BANK OF CANADA

Monetary Policy Report

– November 1995 –

This year is the sixtieth anniversary of the Bank of Canada, which commenced operations on 11 March 1935. To mark the occasion, our cover features Canada's first silver dollar, struck in 1935 and featuring the evocative design of sculptor Emanuel Hahn.

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

893-49-90-514
CN ISSN 1201-8783

Printed in Canada on recycled paper

Contents

1. Introduction

This is the second in a series of semi-annual reports designed to increase the transparency and understanding of Canadian monetary policy.

This is the second in a series of semi-annual reports on Canadian monetary policy. The next Report will appear in May 1996.

As discussed in the first *Monetary Policy Report* published last May, the best contribution that monetary policy can make to good overall economic performance is to preserve confidence in the value of money through price stability. To this end, for the past 4 1/2 years the Bank of Canada has successfully pursued inflation-control targets along a path towards price stability.

The inflation-control targets establish the specific objective to which monetary policy will be directed over the medium term. Thus, the basic task of monetary policy can be summarized as encouraging a trend rate of monetary expansion that is consistent with the achievement of these targets and, thereafter, with price stability. Because of the long lags between the Bank's policy actions and their ultimate effect on inflation, monetary policy decisions must be forward-looking. Moreover, in deciding on the appropriate actions required to meet its targets, the Bank faces many uncertainties as to how the future will unfold. Accordingly, monetary policy decisions must be made on the basis of projections of an uncertain future and must also respond to unexpected events.

Since the last *Report*, the Canadian economy has been weaker than expected, and the degree of slack in labour and product markets has been correspondingly greater. Thus, the economic forces that work to reduce inflation have intensified over the past six months. These circumstances prompted the Bank to take action to ease monetary conditions in the late spring and early summer. However, monetary conditions subsequently tightened as the Bank was cautious in its actions to offset a strengthening Canadian dollar given the narrowing of short-term interest rate differentials with the United States at a time of political uncertainty.

2. Inflation-Control Targets

In December 1993, the government and the Bank of Canada set out a target path for inflation extending from the end of 1995 to the end of 1998. The objective is to keep inflation inside a band of 1 to 3 per cent, with a midpoint of 2 per cent, during that period. By 1998, a decision will be reached on a future target range that is consistent with price stability.

The inflation–control band for year-end 1995 is 1% to 3%.

The inflation-control targets are specified in terms of the consumer price index (CPI). However, 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. As a result, the Bank focusses on the CPI

This text includes information received to 20 October 1995.

excluding food, energy and the effect of indirect taxes. This measure is referred to as the *core* CPI. Over longer periods of time, the measures of inflation based on the total CPI and the core CPI tend to follow similar paths. Therefore, achieving the target path for core CPI inflation should lead to similar movements for total CPI inflation over time. 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 band.

3. Recent Developments in Inflation

Inflation is the outcome of excessive monetary expansion.

Inflation is ultimately the product of excessive monetary expansion, but the transmission mechanism is long and complex. It involves a series of linkages, leading from the Bank's responses to economic and financial developments to the rate of inflation. What is crucial to the analysis of trend inflation is the extent to which monetary expansion accommodates or encourages a pace of aggregate demand that puts persistent pressure on aggregate supply.

Given the lags in the transmission mechanism, monetary policy must be conducted with an eye to the factors that are likely to influence inflation a year or two into the future. Current rates of inflation cannot simply be projected forward. In particular, the fundamental supply/demand factors that drive inflation must be distinguished from transitory factors. It could prove counterproductive for policy to react to movements in inflation that are temporary and therefore inherently self-correcting. The price disturbances that are of concern to the Bank are those that feed into expectations about future inflation and in turn lead to a higher, or lower, trend inflation rate than the policy objective. Identifying these disturbances requires an examination of various measures of inflation and a coherent explanation for their behaviour over time.

Inflation and the target band

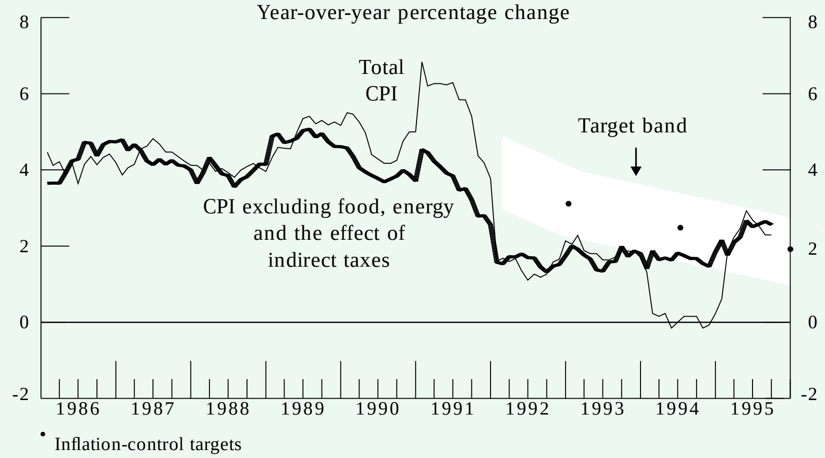
Core inflation has been consistently within the target band since early 1993 ...

Inflation, as measured by the 12-month rate of increase in the core CPI, has moved into the upper half of the target band over the last six months, as anticipated in the previous *Report*. As of September 1995, core inflation was running at a 12-month rate of 2.6 per cent, compared with a high of 2.7 per cent reached in May (Chart 1). The 12-month rate of increase in the total CPI was 2.3 per cent, down from a peak of 2.9 per cent in May.

Chart 1

Consumer Price Index

Year-over-year percentage change



... but has recently moved into the upper half of the range.

