unexpectedly, partly because of sharply higher fuel prices.

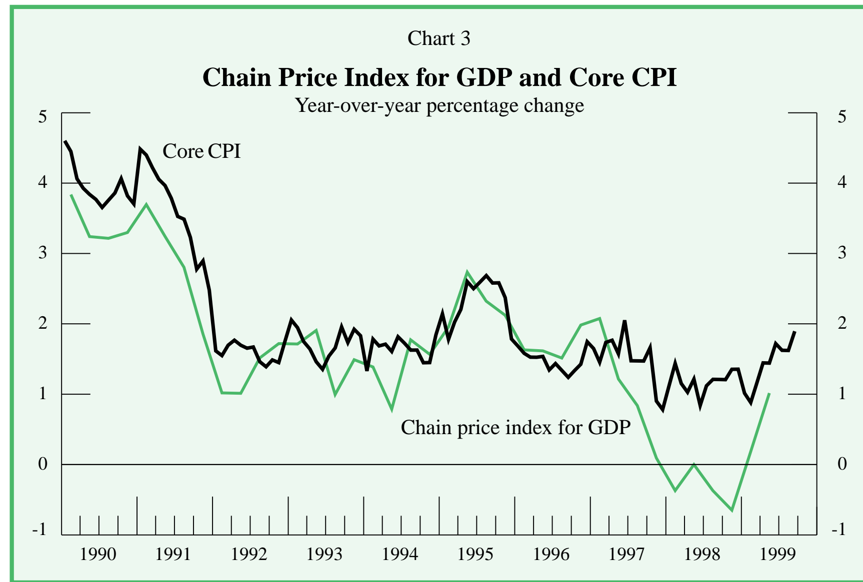
At the same time, two fundamental influences limited the increase in core inflation. Some slack in product and labour markets was present throughout this period, and unit labour costs have been largely unchanged over the past year.



Sharp gains in the prices of both gasoline and natural gas pushed the 12-month rate of increase in the total CPI up significantly to 2.6 per cent in September, from 1.0 per cent in March. This increase should be temporary, given that international oil prices are no longer under upward pressure. Total CPI should therefore move down towards the core inflation rate through next year.

The chain price index for GDP rose in the first half of 1999 . . .

Increased prices for the commodities that Canada exports led a recovery in the chain price index for GDP over the first half of 1999 after its decline in 1998. This economy-wide measure of prices rose by 1.0 per cent during the past year (Chart 3). Price gains continued to be modest for both consumer expenditures (similar to those recorded in the CPI) and business fixed investment.



. . . reflecting a marked increase in commodity prices.

World commodity prices have rebounded considerably since the end of 1998 (Chart 4) because of firmer global demand and some restrictions in supply. Metals prices rose sharply over this period, reflecting an increase in Asian and European demand as well as production cutbacks for certain metals. Crude oil prices surged between March and September with news of major cutbacks by OPEC and several non-OPEC producers, as well as mounting demand in the United States. In contrast, market conditions for many foodstuffs remain soft because of abundant supplies.

The Bridge/CRB index, a broad index of commodity prices followed by many analysts, has recently performed sluggishly compared with the significant rise in the Bank of Canada's commodity price index. This results mainly from the weakness in the price of food products combined with a weight on these products that is much greater in the CRB index than in the Canadian economy (Technical Box 1).

Technical Box 1

Bank of Canada Commodity Price Index versus the Bridge/CRB Index

The Bank of Canada commodity price index (BCPI), published weekly,[1] tracks movements in the world prices of the major commodities produced in Canada.[2] It is an arithmetic, fixed-weight index of the spot or transaction prices in U.S. dollars of 23 commodities sold in world markets. The weight of each commodity in the index is based on the average value of its production in Canada between 1982 and 1990.

An alternative measure, which many analysts follow closely because it is available daily, is the Bridge/CRB index of commodity futures prices. Produced by the Commodity Research Bureau in the United States, this index weights its components equally and uses average U.S. dollar prices for contracts with maturities of up to six months. There are 17 commodities in the CRB index. Of the nine items in its foodstuffs subindex, five are not part of the BCPI: cocoa, coffee, soybeans, orange juice, and sugar. Of the eight raw industrial commodities, cotton and platinum are not included in the BCPI. The CRB index excludes the forest products (lumber, pulp, and newsprint) that account for almost 30 per cent of the BCPI, as well as various other components of the BCPI (barley, canola, cod, lobster, salmon, aluminum, zinc, nickel, potash, sulphur, and coal). The weight for energy commodities (crude oil, heating oil, and natural gas) is only about 18 per cent in the CRB index, compared with almost 35 per cent in the BCPI.

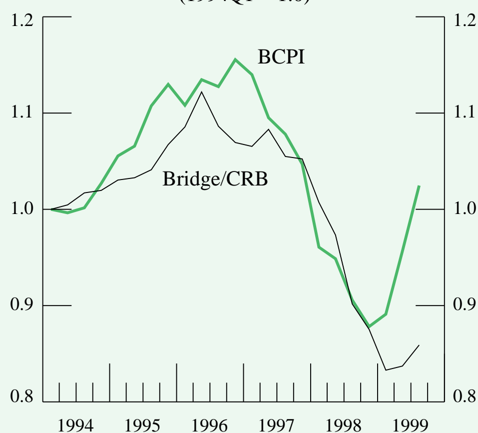
Because the BCPI is a price index of commodities produced in Canada and is constructed using Canadian weights, it is better suited to the analysis of Canadian economic developments. Consistent with this conclusion, research has shown that there is no stable statistical link between the Canada/U.S. exchange rate and the CRB index.

Index Components

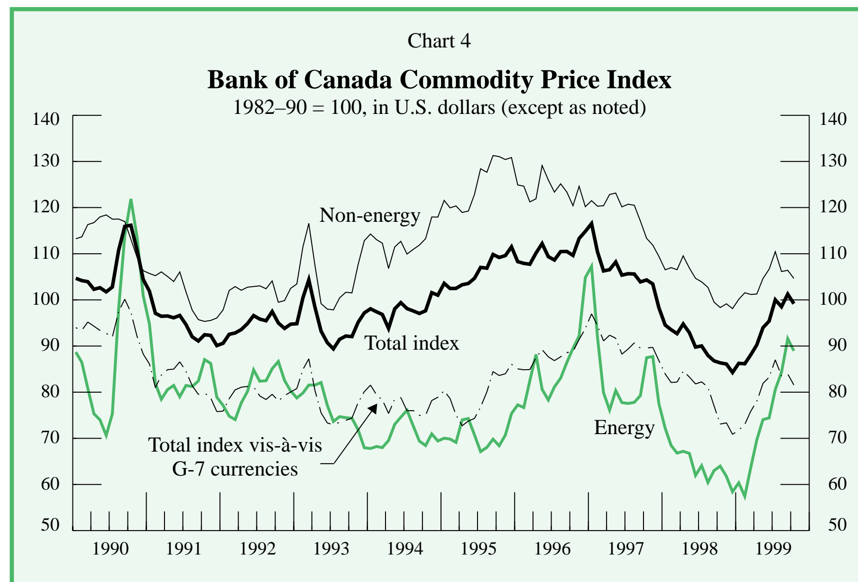
Major commodity categories	Weight (%)	
	BCPI	Bridge/CRB
Energy	34.8	17.7
Industrial materials	46.3	29.4
Precious metals	3.4	17.7
Base metals	11.0	5.9
Forest products	29.6	0.0
Other	2.3	5.9
Food	18.8	53.0
Grains and oilseeds	8.8	17.7
Livestock	9.3	11.8
Fish	0.7	0.0
Others	0.0	23.6

BCPI and Bridge/CRB Indexes

(1994Q1 = 1.0)



1. The BCPI is updated on Fridays, in the *Weekly Financial Statistics*, and is available on the Bank of Canada's Web site (http://www.bank-banque-canada.ca).
2. See Novin and Stuber (1999) for details on recent developments in global commodity markets.



