Part V. Canada

Canada adopted inflation targeting in 1991, one year after New Zealand. In examining its experience, we stress the following themes:

- Inflation targeting in Canada was not the result of legislation. However, as in New Zealand, the inflation target in Canada is jointly determined and announced by both the government and the central bank.
- As in New Zealand, inflation targeting was adopted after substantial disinflationary pressures were already evident.
- In Canada, there is a clear-cut separation between the entity that measures the inflation variable to be targeted (Statistics Canada) and the entity that is accountable for achieving the inflation target and assessing past performance (the Bank of Canada).
- The consumer price index (CPI) inflation rate has been chosen as the primary target variable because of its "headline" quality, although a core inflation rate that excludes energy and food prices and the effects of indirect taxes is also used and reported in assessing whether the trend inflation rate is on track for the medium term.
- The Canadian inflation-targeting regime is quite flexible in practice, as are all the regimes we study, with real output growth and fluctuations a consideration in the conduct of monetary policy. Indeed, in Canada, the inflation target is viewed as a way to help dampen cyclical fluctuations in economic activity.
- In Canada, as in New Zealand and even Germany, the chosen rate of convergence of the medium-term inflation goal to the long-term goal has been quite gradual.
- The Canadian inflation target is stated as a range rather than a point target, often with greater emphasis placed on the bands than on the midpoint.
- The midpoint of the inflation target range, 2 percent, is above zero, as in all the cases we examine here.
- Although accountability is a central feature of the inflation-targeting regime in Canada, the central bank is more accountable to the public in general than to the government directly.
- A key and increasingly important feature of Canada's inflation-targeting regime is a strong commitment to transparency and the communication of monetary policy strategy to the public.
- As an adjunct to implementing the inflation-targeting regime, the central bank makes use of a monetary conditions index (MCI), a weighted average of the exchange rate and the short-term interest rate, as a short-run operating target.

The Adoption of Inflation Targets

The adoption of inflation targeting in Canada on February 26, 1991, followed a three-year campaign by the Bank of Canada to promote price stability as the long-term objective of monetary policy. This campaign, beginning with then Governor John Crow's Hanson Lecture at the University of Alberta in January 1988, "The Work of Canadian Monetary Policy" (Crow 1988), had spelled out the reasons for the Bank of Canada's disinflationary policy of the late 1980s and early 1990s. The campaign had not, however, spelled out the practical policy implications of what price stability meant in terms of either inflation levels or the time frame for reaching that goal (Thiessen 1995d; Freedman 1994a, 1995).

On February 26, 1991, formal targets through the end of 1995 "for reducing inflation and establishing price stability in Canada" were announced. The announcement was a joint statement by the Minister of Finance, Michael

Wilson, of the ruling Conservative Party, and the Governor of the Bank of Canada, John Crow. Publicity was maximized by the timing of the announcement, which occurred on the day of the Canadian government's release of its budget and underscored the government's support of the Bank's commitment to the goal of price stability. The following month, the Bank released its *Annual Report, 1990*, which featured remarks by Governor Crow on the appropriateness of price stability as a goal for monetary policy and an article entitled "The Benefits of Price Stability" (Bank of Canada 1991a). The initiation of the new monetary policy commitment to inflation targeting had been carefully planned to attract public attention and to begin building public support.

Yet there had been no advance notice to the public of the policy shift to inflation targeting by senior Bank of Canada officials. Even in the same *Annual Report, 1990*, a one-paragraph mention of the announcement of inflation targets was tacked on the end of Governor Crow's annual statement, with no mention of the adoption earlier in the piece. Nor was there an obvious crisis prompting an abrupt shift in policy (such as a devaluation and exit from a fixed exchange rate system or the sudden breakdown of a declared intermediate target relationship). Governor Crow had been appointed to his position four years earlier, and the Conservative Government had been reelected in late 1988, so a change in policymakers also did not explain the shift in policy.