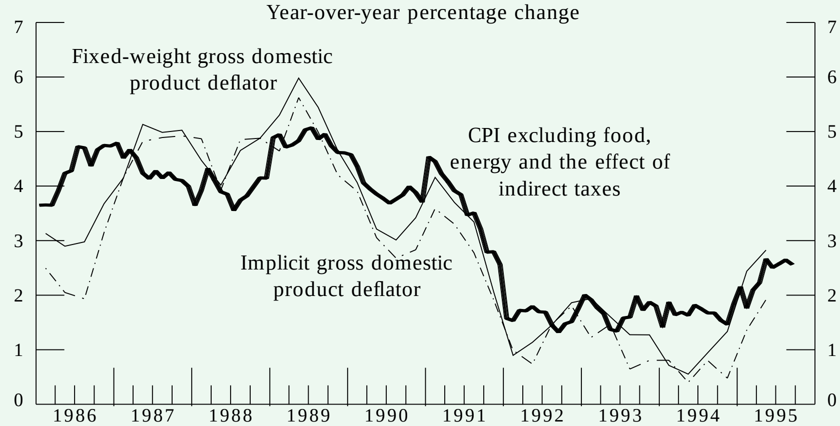
Other broad measures of price inflation have also picked up in 1995. The year-over-year rate of increase of the implicit gross domestic product (GDP) deflator averaged 1.6 per cent in the first half of 1995, compared with an average rate of 0.6 per cent during 1994. The fixed-weight GDP deflator, which adjusts for the effects of changes in the composition of spending, rose 2.6 per cent on average during the first half of 1995 on a year-over-year basis, up from around 1 1/2 per cent at the end of 1994 (Chart 2).

Other broad measures of inflation also rose in the first half of 1995.

Chart 2

Broad Inflation Measures

Year-over-year percentage change



Factors at work on inflation

Excess capacity in product markets and slack in labour markets have continued to place downward pressure on inflation over the past six months. At the same time, movements in certain key relative prices have again substantially affected measures of aggregate consumer and producer prices. Specifically, the upward pressure on the overall price level arising from both commodity-price increases and past depreciation of the Canadian dollar has been particularly evident over the past six months.

Aggregate demand and supply

Economic activity in Canada slowed much more than expected during the first half of 1995 ...

After expanding rapidly during 1994, economic activity in Canada levelled off during the first half of 1995. Although a slowdown had been anticipated, the Bank was surprised (along with most others) by how abruptly the situation changed. Three factors appear to have accounted for the weakness. First, households cut back spending on big-ticket and discretionary items. Second, net exports declined after contributing very substantially to growth during 1994. Third, reductions in government spending began to have a noticeable impact on aggregate demand in the second quarter.

A number of factors contributed to reduced consumer spending on housing and automobiles. A key influence appears to have been the sharp rise in interest rates that took place during the winter. In addition, consumer attitudes were negatively affected by a flat employment picture, as moderate increases in employment in the manufacturing and service sectors were offset by declines in construction and in the public sector. As well, exports fell, mainly as a result of a slowdown in the U.S. economy. Although some slowing in U.S. activity had been anticipated in response to the rise in interest rates that had occurred over the previous year, the reaction there, too, was greater and more sudden than expected. Other factors contributing to the U.S. slowdown were the very sharp decline in demand in Mexico and weakness in Japan and Canada.

In the United States, and especially in Canada, the extent of the weakening in final domestic demand was unexpected. Consequently, there was substantial inventory accumulation in both economies during the first quarter, and activity during the second and third quarters was held back by the need to work off those excess stocks (see Technical Box 1). However, both economies are showing signs of renewed activity in the housing and automobile markets, suggesting that domestic demand is responding to the decline in interest rates that has taken place since last spring.

... leading to a widening of the gap between actual and potential output.

Lack of growth in aggregate demand in the first half of 1995 has led to an increase in excess capacity. It is especially difficult to measure potential output in these circumstances because growth in capacity can slow in response to increased uncertainty about future demand. However, the Bank estimates that the output gap widened to between 3 and 3 1/2 per cent at midyear, compared with between 2 and 2 1/2 per cent at the end of 1994 (Chart 3).[1] Accordingly, the downward pressure on trend inflation has clearly increased during the past six months.

---

1. See the discussion of the Bank's methodology for estimating potential output in the May 1995 *Monetary Policy Report* (Technical Box 1, page 8).

Technical Box 1

Inventory Fluctuations

While the amount of inventory investment is small relative to aggregate output, its contribution to variations in the production cycle has tended to be quite pronounced. Indeed, many of the downturns in economic activity in Canada in the postwar period could be characterized as "inventory recessions," in the accounting sense that the decline in GDP was mainly due to a reduction in the rate of stockbuilding.

Changes in inventory management techniques and the increasing use of new information technologies have contributed to a trend reduction in the aggregate stock-to-sales ratio over the past two decades. These changes have also improved the ability of firms to respond to varying economic circumstances and, hence, to reduce undesired variations in inventories. Even so, the rate of inventory investment over the first half of 1995 suggests that fluctuations continue to play an important role in the short-term evolution of aggregate output.

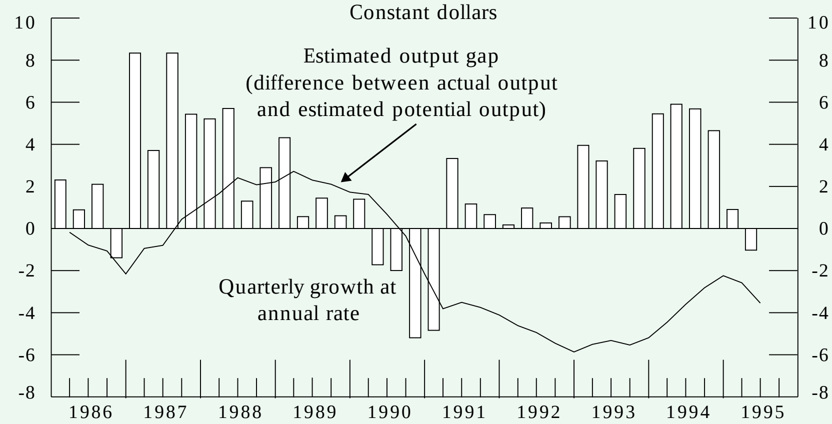
The extent of the weakening in both domestic and external demand for Canadian goods in the first half of 1995 was widely unexpected, contributing to a substantial increase in the rate of inventory accumulation. While inventory investment contributed more than 3 percentage points to the growth of GDP in the first quarter, this was largely offset by a contraction of about 2 per cent in other GDP components, leaving total growth in GDP at 0.9 per cent. Similarly, the contraction of GDP in the second quarter would have been around 2 per cent were it not for some additional contribution from inventories, particularly in the farm sector. Aggregate production in the second and third quarters appears to have been held back by the need to reduce inventories, particularly in the manufacturing and retail sectors. Automobiles are a prime example.