Factors at work on inflation

Aggregate demand

Growth in real GDP strengthened in the first three quarters of 1999 . . .

Canada's economy expanded robustly in the first three quarters of 1999, continuing to take up slack. Monetary conditions remained accommodative, U.S. aggregate demand was exceptionally strong, and the Asian economy and world commodity markets began to turn around. As a result, Canada's real GDP (based on national accounts data) rose at an annual rate of 3.8 per cent in the first half of 1999, compared with 2.8 per cent between the fourth quarter of 1997 and the fourth quarter of 1998. Growth in the third quarter of 1999 is expected to be even more robust than in the first half, as indicated by strong quarterly automobile sales as well as by healthy retail sales and production in July and August.

. . . as household expenditures rose strongly.

Household expenditures rose much more strongly in the first six months of 1999 than in the second half of 1998. As a result, the personal savings rate declined further, reaching a very low level by mid-1999. (The overall national savings rate has, however, shown a rising trend since 1992, as discussed in Technical Box 2.)

A number of labour market factors helped raise consumer confidence (Chart 5), which contributed to the considerable boost in sales of housing and durable goods in the first half of 1999 and into the third quarter. Marked employment gains over the past year were particularly evident in full-time, non-self-employed

Technical Box 2

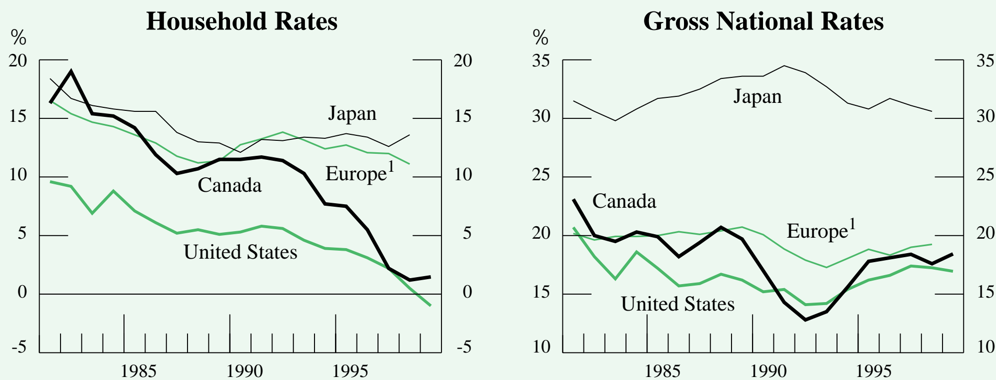
Canadian Savings Rates in an International Context

National savings rates (which include savings by households, businesses, and governments) in both Canada and the United States have increased noticeably since 1992, mainly because of improvements in government fiscal positions.[1] This has occurred even though household savings rates have continued to decline.[2] After a substantial reduction in the early 1990s, Canada's national savings rate has now recovered to a level similar to that of the major European nations and is back above that of the United States.

The decreases in household savings rates have tended to coincide with increases in the net worth of households, in part because of capital gains. This latter development may have reduced the perceived need of households to save from disposable income, since their stock of wealth was already rising. Among the G-7 countries, the most notable increases in net worth during the 1990s have occurred in Canada, the United States, and France.

The recent declines in household savings rates in industrialized countries during the 1990s have also, in general, coincided with improvements in fiscal balances. This suggests that sustained improvements in government financial balances can lead households to expect lower future tax obligations and therefore decrease the component of their savings intended for future tax payments. Empirical evidence for Canada suggests that 50 to 60 per cent of a persistent improvement in the government sector's fiscal situation would be matched by lower household savings.[3]

Savings Rates in G-7 Countries



Source: OECD (1999)

1. Simple average of Germany, France, Italy, and the United Kingdom

Note: Estimates for Canada and the United States for 1999 are based on the first two quarters.
Data for gross national savings rates in Europe and Japan in 1998 are staff estimates based on currently available information.

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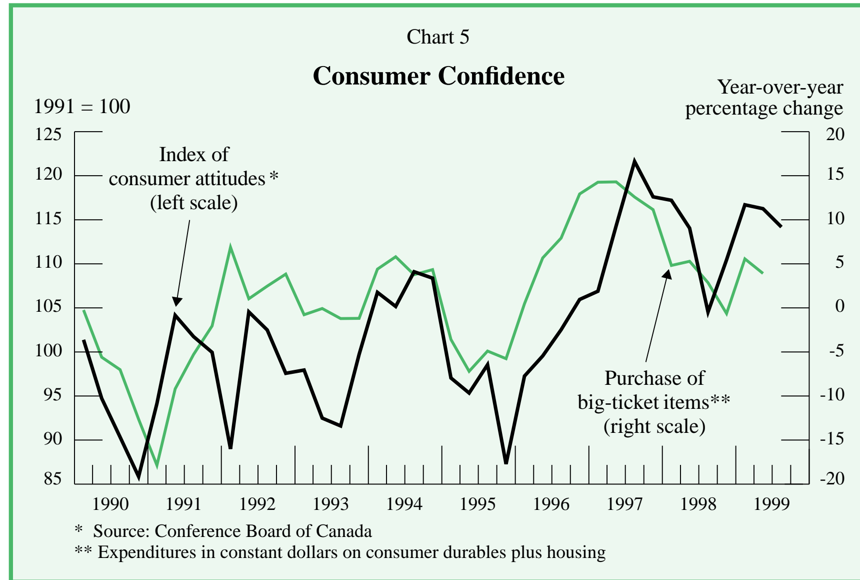
1. In this discussion, savings rates are measured on a national accounts basis.
2. Household savings rates across countries should be compared with caution because of differences in inflation, taxation, national accounts definitions, and economic conditions.
3. See Bérubé and Côté (forthcoming Bank of Canada working paper).

positions (Chart 6).[2] Better job prospects brought workers back into the labour force, and participation rates rose for both sexes at all age levels. Even so, since mid-1998 the unemployment rate has decreased by 1.2 percentage points.



2. Total employment growth was weak from February to August (after rapid growth in the previous months). In interpreting economic developments, we have tended to de-emphasize the short-term fluctuations in this measure because, in the last couple of years, its quarterly profile within a given year has not reflected the quarterly profile of GDP growth, as had been the case historically. Thus, in Chart 6, employment growth is shown on a year-over-year basis.

Business investment also rose rapidly . . .

Business investment in capital goods increased very strongly in the first half of 1999, as business confidence recovered in light of favourable international developments. In addition, the intense pace of price-cutting for computers that began in mid-1998 and the need to upgrade systems to ensure year-2000 compliance contributed to a surge in purchases of computers and other office equipment.

. . . and inventory investment started to recover.