Before the announcement of specific inflation targets, the Bank's repeated declaration of the price stability goal by itself appeared to have made little headway against the "momentum" in inflation expectations that had built up (Thiessen 1991; Freedman 1994a). In fact, in the "Background Note" released at the time of the adoption of the targets, mention is made of the "unduly pessimistic" outlook for inflation in a number of quarters (Bank of Canada 1991c, p. 11). Inflation targets were the tactic adopted to reduce sticky expectations and to bring the stated goal of Canadian monetary policy to fruition.

February 1991, it turns out, was seen by the Bank of Canada as a useful opportunity to formalize its commitment to price stability. On the positive side, year-over-year CPI inflation had just dropped to 4.2 percent in the fourth quarter of 1990 (versus a high of 5.5 percent in early 1989), and "the pressures from excess demand that were pushing up prices from 1987 through 1989 finally eased during 1990" (Thiessen 1991), with economic growth at its cyclical trough. Because the Canadian economy had slowed—and, although not realized at the time, had entered a deep recession in 1990—underlying disinflationary pressures were already becoming apparent at the time the targets were introduced.

More important, on the negative side, large risk premiums were being built into long-term Canadian interest rates because of rapidly growing government and external debt, political uncertainty, and credibility problems for monetary policy following two decades of inflation. Furthermore, a new goods and services tax (GST)—an indirect tax similar to a value-added tax (VAT)—was to take effect at the start of 1991 with an expected effect on the headline total CPI of 1.25 percent, and there were fears of further oil price increases as well. A failure to keep the first-round effects of the indirect tax increase from initiating a new wage-price spiral would only confirm the public's high inflation expectations.

The current Governor of the Bank of Canada, Gordon Thiessen, characterized February 1991 as period of public uncertainty, despite the prior declarations of the price stability goal (Thiessen 1991, 1995d). Deputy Governor Charles Freedman (1994a) also stated that one of the Bank of Canada's primary short-run concerns was to prevent an upward spiral in inflation expectations in the face of these shocks. The Bank went further and seized the opportunity to distinguish between the temporary shocks and the intended path of inflation as an instructional precedent for its targeting framework. As the initial announcement explained: "These targets are designed to provide a clear indication of the downward path for inflation over the medium term" (Bank of Canada 1991b). To underscore this intention, the Bank referred to them as "inflation-reduction targets," until the target range stopped dropping in 1995. Of course, the targets chosen were thought to be realistically attainable, the logic being that if declarations of the price stability goal were not enough, failure to achieve the

promised amount of progress toward that goal would certainly be detrimental (Freedman 1995).

The Bank set the first target for twenty-two months after the announcement of target adoption for the stated reason that six-to-eight-quarter lags in the effect of monetary policy made any earlier target infeasible. Canada possibly went through a period of significant inflation uncertainty as a result, and inflation *undershot* the target range until early 1993. The targets did not appear believable to the public until later (Laubach and Posen 1997b). In contrast, New Zealand's and the United Kingdom's target ranges took effect immediately upon adoption, and these countries experienced little problem with target misses until their recent cyclical upswings.

The Bank of Canada's intellectual basis for its inflation-targeting approach—and for its goal of price stability, rather than just low inflation—was what could be termed a sluggishness as well as an entrenched upward bias to inflation expectations. As articulated by Governor Crow (1988) in his Hanson Lecture, "In my view, the notion of a high, yet stable, rate of inflation is simply unrealistic." Offering the hypothetical example of a central bank tolerating 4 percent inflation, the Governor asserted that a public that sees the central bank as unwilling to reduce inflation from that level would view any shock that moved inflation up (say to 5 percent) as unlikely to be reversed, and therefore likely to be built into inflation expectations. Inflation expectations get an entrenched bias upward when there is no nominal anchor to keep the goal of price stability in view.

The entrenched upward bias of these expectations is cited repeatedly as an empirical reality of the Canadian economy.[1] For expectations to change, Governor Crow argued, the central bank must demonstrate its willingness to pay the costs of disinflating: "But as lower inflation is achieved, as people are less conditioned by fears of inflation, reducing inflation and preventing its resurgence becomes less difficult" (Crow 1989).[2] While this belief explains why the targets announced "provide [a path] for *gradual* but progressive reductions of inflation until price stability is reached" (Bank of Canada 1991c, emphasis added), it begs the question why for three years the Bank simply declared its commitment to price stability without naming a nominal anchor. It is likely that the Bank was waiting until the elected government was ready to support fully its commitment to price stability (see, for example, Laidler and Robson [1993]).