Not all of the accumulation of inventories earlier this year was undesired. Inventory behaviour also reflected the efforts of some firms to hedge against anticipated events, such as changes in input prices or labour disruptions. For example, it seems that substantial increases in the prices of industrial materials led many manufacturers to advance their purchases of these commodities in the first half of 1995 in anticipation of further price increases. This was especially true for newsprint, pulp and chemicals. Such increases in inventories of raw materials would eventually be run down as prices stabilized. As another example, impending strikes in Canada's transportation sector led many businesses to engage in a precautionary buildup of inventories in the first quarter of 1995. Most of these labour disruptions turned out to be of relatively short duration, and production was scaled back soon afterwards to work off the increase in inventories.

Chart 3

Gross Domestic Product

Constant dollars



Exchange rate and commodity prices

Exchange rate effects on consumer prices are still important but should begin to diminish.

Given the weight of imported goods in the average consumer basket in Canada, exchange rate movements typically feed through to the CPI by a factor of about one-fifth. Much of this adjustment usually takes place during the first year following a change in the exchange rate, but the total effect can take two years or more to emerge. Accordingly, past depreciation of the Canadian dollar continued to have a substantial impact on consumer prices over the last six months. At the recent peak in inflation in May, this effect is estimated to have accounted for over 1 percentage point of the 2.7 per cent year-over-year measured increase in core CPI.

The clearest example of the exchange rate effect can once again be seen in motor vehicles, where the average price is up approximately 6 per cent from a year ago.[2] The comparable figure for the United States is about 2 per cent. In the cases of many other imported, or import-competing, consumer goods, the usual exchange rate effects appear to have been largely offset by increased competition and improved productivity in both the retail and the manufacturing sectors.[3]

World commodity prices (quoted in U.S. dollars) have continued to rise over the past six months (Chart 4). In Canada, these price increases have been felt in various ways by both producers and users of raw materials.

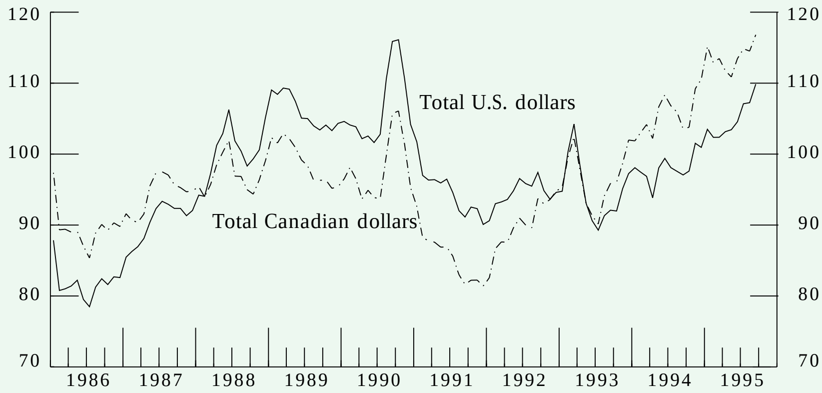
---

2. It is worth noting that the sticker prices of many vehicles have risen much further than indicated by this figure because of additional safety features and other improvements in quality. Such improvements are taken into account by Statistics Canada when the CPI inflation data are constructed.
3. See the related discussion in the May 1995 *Monetary Policy Report* (Technical Box 2, page 10).

Chart 4

Bank of Canada Commodity Price Index

1982-90 = 100



For Canadian producers, price increases have been most pronounced for newsprint, pulp and grains. Newsprint and pulp prices have surged as world demand continues to grow in the face of limited prospects for additional supply. Grain prices have jumped as a result of adverse growing conditions in the United States and in other foreign grain-producing regions. Prices for base metals have also resumed their advance, after experiencing a downward correction in the spring. The rise in average prices received by Canadian commodity producers continued to be reflected in the aggregate industrial product price index (IPPI) (Chart 5), as well as in a further marked rise in aggregate export prices. Nevertheless, the 7 per cent rise in the IPPI over the past year represents a substantial deceleration from the rates observed in early 1995.

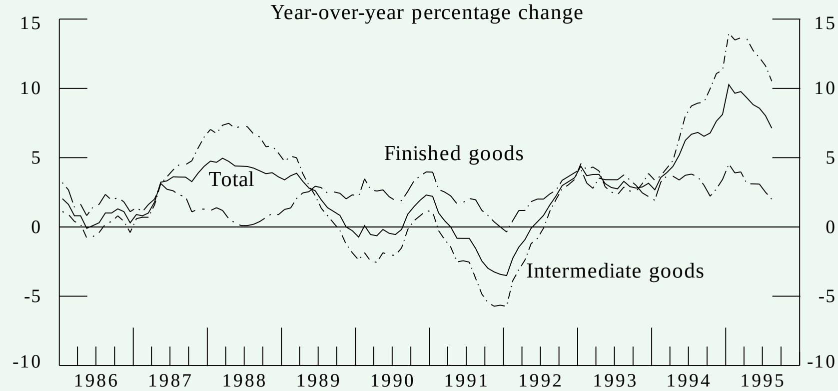
Commodity-price increases, evident earlier at the producer price level, are now showing up in selected consumer prices.

The impact of commodity-price increases, evident for some time in producer prices, is now beginning to show up clearly in selected consumer prices. Indeed, it is estimated that higher commodity prices have contributed about half a percentage point to the recent year-over-year measures of CPI inflation. This effect should prove temporary, both because commodity prices should stabilize in the face of the current moderation in the pace of world economic expansion and because excess supply here in Canada should place downward pressure on trend inflation. The clearest examples of commodity-price effects on the CPI can be seen in the substantial price increases for both paper supplies and reading materials. However, the rises in the costs of metals, chemicals and packaging materials imply that these effects are being felt more widely.

Chart 5

Industrial Product Price Index

Year-over-year percentage change



Cost control and other factors

Increased prices of commodities and of imported inputs have significantly raised costs for domestic producers. Combined with weakening domestic demand in the first half of the year, this has increased the incentive for producers to control other costs and to try to raise productivity.

Wage increases in the first half of 1995 picked up in the private sector but remained moderate overall.

Wages, the largest component of total costs, continued to rise at a very moderate pace during the first half of 1995, with wage settlements averaging about 1.5 per cent in the private sector and just above zero in the public sector. This represents something of an acceleration over last year for the private sector, but wage increases have followed substantial productivity gains in many areas. More generally, aggregate employment levels and the unemployment rate have remained almost unchanged over the last six months. With this persistent slack in the labour market, average wage growth is likely to remain modest.

With production cutbacks, productivity declined ...