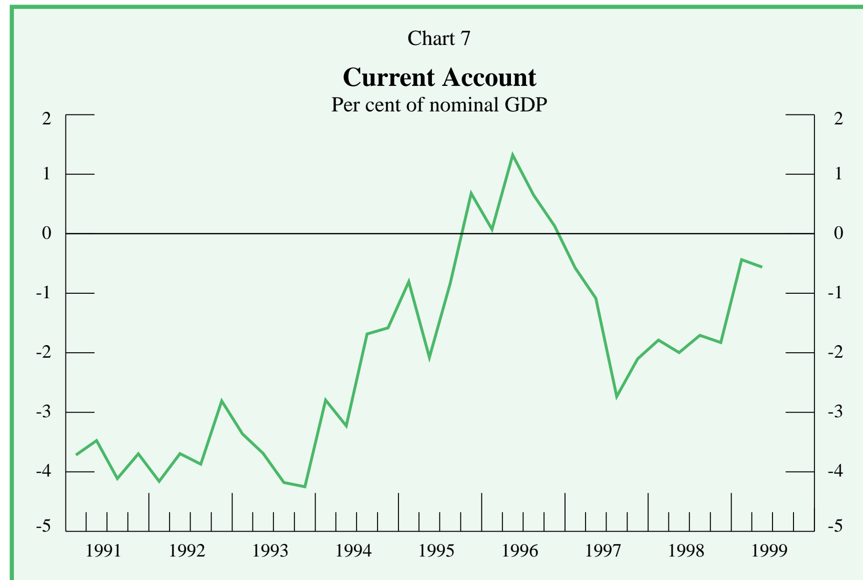
Inventory investment began to recover in the first half of the year. Firms tried to restore stocks to normal levels following the unanticipated strength in exports of manufactured goods to the United States in late 1998.

The rapid expansion of domestic demand led to a pickup in import growth, and exports remained strong.

With more rapid growth in domestic demand, particularly for import-intensive items such as machinery and equipment, import volumes rose much more strongly in the first half of 1999 than in the second half of 1998.

Canadian export growth, while continuing at a strong pace, was not quite as vigorous as that recorded in the second half of 1998. In that earlier period, exports had been driven by a marked expansion in U.S. activity, partly the result of efforts to restore stocks of motor vehicles to more normal levels following labour disruptions. Overall, however, the favourable competitive position of Canadian industry continued to be an important factor supporting export growth. Indeed, data for July and August show a sharp acceleration in exports, consistent with the strength of U.S. demand.

Because export growth was outstripped by import growth, the merchandise trade surplus, in volume terms, decreased markedly in the first half of 1999. The terms of trade improved substantially, however, mainly because of the recovery in commodity prices. Thus, the current account deficit (in dollar terms) narrowed considerably to around 1/2 per cent of GDP (Chart 7).



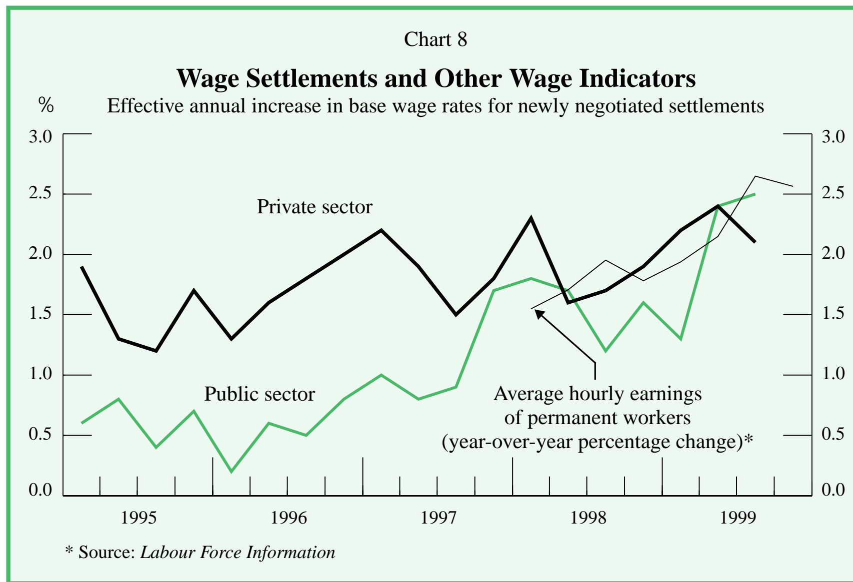
Cost control

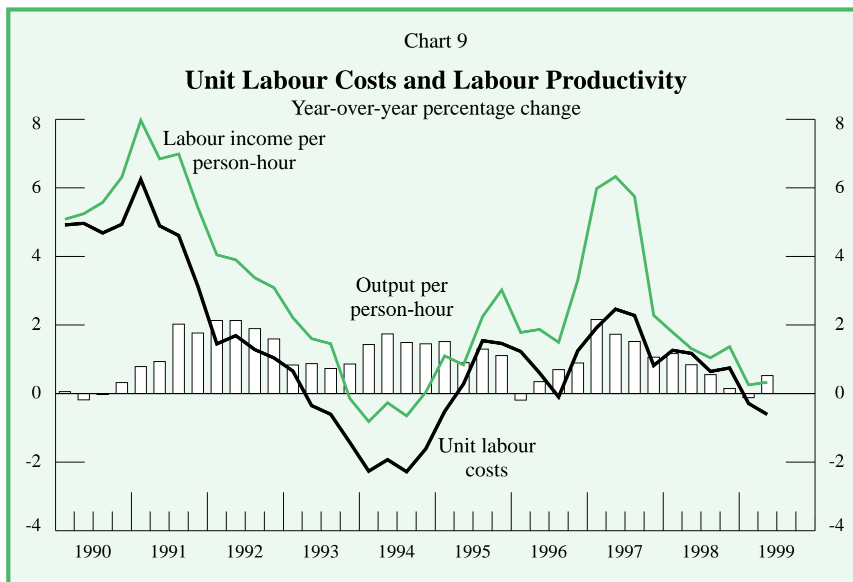
Underlying wage increases were somewhat higher in the first half of 1999 . . .

Wages, the largest component in the total cost of producing goods and services, have tended to rise at a somewhat higher rate in 1999. Over the first eight months of this year, annual wage settlements in the unionized private sector averaged 2.2 per cent, compared with 1.8 per cent in the second half of 1998 (Chart 8). Public sector wage settlements averaged 1.9 per cent. The average rate of wage increases in the unionized sector was affected by substantial settlements in skilled occupations where demand is strong, such as nursing and computer technology. Statistics Canada's *Labour Force Information* reports that the year-over-year increase in the average hourly wage (excluding overtime) for permanent workers was 2.1 per cent in the second quarter of 1999 and 2.6 per cent in the third quarter, compared with 1.8 per cent in the fourth quarter of 1998. Thus, the underlying wage increase in the total economy was in the 2 to 2.5 per cent range.

. . . but overall unit labour costs declined.

This pickup in wage growth is occurring, however, at the same time as a resumption in the growth of labour productivity. Indeed, with only a modest increase in labour income per person-hour, partly because of a compositional shift towards lower-paid workers, the productivity pickup led to unit labour costs edging down on a year-over-year basis (Chart 9). Over time, labour income (adjusted for underlying inflation) would be expected to rise at a rate related to the trend in labour productivity growth.