It is also possible to ascribe to the Bank simply an extended decision-making process that culminated in the opportunity to take advantage of the economic situation of February 1991. The Hanson Lecture itself was ignored in the *Annual Report, 1988*, despite eventually being cited repeatedly in Bank of Canada statements and followed up by "The Benefits of Price Stability" in the *Annual Report, 1990*. An appreciation for the possibilities of targeting seemed to emerge with an even greater lag—in 1989, Governor Crow stated in a speech reprinted in the *Bank of Canada Review*, "In my experience, if [an inflation] target is suggested it is almost invariably whatever the rate of inflation happens to be at the time. Some target!" (Crow 1989, p. 22).[3]

In any event, the decision to adopt inflation-reduction targets was made to "buttress" the Bank of Canada's commitment to price stability and to resolve uncertainties about it (Freedman 1994a). "The targets [were] not meant to signal a shift in monetary policy. . . . All we [were] doing [was] making clear to the public the rate of progress in reducing inflation that monetary policy [was] aiming for" (Thiessen 1991, p. 19). The Bank of Canada did not suggest that the announcement of targets by itself would bring an immediate payoff in terms of reduced inflation expectations; rather, it saw the benefits accruing over a long time horizon. Achieving these targets over the medium term would eventually strengthen public confidence in monetary policy, and inflation control would be supported by the increased transparency and accountability that inflation targets brought to the conduct of monetary policy.

The Operational Framework

When announced in February 1991, the Canadian inflation-targeting scheme was a path for reducing inflation defined by three commitments for inflation levels at later dates. (In fact, as mentioned earlier, Bank of Canada officials originally

referred to the targets as "inflation-reduction targets.") The first was for 3 percent year-over-year inflation (defined as the change in the CPI) by the end of 1992, twenty-two months after adoption; the second was for 2.5 percent inflation by the end of June 1994; and the third was for 2 percent inflation eighteen months after that.

The Bank stated at the outset that price stability involved a rate of inflation below 2 percent: "A good deal of work has already been done in Canada on what stability in the broad level of prices means operationally. This work suggests a rate of increase in consumer prices that is clearly below 2 per cent" (Bank of Canada 1991c). There was no mention, however, of targeting zero-measured inflation or of a stable price level. The Bank wanted to see further research before committing to a precise operational definition of price stability. It indicated that at the end of 1995, the goal would be a rate of measured inflation of 2 percent, but this rate was not to be considered equivalent to price stability. From the outset of targeting, the Bank made a number of statements to indicate that the correct number for price stability would be defined at a later date, and that there would be further reductions in the target until price stability was achieved. Later Bank studies would estimate the positive-mean bias in inflation measurement of the Canadian CPI to be at most 0.5 percent a year (Bank of Canada 1995, May, p. 4, footnote 1), so more than measurement error must lie behind the Bank's belief in a greater-than-zero definition.

On the appointment of Governor Thiessen in December 1993, the new Liberal Government and the Bank extended the 1 to 3 percent inflation target from the end of 1995 to the end of 1998. The setting of an operational definition of price stability was again put off until more experience was gained about the performance of the economy at low rates of inflation. The Bank specified that it was not treating the current targets as the equivalent of price stability.

> There were two reasons for the extension—(i) given that it has been a long time since Canada has had such low rates of inflation, it would be helpful to have more experience in operating under such conditions before an appropriate longer-term objective is determined; (ii) some time is needed to enable Canadians to adjust to the improved inflation outlook.[4] (Freedman 1995)

The Bank attempted in its targets to orient its policies, and public expectations, to forward-looking concerns for the medium term of one to three years, but accepted that expectations and the structures that went with them would not be completely changed (even after three or more years of targeting, and six years by the end of 1998).