Gains in productivity (output per person-hour) were particularly impressive during 1994, as firms restructured their operations and as the economic expansion gained strength (Parker 1995). With wages advancing only modestly, profitability improved significantly in many sectors (see Technical Box 2). However, with the sudden slowdown in activity early in 1995, both labour productivity and profits levelled off over the first half of the year. This is not an uncommon cyclical phenomenon, as firms tend to adjust labour inputs gradually to a sudden easing of demand, especially when it is widely believed to be temporary.

... and unit labour costs rose over this period.

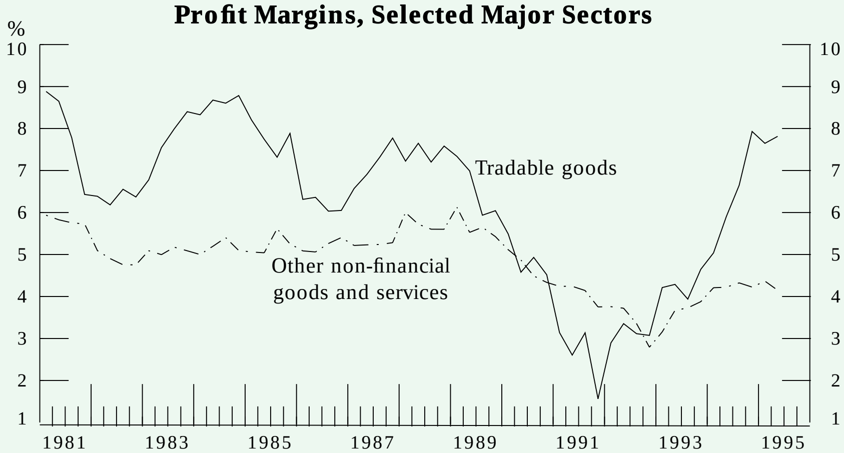
This combination of some wage growth and weaker aggregate productivity has caused unit labour costs to rise recently (Chart 6). However, it is expected that a resumption of the expansion later in the year will raise productivity further and that the effects of ongoing restructuring efforts will continue to emerge over time, thus helping to keep overall cost increases low.

Technical Box 2

Recent Developments in Profitability

Corporate profits fluctuate with the business cycle largely as a result of the gradual response of production costs to changes in sales. In the early 1990s, profits were at very low levels for a number of reasons, including a cumulative deterioration in the international competitiveness of Canadian businesses, the sluggishness of aggregate demand, low world commodity prices and increased global competition (see Lau and Stuber 1992). The persistence of these factors motivated firms to engage in major restructuring efforts, which have been particularly intense in the tradable-goods sector.[1] Profit margins have subsequently returned to historical average levels, partly aided by the recovery in export demand and in world commodity prices.[2]

Profit Margins, Selected Major Sectors



The process of adjustment to changing economic circumstances seems less advanced in industries that have either been traditionally less exposed to foreign competition or are in the process of deregulation. Indeed, profitability levels remain substantially below normal in many of these industries, and as a result, major restructuring initiatives continue to be implemented. For instance, the Canadian retail industry, in addition to facing sluggish consumer demand, is being subjected to increasing competition from large U.S. retailers. Furthermore, the telecommunications industry is in the process of adjusting both to deregulation and to the ongoing rapid pace of technological innovations.

---

1. The tradable-goods sector includes metals, wood, paper, petroleum, natural gas, other fuels, electricity, chemicals, machinery, transportation equipment, electrical products and other manufactured goods.
2. The term *profit margin* is used here to describe operating profits as a percentage of operating revenues.

Chart 6

Unit Labour Costs and Labour Productivity

Year-over-year percentage change

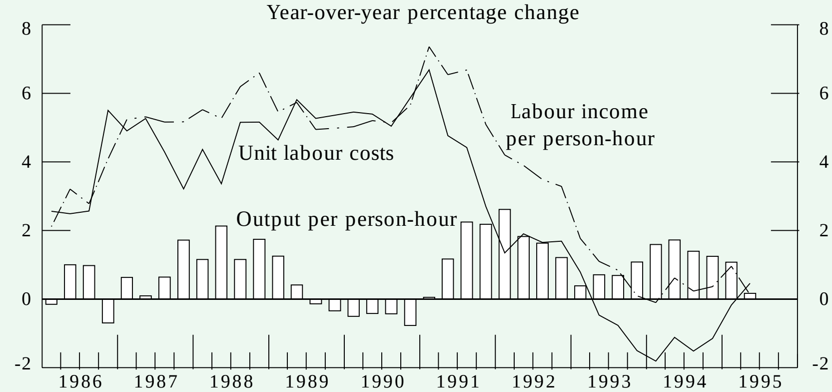


Chart 7

Real Wages and Labour Productivity

1981 = 100, seasonally adjusted

* Labour income per person-hour divided by the GDP deflator

The producer real wage gap closed further in the first half of 1995.

The gap between real wages and productivity continued to close in the first half of 1995 (Chart 7). This was mainly a result of the further increases in world commodity prices discussed above, which reduced producer wages in real terms for firms in affected sectors. This development should lead to some increase in employment growth in the coming quarters.

Aggregate price rises have also been restrained by lower housing prices, as higher interest rates early in the year caused many households to delay home purchases. Early signs of revival in the housing market suggest that this factor may also be temporary.

4. Achieving the Inflation-Control Targets

As explained in the previous *Report*, the Bank uses the concept of monetary conditions to guide its policy actions in response to changing economic circumstances. Monetary conditions capture the influence of both short-term interest rates and the trade-weighted exchange rate on the economy, and the monetary conditions index (MCI) constructed by the Bank (Charts 8-10) provides a shorthand measure of the overall degree of tightness or ease of such conditions.

The Bank constantly reassesses the level of monetary conditions necessary to achieve its inflation-control targets. If, on balance, the analysis indicates a lessening of inflationary pressures relative to what had been expected (for example, because of lower-than-expected aggregate demand), the desired path for monetary conditions is revised downwards. However, if inflation pressures have increased relative to earlier expectations, then desired monetary conditions are adjusted upwards. It is important to bear in mind that occasions arise when the Bank's actions cannot be devoted exclusively to achieving the desired monetary conditions in the short term because of the need to cope temporarily with actual or potential disorderly markets.

After a marked tightening in early 1995, monetary conditions remained largely unchanged until late May ...