Estimated pressures on capacity

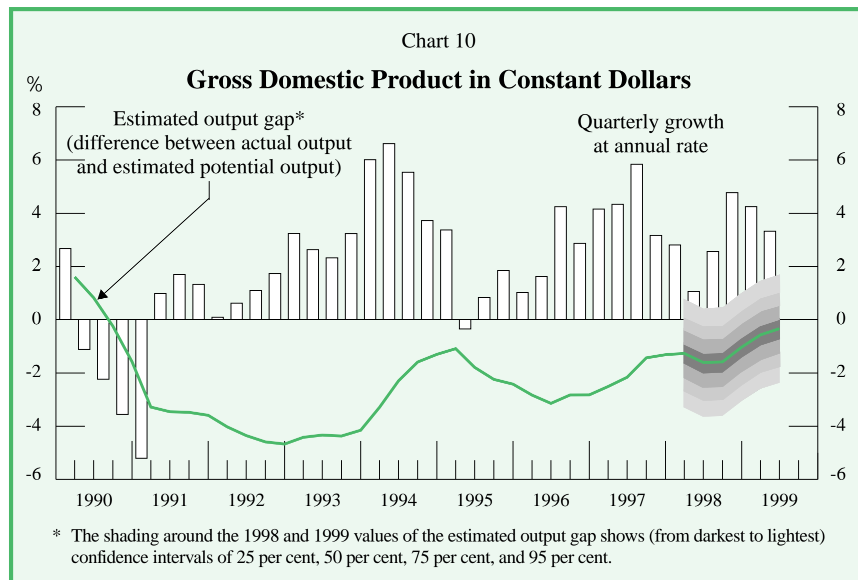
Although the estimated amount of excess supply diminished further . . .

Output grew faster in the first half of 1999 than the estimated rate of expansion in the economy's capacity to produce. As a result, the Bank's traditional estimate of the output gap—the amount of excess supply in the economy as a percentage of capacity output—narrowed from about 1.0 per cent at the end of 1998 to

about 0.25 per cent at mid-1999 (Chart 10).[3] However, as we have emphasized before, estimates of the output gap must always be viewed cautiously. Historical data for real GDP are frequently revised. There is also a high degree of uncertainty about the effects on potential output of such factors as low inflation, large investments in technology and new machinery and equipment, and various policy measures that have made product and labour markets more flexible.

As outlined in the last *Report,*[4] when the economy is thought to be operating near capacity, and given the uncertainty about measures of potential output and the output gap, close attention must be paid to a wide set of indicators of pressures on capacity and on inflation, including movements of core inflation relative to expectations. The indicators that have been discussed in this section do not point to any significant increase in pressures over the past six months.

. . . other indicators do not point to any significant increase in capacity pressures.



* The shading around the 1998 and 1999 values of the estimated output gap shows (from darkest to lightest) confidence intervals of 25 per cent, 50 per cent, 75 per cent, and 95 per cent.

3. At the time of the May *Report*, the output gap for the end of 1998 had been estimated at about 1.25 per cent. Historical estimates of the output gap were revised after a review of the path of potential output. This review included taking account of major historical revisions to the national accounts estimates of real GDP (especially for 1995–97) that were released in June.
4. See Technical Box 4 in the May 1999 *Report*.

3. Achieving the Inflation-Control Targets

Although the Bank of Canada did not change the Bank Rate, money market interest rates moved up . . .

The Bank of Canada has held the Bank Rate at 4.75 per cent since May, following three reductions over the preceding six months (Chart 11). There has, nevertheless, been a move upward in money market rates, reflecting actual and expected increases in U.S. short-term interest rates as well as market sentiment that Canada would follow suit.

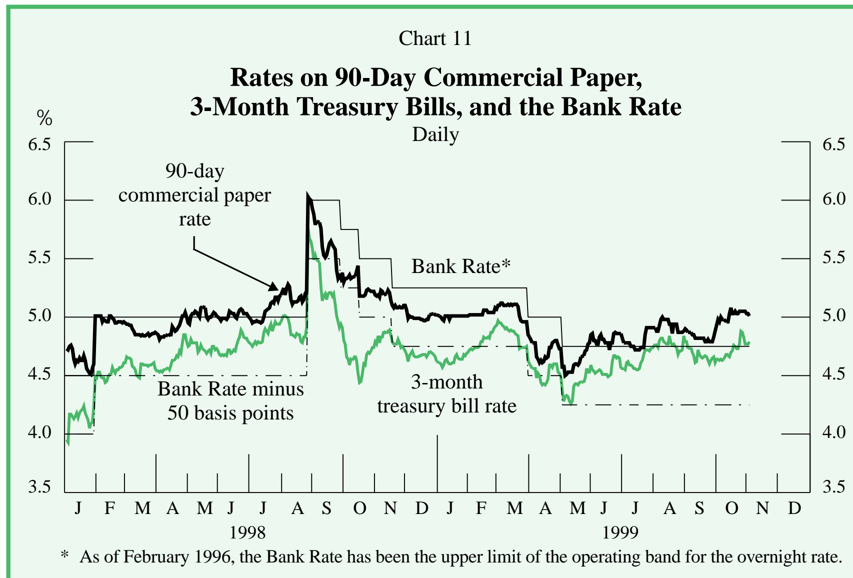


Chart 11

Rates on 90-Day Commercial Paper, 3-Month Treasury Bills, and the Bank Rate

Daily

* As of February 1996, the Bank Rate has been the upper limit of the operating band for the overnight rate.

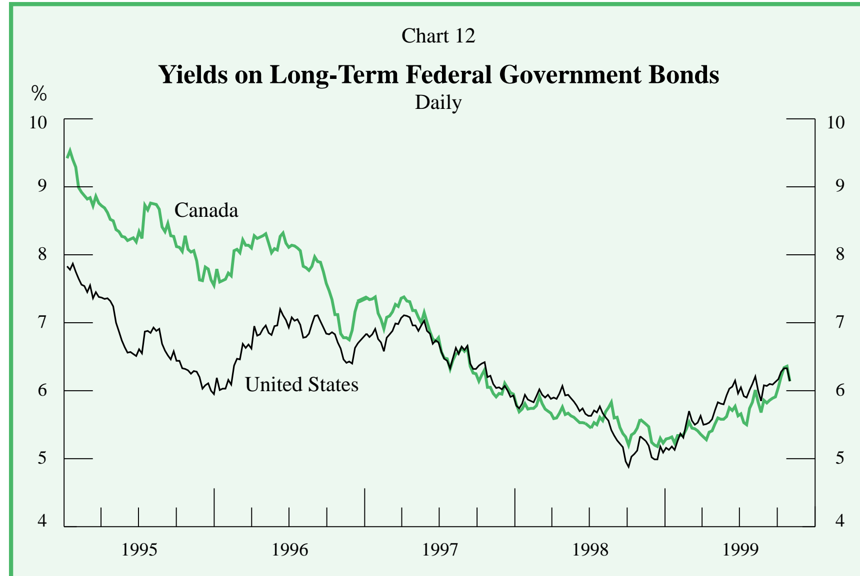
. . . as U.S. short-term interest rates rose.

The U.S. Federal Reserve announced quarter-point increases in its target rate for federal funds on 30 June and on 24 August, raising the rate to 5.25 per cent. These actions were taken to reduce the risk of rising inflation because demand had grown at a surprisingly rapid pace and the markets for many goods and services were already very tight. In addition, the financial strains that had prompted lower interest rates in 1998 had eased. At its 5 October meeting, the Federal Open Market Committee left the target funds rate unchanged, but indicated that it was alert for evidence of inflation pressures and that more tightening might become necessary. On this news, U.S. market rates rose further.

With U.S. longer-term rates up . . .