The medium-term orientation also informed the Bank's choice of target series. The rate of change in the CPI was chosen as the primary target rate of inflation because of its "headline" quality, that is, it is the most commonly used and understood price measure in Canada. In addition, the CPI had the perceived advantage of coming out monthly, with infrequent delays and without revisions (one alternative, the GDP deflator, is often revised for multiple-observation periods in Canada). Because of the inclusion of food and energy prices in the CPI, however, the series is volatile; to avoid forced responses to short-run blips, the Bank of Canada also uses and reports core CPI, which excludes food and energy, asserting that core CPI and CPI inflation move together in the medium-to-long term.[5] "How we will react [to a change in inflation] will depend on whether or not a change in measured inflation is associated with a shift in the momentum, or underlying trend, of inflation" (Thiessen 1994b, p. 81).

There is no fixed rule by which the Bank is held accountable for performance on either CPI series over a specified time frame, but given the easy observability of these measures, persistent deviations from the path set by the targets would be obvious. Similarly, the Bank of Canada takes out the first-round effects of indirect taxes when determining whether a current or future change in inflation exceeds the target range in a manner that justifies a response.[6] Even allowing for some slow adaptation of price expectations, the targets' distinguishing first- and second-round price effects of shocks are consistent with the Bank behaving in a preemptive manner against inflationary impulses.

Deputy Governor Charles Freedman's discussion of price developments in 1994 illustrates how the Bank uses this combination of factors in assessing the situation:

> In particular, although the 12 month rate of increase in the total CPI through much of 1994 was virtually zero, the Bank focussed on the fact that the reduction in excise taxes on cigarettes in early 1994 accounted for a decline of 1.3 per cent in the total CPI. Operationally, therefore, the emphasis has been placed on the CPI excluding food, energy and the effect of indirect taxes, which has been posting a rate of increase between 1 1/2 and 1 3/4 percent. At mid-1994, the date of the second milestone, the rate of increase of total CPI was at 0.0 percent while that of the CPI excluding food, energy and the effect of indirect taxes was at 1.8 percent, near the bottom of the band. (Freedman 1995, pp. 24-5)

The Bank of Canada makes a strong effort to communicate its reading of the economy and the rationale for its decisions. In doing so, it explains the extent to which the changes in the CPI reflect purely transitory factors or persistent inflationary pressures. The Bank of Canada is very concerned about conveying this message clearly since its target series, CPI inflation, can be sensitive to temporary factors.[7]

As initially announced, inflation would be permitted to range from 1 percent above to 1 percent below each of these targets, and then to lie between 1 percent and 3 percent from 1995 on; but the objective to be targeted was the midpoint. In practice, the Bank never aggressively sought to move inflation from the outer bands toward the midpoints, even when actual inflation lingered at or below the target floor for an extended period. In fact, "in the revised targets more emphasis is placed on the bands than on the midpoints" (Freedman 1995). Explicitly, the target range is intended to allow for control problems.[8] While the Bank recognizes that a band of 2 percent width is indeed narrower than what research has shown to be necessary to capture all the unavoidable variation from unexpected sources, it also felt that too wide a band would send the wrong message (Freedman 1994a).

In general, the belief was that the band would provide sufficient flexibility to deal with supply shocks that were not already taken care of by exclusion of food, energy, and the first-round effect of indirect taxes.[9] No explicit escape clauses were set up for the Bank of Canada to invoke when larger shocks arose; accommodation of supply shocks (beyond that of referring to core CPI, rather than headline CPI, deviations from trend) was left to the Bank's discretion.

It is important to note how much looser in spirit this target definition is than the Reserve Bank of New Zealand's highly specified list of exceptions, which is dependent upon elected government approval. In many ways, however, the Bank of Canada's definition is a similar operational response to the same difficulties and shocks to which all small open economies exporting a large amount of natural resources are subject. The definition of target inflation in this manner has several implications. First, it commits monetary policy in Canada to reversing shifts in the trend inflation rate, while allowing price-level shifts in the face of supply shocks—it is not a framework consistent with price-level targeting. Second, it grants the Bank of Canada the freedom to act in whatever way it can transparently justify to the public with reference to the target bands; it does not prespecify when the Bank should deviate from target achievement.