Towards the end of 1994 and in early 1995, higher U.S. interest rates and increasing concerns about the high levels of public debt put downward pressure on the exchange rate and upward pressure on market interest rates. The Bank responded with successive upward adjustments to its overnight target range (Chart 11 and Technical Box 3), and monetary conditions tightened. Even though the Bank acted primarily to calm markets, a tightening of monetary conditions was also judged appropriate at the time because there was evidence of stronger-than-expected momentum in the economy. Subsequently, the positive reaction to the February 1995 federal budget provided a steadying influence in financial markets, and monetary conditions at the end of the first quarter were essentially unchanged from mid-January.

... but subsequently eased in response to weaker-than-expected growth ...

In the second quarter of 1995, the tone of Canadian financial markets improved, and the Canadian dollar strengthened. This reflected increasingly positive assessments of the fiscal situation for the provinces and for the federal government as well as heightened expectations of future declines in interest rates in the United States in response to the slowing of the U.S. economy. In early May, the improved market tone allowed the Bank to rebalance the mix of monetary conditions by offsetting the effect of the stronger exchange rate through a reduction of 25 basis points in its target range for the overnight interest rate. It became increasingly apparent throughout the rest of the second quarter that the Canadian economy had not been expanding as expected, thus warranting an easing of monetary conditions. The range for the overnight rate was lowered by 25 basis points on two occasions in early June, ratifying reductions in money market rates that had already taken place. The decline in interest rates, combined with a somewhat lower Canadian dollar, contributed to a significant easing of monetary conditions.

Through the July-August period, there was a positive shift in sentiment towards North American currencies. At the same time, the Canadian

... before tightening again as the exchange rate strengthened.

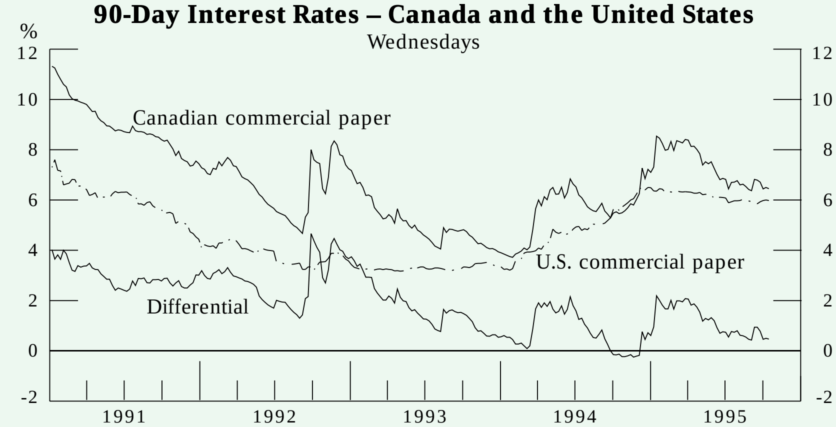
dollar was benefiting from a further improvement in our terms of trade. There was also a growing awareness that fiscal adjustment is proceeding and that Canada's inflation performance remains favourable. In response to the firming of the dollar, there was a decline in short-term interest rates, which the Bank undertook to ratify. This action by the Bank involved reducing its operating range for the overnight rate by 25 basis points on four occasions (on 6 and 10 July and on 9 and 28 August) to a range of 6 to 6 1/2 per cent. In taking these actions, the Bank proceeded cautiously because of the potential implications for the dollar of the narrowing Canada-U.S. short-term interest rate spreads at a time of impending political uncertainty. Indeed, the continuing wide long-term spreads suggested that financial markets remained sensitive to debt levels and to uncertainty regarding the Quebec referendum. While overall market developments during this period moved towards a further rebalancing of monetary conditions, the net outcome was a tightening in monetary conditions as the declines in interest rates did not completely offset the currency appreciation.

In September, following the setting of the referendum date, volatility increased in money and foreign exchange markets. The Bank remained

Chart 8

90-Day Interest Rates – Canada and the United States

Wednesdays



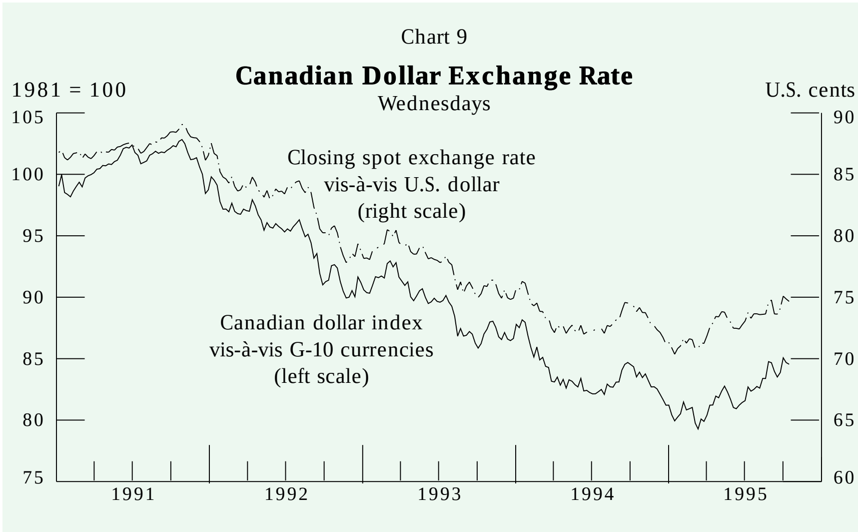


Chart 9
Canadian Dollar Exchange Rate
Wednesdays
1981 = 100
U.S. cents
Closing spot exchange rate
vis-à-vis U.S. dollar
(right scale)
Canadian dollar index
vis-à-vis G-10 currencies
(left scale)
105
100
95
90
85
80
75
90
85
80
75
70
65
60
1991
1992
1993
1994
1995

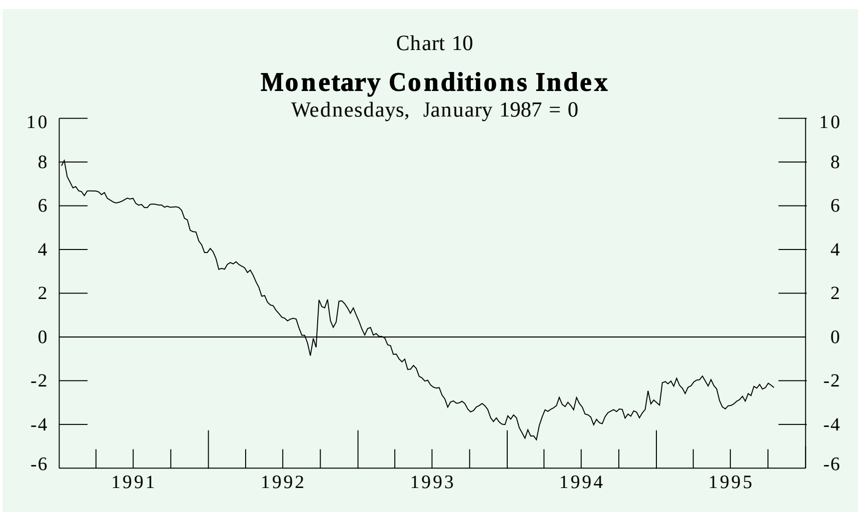


Chart 10
Monetary Conditions Index
Wednesdays, January 1987 = 0
10
8
6
4
2
0
-2
-4
-6
1991
1992
1993
1994
1995