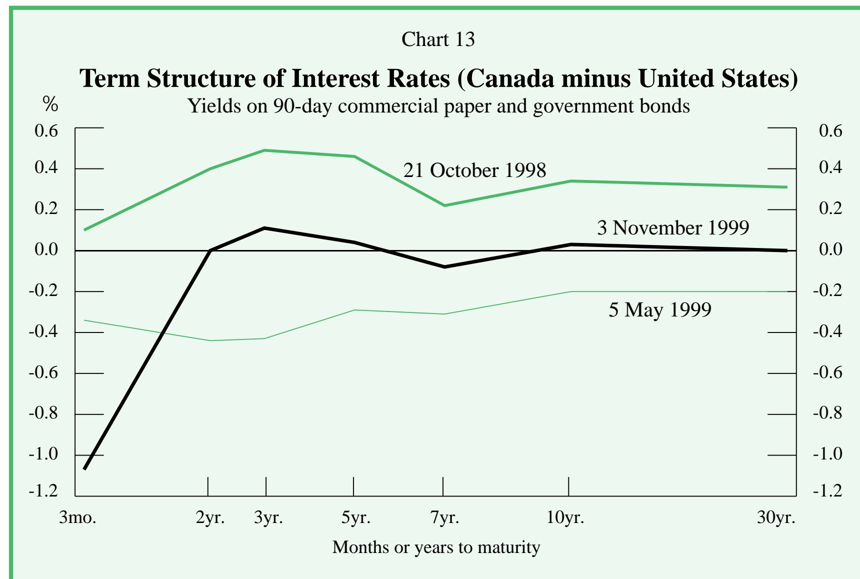
Given the strength of spending in the United States, an increase in U.S. short-term rates had been anticipated in bond markets, where yields had been rising since the start of the year (Chart 12). Medium- and longer-term interest rates continued to rise during the summer and early autumn, with yields on long-term U.S. government bonds rising above 6 per cent.

Yields in Europe have also risen, reflecting the view that economic growth there is strengthening.



. . . Canadian bond yields and mortgage rates have also increased.

Bond yields have increased more in Canada than in the United States, and negative spreads have largely disappeared (Chart 13). This increase in bond rates has also affected the mortgage market. Between May and October, the cost of 1- and 5-year mortgages at major lending institutions in Canada increased by about 100 basis points. Demand for mortgage loans, however, has remained strong.



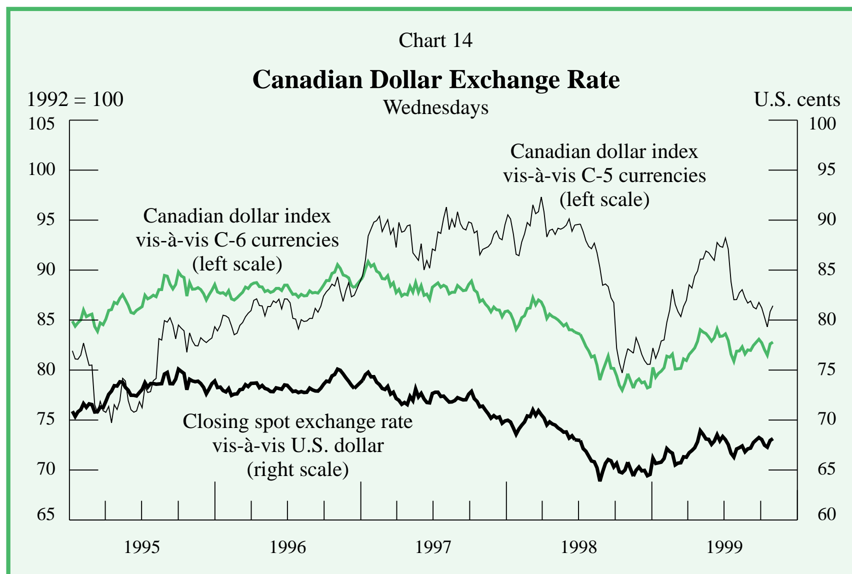
For most of the period since the last *Report*, the Canada/U.S. exchange rate has tended to fluctuate in a range of 66 to 68 U.S. cents (Chart 14). Wider negative short-term interest rate spreads that followed the increases in U.S. short-term interest rates have worked against the Canadian dollar. At the same time, however, it has been supported by strengthening commodity markets and the improving current account of the balance of payments, as well as by the strong fundamentals of the Canadian economy. Over the same period, the U.S. dollar has tended to weaken. For example, because of unexpectedly large increases in output in Japan, the yen jumped sharply. The net effect of these currency movements on the Bank's C-6 trade-weighted index for the Canadian dollar was a decline of about 2 per cent between May and October.

The effect on the exchange rate of the rise in U.S. short-term interest rates was countered by a strengthening trend in the economy and higher commodity prices.

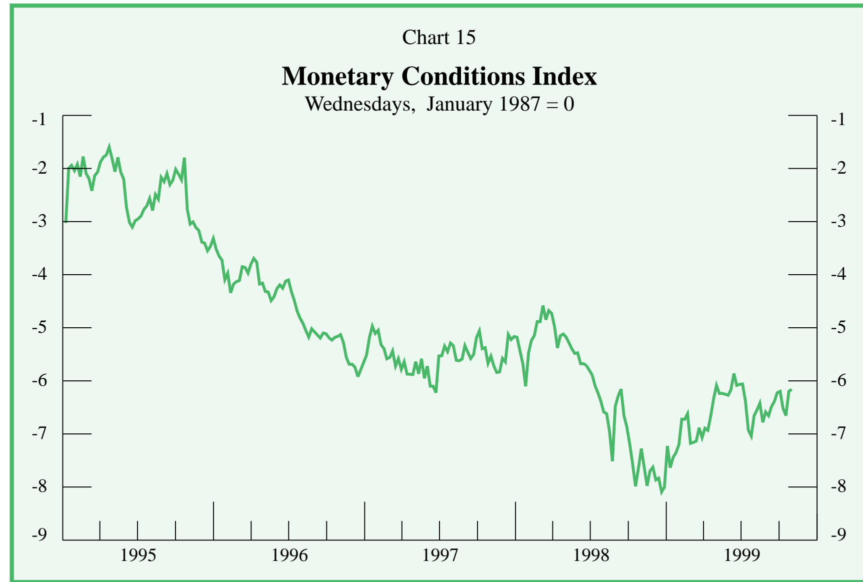
Chart 14

Canadian Dollar Exchange Rate

Wednesdays



With the increase in short-term interest rates and the fluctuations in the Canadian dollar, the Bank's monetary conditions index (MCI) has varied between -7.0 and -6.0 over the past six months (Chart 15).



Preparations for the year-2000 date change

The Bank of Canada and Canadian financial institutions have prepared thoroughly for the year-2000 date change. Systems for banking, securities, and payments have been tested extensively for compliance.

The Bank of Canada, like other central banks, has announced contingency arrangements for the period leading up to the transition to the new year and immediately thereafter. These measures, combined with the preparations of financial institutions, will provide Canadian households, financial institutions, and businesses with a further measure of confidence that extraordinary demands for currency or liquidity will be met, and should effectively counter unusual financial pressures.[5]

Participants in the financial markets have been taking precautions to avoid technical problems, and these have been absorbed without undue strain in markets. For example, many large borrowers have switched to longer-term financing, putting some upward pressure on corporate-government yield differentials and swap spreads. In short-term money markets and derivatives markets, actions to avoid exposures during the first business days of the new year were reflected in a small increase in 3-month interbank rates at the end of September. These movements in financial market prices have not, however, been large enough to have any significant effect on economic activity. And the contingency

5. The Governor's speech to the Regina Chamber of Commerce on 23 September outlined these preparations. The Bank of Canada's Web site (http://www.bank-banque-canada.ca) presents a wide range of information on year-2000 arrangements, including the press release on contingency arrangements for the provision of liquidity (2 September).

arrangements mentioned above should prevent significant movement in interest rates in response to year-end pressures.