Another aspect of the Bank of Canada's framework is that it commits monetary policy to a somewhat countercyclical bent, in that the Bank must respond to aggregate demand-driven price increases *and* decreases that would take inflation out of the target range. While common to all inflation-targeting regimes that explicitly or implicitly (in terms of reasonable deviation from a point target) put a floor on inflation goals, this feature has become more prominent and explicit in the Canadian framework:[10]

> Some people fear that, by focusing monetary policy tightly on inflation control, the monetary authorities may be neglecting economic activity and employment. Nothing could be further from the truth. By keeping inflation within a target range, monetary policy acts as a stabilizer for the economy. When weakening demand threatens to pull inflation below the target range, it will be countered by monetary easing. (Thiessen 1996d, p. 2)

The link between developments in the real economy and in prices is not denied by the Bank of Canada despite the focus on inflation goals. Governor Thiessen, in fact, has offered an explanation for inflation distinct from those relating solely to monetary factors:

> Upward pressure on inflation comes about when excessive spending demands in the economy, which are not adequately resisted by monetary policy, persistently exceed the capacity of the economy to produce the goods and services that are being sought. (Thiessen 1995d)

The trade-off between output and prices—even at times when increasing counterinflationary credibility might be expected to reduce the cost of disinflation—explains the gradual way the Bank moved from an initial expected inflation rate of 5 percent at the end of 1991 to a 2 percent target by the end of 1995. Freedman (1994a) noted that a typical augmented Phillips curve equation was broadly able to track the decline in inflation, and that this suggested that there was no need to resort to explanations involving credibility and changes in expectations to explain the pace of disinflation. However, despite the continued output gap, since that time inflation has not fallen further, as these equations predict. One reason for this might be that the process of expectations formation has changed; that is, that the Bank's target is now given substantial weight, such that expectations have been quite firm at about 2 percent.

In any event, the Bank repeatedly holds out the hope in public statements that as private individuals' and firms' expectations adapt, the cost and time necessary to achieve and maintain inflation goals will drop.[11] It is fair to ask, however, how long Canada (or any country) must pursue credible disinflationary, and then counterinflationary, policies before results can be expected. Clearly, in the case of Canada, more than four years of inflation targeting, preceded by at least three years of tightening monetary conditions, were not enough to induce these effects.

Accordingly, the Bank of Canada's justification for the pursuit of inflation targets, and from there price stability, does not rest upon credibility arguments alone. "In other words, our objective is price stability, but as a means to the end of good economic performance rather than as an end in itself" (Thiessen 1994a, p. 85).[12] Interestingly, Governor Thiessen has gone on to extol the benefits of transparency in monetary policy—as fostered by inflation targeting—as a worthwhile pursuit in its own right.

> First, [the central bank] can try to reduce the uncertainty of the public and of financial markets about its responses to the various shocks. It can do this by making clear the longer-run goal of monetary policy, the shorter-term operational targets at which it is aiming in taking policy actions, and its own interpretation of economic developments. Moreover, by committing itself to a longer-term goal and sticking to it, as well as by lessening uncertainty about its own responses to shocks, the central bank may be able to lessen the effect of shocks on private sector behavior. (Thiessen 1995d, p. 42)

No other targeting central bank has so explicitly made a virtue of transparency for its benefit to the economy as well as its role in credibly reducing inflation, although all have made efforts in this direction. Note that the benefits Thiessen lists in this quotation can stem from any sustainable longer run goal of a central bank with a consistent operational framework—neither price stability nor inflation is mentioned. In this context, it is only logical to conclude that the Bank of Canada feels comfortable dealing with various short-run challenges without fear of compromising its longer run goals.[13]