Technical Box 3

Monetary Policy Operations: Increased Emphasis on the Overnight Interest Rate

Since mid-1994, the operational objective of the Bank of Canada's monetary policy actions has been to keep the overnight interest rate within a band of 50 basis points. Previously, the Bank influenced the overnight rate to achieve a desired level for the 3-month treasury bill rate. This change makes it easier for markets to interpret the Bank's operations, since it defines the Bank's immediate target in terms of the interest rate it can influence most directly.

The Bank changes its operating range for the overnight rate when it wishes to effect an increase or decrease in the level of monetary conditions, or to rebalance monetary conditions (e.g., lower interest rates as a result of an appreciation of the Canadian dollar). The Bank has also, on occasion, increased its operating range to stabilize financial markets. In all three cases, the Bank's move to change the range for the overnight interest rate may simply ratify movements that have already occurred in other money market rates.

The Bank can influence the overnight rate in two ways. The first is through its supply of settlement balances to direct clearers (the major financial institutions that maintain accounts at the Bank of Canada for clearing and settlement purposes). Since direct clearers are the marginal suppliers of credit in the overnight financing market, changes in the supply of settlement balances put downward or upward pressure on the overnight rate.

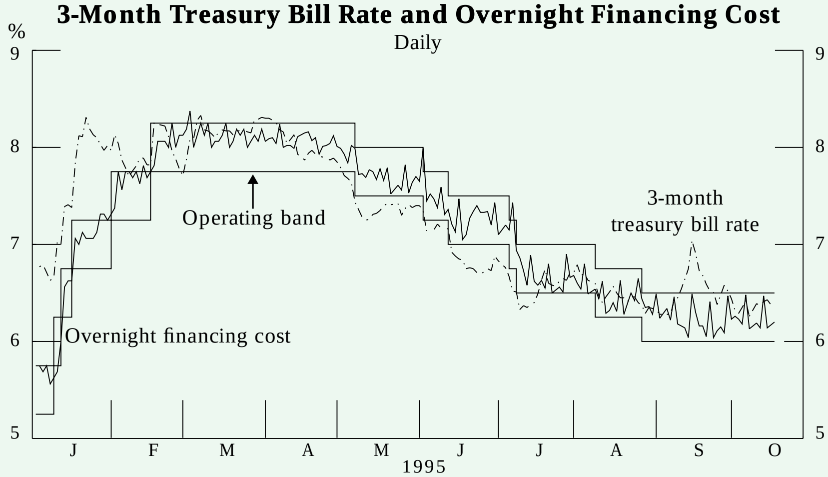
The second is through buyback operations to enforce the upper and lower bounds of the operating range. When overnight financing costs threaten to rise above the range, the Bank will offer Special Purchase and Resale Agreements (SPRAs) to jobbers (the investment dealers and banks with whom it conducts its money market operations) at a rate equal to the top end of the operating range. When interest rates threaten to fall below the floor of the range, the Bank will offer Sale and Repurchase Agreements (SRAs) to the major banks (in practice, the marginal lenders in the overnight market) at a rate equal to the lower limit of the operating range (Clinton and Fettig 1989). The Bank also uses buyback techniques to announce a change in its operating range. It does this by offering SPRAs or SRAs at the appropriate new level, whether or not the overnight rate is actually outside the new range.

The Bank of Canada may also sell or buy treasury bills outright as a signal that it wishes a moderation in the pace of movement in the interest rate on 3-month treasury bills. Until recently, the rate at which the Bank intervened was typically left unchanged between auctions as the Bank sought to influence the level of the 3-month rate directly. The Bank announced on 31 August 1995 that it will henceforth conduct its treasury bill sales or purchases at prevailing market rates. Finally, the Bank may on occasion engage in switches of treasury bills with the market (purchasing longer-term maturities and selling shorter-term maturities) to help relieve market pressures.

Chart 11

3-Month Treasury Bill Rate and Overnight Financing Cost

Daily



cautious and maintained its overnight rate unchanged at 6 to 6 1/2 per cent up to the 20 October cut-off date for information contained in this *Report*.

5. The Outlook for Inflation

In assessing the outlook for inflation, the Bank must consider various factors, including the external economic environment, the momentum of the Canadian economy and the implications of monetary conditions for the future course of aggregate demand.

Aggregate demand and supply

The single most important element in Canada's external environment is the U.S. economy, as was clearly demonstrated during the first half of 1995 when activity in that country slowed. That slowdown appears to have brought aggregate demand and supply in the U.S. economy to a position of rough balance, paving the way for a more sustained period of low-inflation growth. Consequently, the U.S. economy appears to have solid underlying momentum in the second half of the year, and some pickup in growth can be expected as inventory adjustment is completed.

The external economic environment remains positive.

Overseas, the expansion is expected to continue but at a slower pace than previously forecast. It now appears that growth in Europe in 1995 will be similar to that experienced in 1994. The situation in Japan is more uncertain, given financial system stresses and the strength of the yen earlier this year. Nonetheless, with recent declines in interest rates, a weaker yen and several other policy initiatives, it seems likely that output in Japan will be up this year, albeit only modestly.

With a favourable outlook for the U.S. economy and the prospect of moderate growth for the overseas economies, commodity prices are expected to remain firm. Despite Canada's diversified industrial base, commodities continue to contribute strongly to economic activity.

Overall, then, the positive contribution of external demand to the expansion of the Canadian economy is expected to resume in the second half of 1995.

Although employment uncertainty may hold back the growth of household spending ...