4. The Outlook for Inflation

Overall, our analysis suggests that the most likely outcome over the next 18 months is for little change in core inflation. However, there are a number of risks to this projection.

International background

Recovery is underway in many of the emerging-market economies.

Although growth in emerging-market economies will remain relatively weak this year, it is now expected to be stronger than originally anticipated and should pick up significantly in 2000 (Technical Box 3).

The economic outlook for the major industrial countries is, on balance, encouraging and shows less divergence among countries than at the time of the last *Report*.

And although the strength of the recovery in Japan remains uncertain . . .

In Japan, real GDP rose considerably in the first half of 1999, partly as a result of fiscal stimulus. Nevertheless, not all indicators suggest that a sustainable recovery in private sector demand has taken hold. As a result, it will be important that economic policies continue to promote expansion.

. . . the euro area is expected to pick up.

Economic growth in the major European countries remained below the growth in potential output in the first half of 1999. The euro area should see some improvement over the next year and a half, chiefly reflecting the past easing in monetary conditions.

U.S. output growth should remain strong over the near term . . .

In the United States, the overall pace of economic expansion is expected to remain robust through year-end. However, a slowdown in economic growth to a more sustainable pace is projected starting early next year.

. . . with a risk that U.S. core inflation will increase.

U.S. core inflation (which excludes food and energy prices) has been close to 2 per cent in recent months. But, on balance, economic developments point to the risk of core inflation beginning to rise by early next year. These factors include continuing excess demand in labour markets, as well as supply bottlenecks in some areas, the recent depreciation of the U.S. dollar, and rising commodity prices.

Non-energy commodity prices should recover further in 2000.

While easing in some world prices of commodities important for Canada is anticipated over the next few months, prices are expected to recover further during 2000 as demand continues to rise and restrictions on supply persist. By the middle of next year, crude oil prices are likely to fall back from their current high levels as major oil producers increase production.

Technical Box 3

The Recovery in Emerging Markets

Prospects for emerging-market economies seem more favourable than earlier this year.

In Asia, the countries most affected by the 1997 crisis have recovered more quickly than expected as a result of their increased competitiveness and the subsequent easing of domestic fiscal and monetary policies. While growth in most Asian countries this year will exceed earlier expectations, two challenges remain. First, there is a risk that the improved economic performance to date might reduce the willingness to undertake the structural reforms needed to put these economies on a solid footing. Second, it may be difficult to sustain the required revival of private spending on consumption and investment when structural changes are creating considerable uncertainty.

In Latin America, the outlook for Mexico and Brazil is more encouraging than it was a year ago. Adjustments in Brazilian fiscal policy have exceeded the targets under the IMF program so far in 1999, and the rollover of interbank and trade credit was successful. These developments and the containment of inflationary pressures following the floating of the exchange rate have allowed the authorities to lower short-term interest rates. Elsewhere in Latin America, the growth outlook is less encouraging. Argentina and Colombia, in particular, are suffering especially severe recessions.

In Russia, the devaluation of the rouble has encouraged significant import substitution and a large increase in domestic production. While this, together with the increase in world oil prices, is good news for Russia, capital flight is making it difficult for the country to honour its external payment commitments.

Although the risk premiums on emerging-market borrowing, represented by the spreads on Brady bonds,[1] have fallen from the peak following the August 1998 devaluation of the rouble, they remain relatively high, reflecting the still-fragile state of many of these economies. However, creditworthy borrowers such as Argentina, Brazil, and Mexico have retained access to international capital markets.

Spreads Between Emerging-Market Brady Bonds and U.S. Treasury Bonds of Similar Maturities

Source: JP Morgan Emerging Market Bond Index

1. Brady bonds are mainly collateralized debt from emerging-market countries and are denominated in U.S. dollars.

Aggregate demand and supply in Canada

Our outlook for the Canadian economy is based on the U.S. forecast described above that involves a recovery in the second half of 1999 from the temporary slowdown in the second quarter, but then a significant easing to more sustainable growth rates in 2000.

Canadian export growth should ease in 2000 . . .

Canadian exports are likely to show stronger growth in the second half of 1999, given the anticipated increase in the growth of the U.S. economy and the recovery in commodity prices. Next year, however, export growth should ease in line with the expected slowdown of the U.S. economy, although this should be tempered by the improved economic outlook for Europe and Japan and by Canada's strong competitiveness.

. . . but import substitution will support domestic production.

Import growth should also slow during the next 18 months—the result of Canada's solid competitive position and an easing in the strong demand for import-intensive goods.

Business investment is likely to continue to expand next year . . .

Business investment is expected to decline slightly in the second half of 1999, following the substantial investments made this year to deal with year-2000 concerns. But investment should expand at a modest rate next year as the recovery in commodity prices improves cash flows.

. . . while sustained growth of household spending will depend on further employment gains.

The outlook for the growth of household spending calls for some slowing towards the end of this year, partly as a result of efforts to rebuild savings. Increased growth in household expenditures in 2000 will depend on continued gains in employment.[6]

While both businesses and households might temporarily boost purchases towards the end of 1999 to minimize the effects of any supply disruptions associated with the year-2000 date change, the effects are likely to be small.

Output growth of close to 3.75 per cent is expected for 1999 . . .

The latest consensus among private sector forecasters for the growth of real GDP (on an annual average basis) has been revised up significantly to 3.6 per cent this year and 2.9 per cent in 2000. At the time of the last *Report*, the consensus forecast was 2.8 per cent and 2.3 per cent, respectively. These trends are broadly consistent with the Bank's view, as expressed in the summer issue of our quarterly *Review,* that real GDP growth in 1999 would be near the top of the 2.75 to 3.75 per cent range that we projected in the May *Report.*

6. The recent demutualization of Canadian life insurance companies may help to sustain the growth of household spending in the second half of 1999 and early 2000.

. . . followed by growth in a range of 2.75 to 3.75 per cent in 2000.

For next year, with a slowdown in the U.S. economy and continued momentum of Canadian domestic demand, the Bank sees output growth in Canada in 2000 in a range of 2.75 to 3.75 per cent.

This projection, together with estimates of potential output using traditional techniques, would suggest that the Canadian economy would be operating at, or slightly above, full capacity in 2000. With the projected level of activity close to the economy's estimated output capacity and because capacity estimates are uncertain, the Bank has begun to put emphasis on the range of indicators discussed in Technical Box 4 in this *Report* to ensure a full and careful assessment of the degree of pressure on capacity and on inflation.

Measures of inflation expectations

Longer-term inflation expectations are near the target midpoint.

In the regular survey reported in the Conference Board's autumn *Index of Business Confidence*, 85 per cent of respondents expected inflation to be 2 per cent or less over the near term (Chart 16). The percentage of respondents anticipating inflation of 1 per cent or less has fallen sharply since last spring. As well, some 95 per cent of the firms surveyed this autumn by the Bank of Canada's regional representatives expect inflation to remain in the 1 to 3 per cent range. The average private sector forecast for CPI inflation is 1.6 per cent in 1999 and 2.0 per cent in 2000. Typical forecasts of longer-term inflation are between 1.7 and 1.9 per cent, depending on the horizon (Chart 17).

Over the past half-year, the yield differential between conventional and Real Return bonds has widened to above 2 per cent, after drifting down for several years. This widening reflected the rise in long-term nominal interest rates, since yields on Real Return Bonds have been stable. An adjustment of expectations towards the centre of the inflation-control target range might be partly responsible for this change. In any event, the differential between nominal and real rates remains generally in line with the Bank's objective of low inflation. (See Technical Box 3 in the November 1997 *Report*.)

Technical Box 4

Monitoring Inflation Pressures

Since the economy is expected to be operating at, or slightly above, its estimated capacity level next year, the Bank will be watching measures of inflation pressures very carefully. Which measures might give the most timely information on potential inflation pressures? There is no definitive list of indicators for gauging potential inflation pressures, but first and foremost would be a general increase in actual prices or costs that differed from the increase expected by the Bank. The Bank would also look at the core and statistical trend measures of inflation, because they appear to contain information about the underlying tendency in the total CPI.[1] Indicators of core inflation one or two quarters ahead include the Bank of Canada commodity price index (in U.S. dollars), prices for resale housing in major urban areas, and the ratio of unfilled orders to shipments in manufacturing.[2] Research at the Bank indicates that the change in unit labour costs could also be a useful predictor of future movements in inflation, especially during periods of low, stable inflation.

Inflation expectations have an important influence on actual price and cost behaviour. Surveys help to assess the outlook of firms and workers over both short and long horizons. Data on wage settlements and surveys of expected compensation increases have both proven useful in gauging future changes in unit labour costs. In addition, the Bank's regional representatives collect qualitative information each quarter from about 100 firms or associations, about their own (or their members') pricing and costs, as well as about their expectations for the CPI.

Certain asset prices contain indirect evidence about expectations. Early in the inflationary surges of the 1970s and 1980s, real estate prices increased rapidly, and bond prices fell (long-term interest rates rose). Similarly, the yield differential between conventional and Real Return bonds should be sensitive to any major change in inflation expectations.[3]

Monetary aggregates can also be useful predictors, with different definitions conveying different kinds of information. Research at the Bank suggests that gaps between the level of narrow money (M1) and the estimate of the underlying demand for it help to predict inflation over horizons of two years and longer.[4] At the same time, changes in the growth rate of M1 can pick up short-run variations in inflation, perhaps reflecting the accumulation of transactions balances just prior to spending. In the middle of the 1990s, however, financial innovations caused a large increase in M1 that had no inflationary implications, and in the wake of this shift interpreting movements in M1 is still difficult. The growth rates of broad definitions of money such as M2++ have had a stable correlation with current and near-future inflation.

There is no set formula for combining these factors. But past experience suggests that certain combinations raise a warning flag. For example, previous outbreaks of inflation have been preceded by an unexpected rise in the CPI accompanied by substantial increases in real estate prices, rising long-term interest rates, and strong growth of monetary aggregates.

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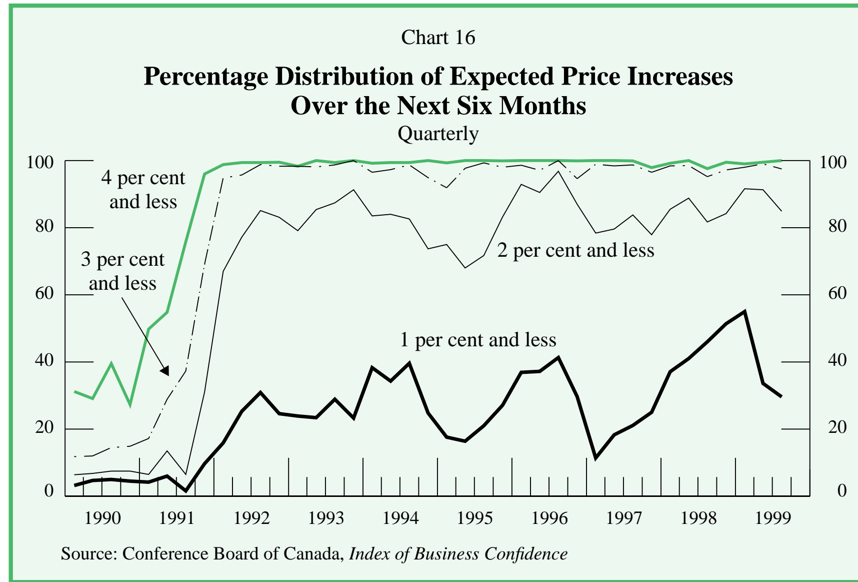
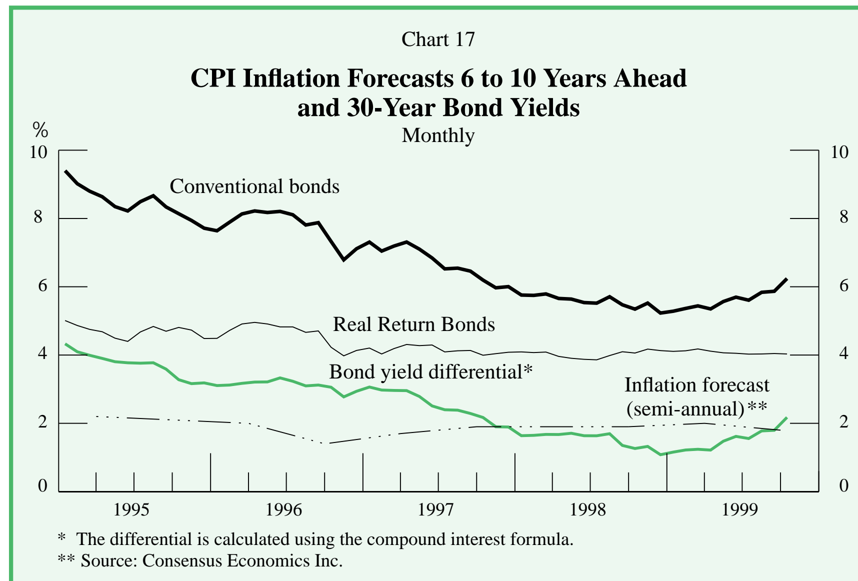
1. See the discussion of statistical measures of trend inflation in Technical Box 1 of the November 1997 *Report*.
2. See Dion (1999).
3. In contrast, the stock market has been a poor guide to inflation, since equity prices are very volatile and have sometimes weakened sharply on evidence of inflation.
4. Armour et al. (1996) provide empirical evidence, while Laidler (1999) outlines a theoretical explanation.





Other factors affecting inflation

A number of other factors are expected to have little net effect on core inflation.

The depreciation of the Canadian dollar against the U.S. dollar that took place from the autumn of 1997 to the autumn of 1998 is expected to continue to hold inflation up until late 2000, although at a rapidly diminishing rate. At the same time, the high rates of price reduction for long-distance telephone service and computer products that prevailed in 1998 and early 1999 are expected to slow further, moderating their influence on measured price

inflation. On balance, these developments should have little net further effect on core inflation.

There is also a risk that the recent sharp rise in crude oil prices, as well as the substantial increases in the prices of various construction materials, may put upward pressure on items in the core CPI for which these materials constitute a significant part of total costs. The magnitude of these price-level effects would depend on the extent to which the cost changes persist, as well as on market conditions.

Wage increases will likely continue to edge up over the next year and a half, a view consistent with that of the firms recently surveyed by the Bank's regional representatives. However, further productivity gains are expected to keep increases in overall unit labour costs in check.