The domestic picture remains mixed, however. Renewed expansion in the export-oriented sector can be expected to generate further growth in employment and income. As unemployed individuals regain employment they usually provide a strong impetus to overall consumption, as was the case in late 1994. The decline in interest rates since last spring should also continue to stimulate demand. But at the same time, many households remain nervous about job prospects in an environment of continuing restructuring and restraint, which is affecting all sectors of the economy. Indeed, in the case of the public sector, restructuring and downsizing is expected to be a persistent characteristic of the economic outlook for the next couple of years, given the need to improve public finances. Moreover, the adjustment of inventories back to desired levels will continue to moderate production in the near term, although to a diminishing extent.

... the pace of expansion in Canada should pick up towards year-end.

Consideration of both external and domestic factors suggests that economic activity should show renewed growth towards year-end, with a modest pickup in the third quarter followed by a more robust fourth quarter. Recent private sector forecasts suggest that total demand (in volume terms) will expand by about 2 per cent in 1995. In light of the absence of growth during the first half of the year, these forecasts also imply some rebound in the second half.

The downward pressure on inflation coming from excess supply will continue.

However, the profile of activity for the third and fourth quarters will likely mean that by year-end the output gap will not be much different than it was in mid-1995. This indicates that the downward pressure on trend inflation coming from slack in product markets will remain a significant factor. Similarly, conditions in the labour market will continue to contain wage and cost pressures.

Exchange rate and commodity-price effects

Exchange rate effects on consumer prices appear to be at their peak ...

The implications that past exchange rate movements have for consumer prices remain a source of uncertainty. Although it is difficult to quantify these effects precisely, it is the Bank's judgment that some of the recent rises in the CPI represented previously postponed adjustments to past depreciations and that we are at about the peak in terms of the potential inflationary consequences of exchange rate pass-through. Although there is still some scope for further adjustment once the recovery regains its vigour, it seems likely that increased competition at the retail level as well as restructuring efforts have erased some of those exchange rate effects permanently. Combined with recent currency appreciation, this means that by early 1996 there should be significantly less impetus to measured inflation coming from this source.

... but increases in raw materials prices are now a factor.

In contrast, the rises in raw materials prices that were seen in 1994, and which have continued into this year, have only recently begun to find their way into consumer prices, particularly prices for metal and paper products. Innovations in the use of these inputs and ongoing attempts to increase productivity in general make it difficult to predict how these movements will ultimately affect consumer prices. Nevertheless, this phenomenon points to a risk that the rate of increase in the core CPI, although declining on balance, might remain in the upper half of the target band for the next several months. This would be especially likely if commodity prices were to rise further. However, the fact that the economy is operating with more slack than was the case six months ago has increased the likelihood of offsets through further cost reductions. Anecdotal evidence also suggests that the Canadian retail marketplace continues to be very resistant to price increases.

Measures of inflation expectations

Expectations of near-term inflation appear to have edged up with the rise in measured inflation.

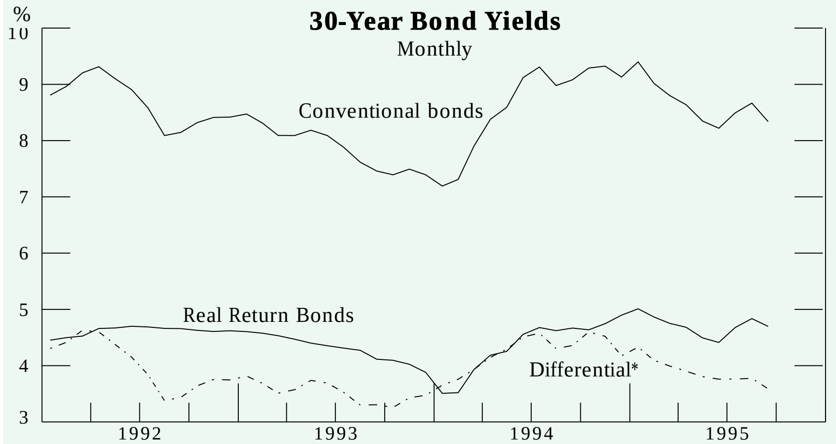
Expectations are also an important component in the outlook for inflation, partly because they are the means whereby relative price increases, coming from the exchange rate or commodity-price effects mentioned above, can be transformed into an increase in the trend of inflation. Short-term inflation expectations appear to have edged up in response to observed price increases, although they remain within the Bank's inflation-control target band. In its October *Quarterly Survey of Canadian Business Attitudes*, the Conference Board of Canada reported that 28 per cent of respondents expected inflation to be 3 per cent over the near term, compared with only 17 per cent in the first-quarter survey, while nearly 72 per cent of respondents still expected inflation to be 2 per cent or less. In its September *Quarterly Survey of Forecasters*, the Conference Board noted that CPI inflation was expected to average just under 2.5 per cent in both 1995 and 1996, up from about 2 per cent in the previous survey.

The difference between yields on government 30-year conventional and Real Return Bonds (Chart 12) can be used to calculate long-term inflation expectations. Since this measure also reflects premiums for inflation uncertainty and the relative liquidity of the two markets, it is difficult to know how much emphasis to give to its level. It is likely, however, that changes in this differential largely reflect changes in inflation expectations. On this basis, it would appear that long-term inflation expectations have been falling throughout 1995.

Chart 12

30-Year Bond Yields

Monthly



* The differential is calculated using the appropriate compound interest formula.

Monetary indicators

The monetary aggregates are also important indicators of near-term inflation and of the growth in real output.

But monetary indicators suggest that inflation will decline ...

The most useful monetary aggregates for forecasting inflation for the period immediately ahead are the broad aggregates associated with M2+ (e.g., M2+ adjusted for substitution into and out of non-money-market mutual funds and Canada Savings Bonds), whose trend growth rates often indicate where inflation is heading. Growth in these aggregates has been moderate (Chart 13), suggesting that the upward movement in measured inflation observed in the first part of 1995 will not be sustained. Specifically, M2+ and adjusted M2+ have been growing at a 3 to 5 per cent rate, which is consistent with a trend inflation rate of under 2 per cent.