Other indicators of inflation pressures

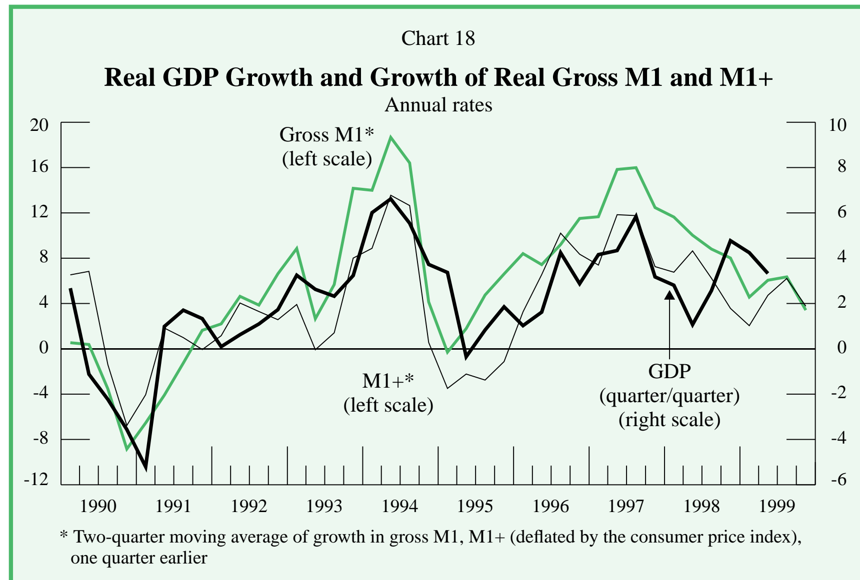
The price of existing housing, based on the Royal LePage index, has picked up somewhat this year with the record pace of sales. New home prices are up only slightly above their year-ago level. However, in a historical context, these indicators do not suggest a significant increase in underlying inflation pressures. The ratio of unfilled orders to shipments in the manufacturing sector (a measure for near-term core inflation) has eased after a marked pickup last year that was partly related to developments in the aircraft industry.

Monetary indicators

Narrow and broad monetary aggregates are growing at a pace consistent with solid growth and low inflation.

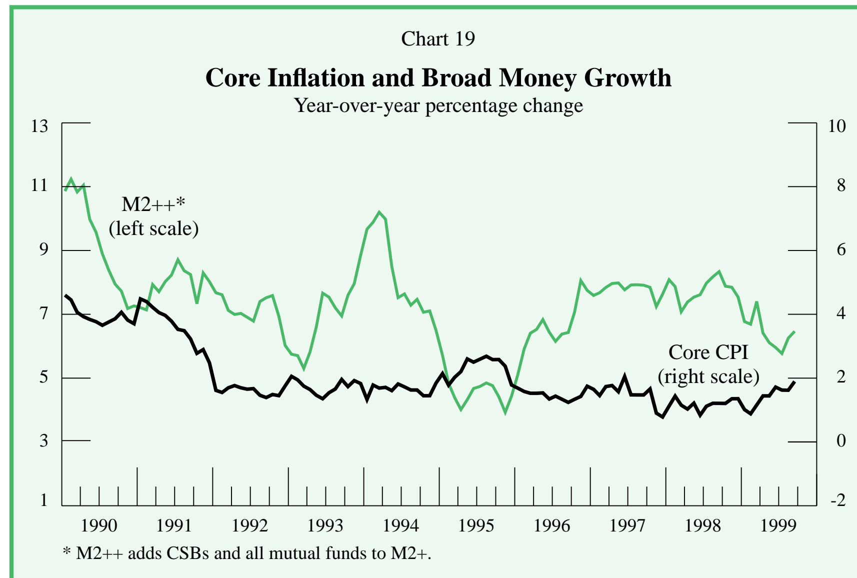
The narrow monetary aggregates have continued to grow at a pace consistent with solid economic growth and low inflation. The downward trend in M1 growth since late 1997 partly reflects the declining influence of the special factors that contributed to high M1 growth in the past few years, particularly movements of funds from non-personal notice accounts (not included in M1) into current accounts (included in M1).[7] As a result, this year the growth rates of the broader measures of transactions money, M1+ and M1++, have been converging towards that of M1 (Chart 18). When substitution effects are taken into account, the recent growth rate of transactions money is consistent with a growth rate of economic activity of about 3 1/2 per cent in the second half of 1999.

7. These special factors were described by Atta-Mensah and Nott (1999).



The Bank's M1-based inflation model suggests that inflation should remain within the inflation-control target range over the next couple of years.[8]

The year-over-year growth rate of M2++, which is the Bank's preferred measure of broad money, has stabilized in the last few months (Chart 19). The decline in the growth rate from about 8 per cent in 1998 to 6 1/2 per cent currently reflects a deceleration in households' net contributions to bond and equity mutual funds. The recent growth rate of M2++ continues to point to inflation close to the midpoint of the target range over the next year.



8. See Engert and Hendry (1998) for a description of this model.

Inflation projection

Longer-term factors continue to point to trend inflation close to the midpoint of the Bank's target range.

With longer-term inflation expectations at 2 per cent and the economy expected to be operating at, or slightly above, estimates of capacity output, fundamental factors will be working to keep core inflation near the 2 per cent midpoint of the target range. Nonetheless, over the next year and a half, three developments are expected to contribute to moderating core inflation. First, the pass-through to inflation of the earlier depreciation of the Canadian dollar has peaked, so this source of temporary upward pressure on core inflation should diminish. Second, increases in unit labour costs are expected to be modest. Third, intense competition in the retail sector will likely continue.

Total CPI inflation should move back down to the core rate since crude oil prices are no longer under upward pressure.

On the other hand, two factors are expected to limit any potential decrease in core inflation during this period: the earlier substantial declines in long-distance telephone rates and computer prices should continue to slow, and the recent marked recovery in commodity prices could be a temporary source of upward pressure on non-labour costs. But with crude oil prices no longer under upward pressure, total CPI inflation will tend to move down to the core inflation rate.

In summary, the Bank expects core inflation to remain close to 2.0 per cent through next year. This outlook, which is broadly in line with earlier expectations, is based on two important assumptions: that the U.S. economy achieves a more sustainable, non-inflationary growth rate, and that the path the Canadian economy follows is close to capacity output.

5. Conclusions

The outlook for the global economy has continued to improve since the May *Report*. The U.S. economy has remained buoyant, signs of a recovery in Japan have emerged, the euro area appears to have a solid underpinning, and a number of emerging-market economies have outperformed expectations. With this international setting and with strengthening domestic demand, the Canadian economy is likely to register growth of close to 3.75 per cent on an annual average basis in 1999.

For 2000, the Bank now projects economic growth in a range of 2.75 to 3.75 per cent, with core inflation remaining close to the midpoint of its 1 to 3 per cent target range.

However, as we have pointed out in this *Report*, there are some important risks to this projection. These risks relate to the possibility of a stronger momentum of demand from domestic as well as international sources and of potential inflation pressures in the United States.

In order to preserve the low trend of inflation incorporated in this projection, the Bank must be ready to adjust monetary conditions in a timely manner. The challenge will be to assess carefully, using all available coincident and leading indicators, when adjustments are needed. Any resurgence of inflation in Canada would undermine our prospects for a durable expansion.

This is a report of the Governing Council of the Bank of Canada: Gordon Thiessen, Malcolm Knight, Charles Freedman, Paul Jenkins, Tim Noël, and Sheryl Kennedy.

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