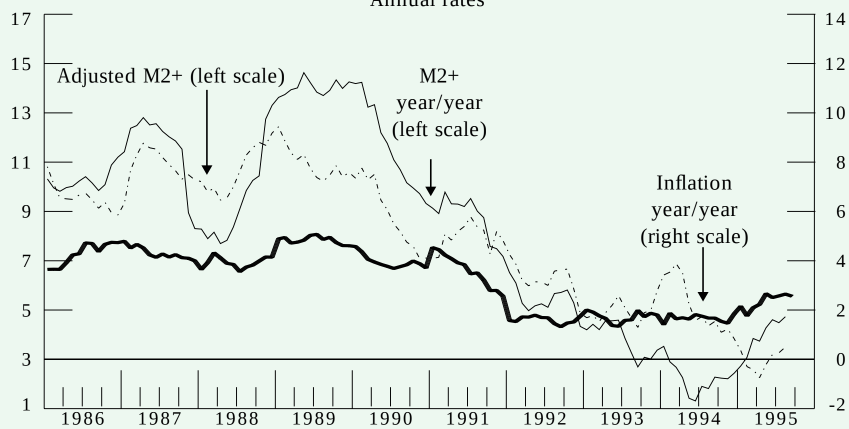
... and that output will pick up.

The rate of change of M1 can provide useful information about where real output growth is headed within an economic cycle. Although the relationship is not exact, a clearly discernible correlation is evident in Chart 14 where growth in M1 precedes growth in real GDP. M1 growth was weak in the latter part of 1994 and in the early part of 1995, anticipating the slowdown in real GDP growth experienced through the first part of the year. More recently, M1 growth has accelerated. This suggests a resumption of economic expansion in the second half of 1995, even allowing for a possible upward bias in M1 growth coming from particular factors affecting the corporate-demand-deposits component (see Technical Box 4).

Chart 13

Core Inflation and Adjusted M2+ Growth*

Annual rates

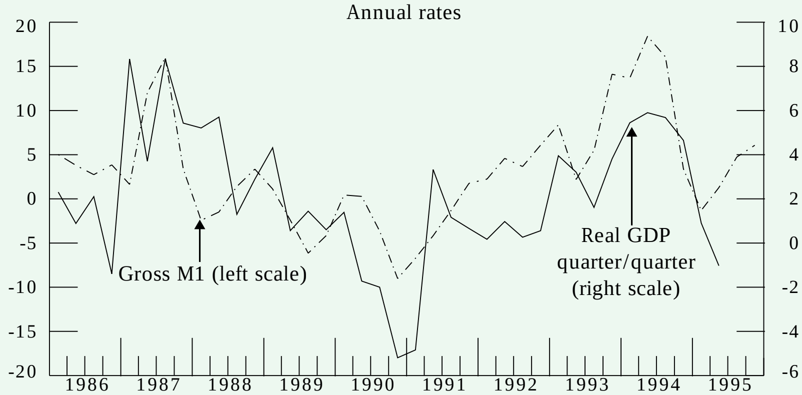


* Twelve-month growth of M2+ plus CSBs and mutual funds at financial institutions

Chart 14

Real GDP Growth and Growth of Real Gross M1*

Annual rates



* Two-quarter moving average of growth of real gross M1, one quarter earlier

Technical Box 4

Corporate Demand Deposits and the Growth in Gross M1

Growth in corporate demand deposits (referred to as current accounts) has been strong this year, accounting for most of the rapid pickup in the growth of gross M1. Anecdotal evidence suggests that this strength in current accounts reflects a continuation of, and to some extent an intensification of, competitive conditions in the current account market, which has resulted in more attractive deposit rates for corporate clients of banks.

Current accounts are the standard banking accounts used by businesses for their day-to-day transactions. These accounts have chequing privileges and are redeemable on demand. Until the early 1990s, the majority of these accounts paid no interest. Therefore, corporations had a significant incentive to economize on the balances in these accounts with the assistance of the cash management services available at banks. For instance, balances in excess of those required for normal transactions purposes might be deployed in money market mutual funds, direct holdings of short-term securities, notice deposits, or term deposits. As a result of such active cash management, growth in current accounts stagnated through most of the 1980s.

The strength in current accounts in 1995 coincides with the introduction at the large banks of tiering features for these accounts, with the interest paid on a scale that is a rising function of the average balance size. Customers in the higher tiers now tend to earn a “market-oriented” interest rate. This tiering phenomenon mirrors a similar trend with respect to personal savings deposits in the 1980s.

As a result of this innovation, recent increases in gross M1 overstate the change in current account balances associated with real economic activity, and thus indicator models based on gross M1 could overstate expected real growth. As well, if such innovations persist, it is possible that the gross M1 aggregate will become less responsive to changes in market interest rates in the future; this could have implications for its indicator properties for real output.

6. Conclusions

The inflation outlook is still consistent with the Bank's inflation-control targets.

As anticipated at the time of the last *Report*, adjustment to past exchange rate depreciation has pushed measured inflation into the upper half of the inflation-control band. This effect is expected to have diminished significantly by mid-1996. However, the pass-through of cost increases stemming from higher world prices for raw materials is likely to be a temporary source of further upward pressure on the CPI in the near term.

The last six months have also witnessed an unanticipated increase in excess supply in the Canadian economy. This added degree of downward pressure on trend inflation means that underlying fundamentals are pointing even more strongly to a downward movement in core inflation. Accordingly, while exchange rate and commodity-price effects will likely hold inflation in the upper half of the Bank's target range for several more months, the trend rate of inflation is expected to decline into the lower half of the inflation-control band in 1996.

The near-term inflation outlook, therefore, remains consistent with the Bank's inflation-control targets. For the medium term, the lessening of inflation pressures would imply a reduction in the desired path of monetary conditions, unless the economy began to show a much stronger rate of expansion.

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

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.

____________. 1993-1994. "Statement of the Government of Canada and the Bank of Canada on monetary policy objectives." *Bank of Canada Review* (winter): 85-86.

____________. 1995. *Monetary Policy Report* (May).

Clinton, Kevin and Kevin Fettig. 1989. "Buy-back techniques in the conduct of monetary policy operations." *Bank of Canada Review* (July): 3-17.

Freedman, Charles. 1994. "The use of indicators and of the monetary conditions index in Canada." In *Frameworks for Monetary Stability: Policy Issues and Country Experiences*, edited by Tomás J. T. Baliño and Carlo Cottarelli. Washington: International Monetary Fund. (Copies of the paper are available from the Bank of Canada.)

Lau, Hung-Hay and Gerald Stuber. 1992. "Recent developments in corporate profitability." *Bank of Canada Review* (September): 3-15.

Parker, Ron. 1995. "Aspects of economic restructuring in Canada, 1989-1994." *Bank of Canada Review* (summer): 23-34.

Thiessen, Gordon G. 1995. "Uncertainty and the transmission of monetary policy in Canada." The HERMES-Glendon Lecture. *Bank of Canada Review* (summer): 41-58.