The view of inflation as largely determined by developments in aggregate demand and supply cited above leads naturally to the wide range of information variables the Bank considers when setting monetary policy. From 1982, when M1 was dropped as the Bank of Canada's intermediate target, until 1991, when inflation-reduction targets were announced, the Bank had been actively searching for a substitute among the various broader monetary and credit aggregates, although "[they had] not found the behavior of any one of them sufficiently reliable to shoulder the burden of acting as a formal target for monetary policy" (Crow 1990, p. 36). The move to targeting the goal (or its forecast) rather than an intermediate variable clearly represented a significant paradigm shift. "In our view, underlying inflation is affected primarily by the level of

slack in the economy and by the expected rate of inflation," stated Governor Thiessen (Thiessen 1995d, p. 49). Both slack and expectations are factors that cannot be directly observed and that require many related variables to assess. In practice, this has implied that:

> the Bank of Canada has focussed closely on estimates of excess demand or supply (or "gaps") in goods and labor markets as key inputs into the inflationary process. It also follows closely such variables as the rate of expansion of money (especially the broader aggregate M2+ . . .), the growth of credit, the rate of increase of total spending and wage settlements as guides to policy action. (Freedman 1995)

The Bank's May 1995 *Monetary Policy Report*, setting the format for those that followed, discusses product and labor markets, inflation expectations, commodity prices, and the Canadian dollar exchange rate in the section "Factors at Work on Inflation." Monetary aggregates are not mentioned until later in the report, as the last of "other indicators" listed in the "Outlook" section. For measures of inflationary expectations, the Bank considers results from the quarterly survey of the Conference Board of Canada, the forecasts listed in *Consensus Forecasts*, and the differential between the returns on thirty-year conventional and real bonds,[14] but it does not conduct its own surveys.

As an adjunct to the direct discussion of the economic forecast and policy decisions, the Bank of Canada has introduced the concept of a monetary conditions index (MCI) as a short-run operational target.[15] The change in the MCI is defined as the weighted sum of changes in the ninety-day commercial paper interest rate and in the Group of Ten trade-weighted Canadian dollar exchange rate, where the weights are three to one. The three-to-one weighting of interest rate to exchange rate effects on the economy came out of Bank estimates of the six-to-eight-quarter total effect of changes of each upon aggregate demand. The MCI was arbitrarily based at 100 in January 1987, and then computed backward and forward from that point; as a result, the Bank stresses that short-run changes in the MCI are more meaningful than levels.

The fundamental message of the MCI is to remind the Bank and the public that there are two monetary channels affecting aggregate demand in the open Canadian economy at any time. The MCI is therefore a "short-run operational target . . . most useful over a one- to two-quarter horizon" (Bank of Canada 1996, November, p. 21). The MCI is not a nominal anchor in itself, nor does it imply a commitment to intervene to alter exchange rates: "Between quarterly staff projections, the MCI provides the Bank with a continuous reminder that exchange rate changes must be considered when making decisions about interest rate adjustments" (Bank of Canada 1996, November, p. 21).[16] Underlining its tactical role in operations, the MCI is considered only briefly in the published semiannual *Monetary Policy Report*.

The Bank of Canada's *Annual Report, 1994* was a totally redesigned document compared with the 1993 edition. The first item discussed under the heading of monetary policy was the planned introduction of the *Monetary Policy Report*. As opposed to a densely printed, very formal-looking document, the *Annual Report, 1994* (and all those published since) was printed in large type, with extensive use of white space and numerous pictures and graphs. The document was consciously made more user-friendly in tone and distribution as well as in format. As argued in the next section, this change may be seen as part of the Bank's ongoing efforts at public outreach and education, goals that gained greater attention when Gordon Thiessen succeeded Governor Crow. Another factor in the new design may have been the switch in 1995 from "inflation-reduction" to "inflation-control" targets, with the setting of a target inflation level to be maintained.[17] By the Bank's own description, in its *Annual Report, 1994*:

> The new *Monetary Policy Report* will be designed to bring increased transparency and accountability to monetary policy. It will measure our performance in terms of the Bank's targets for controlling inflation and will examine how current economic circumstances and monetary conditions in Canada are likely to affect future inflation. (Bank of Canada 1995a, p. 7)

Governor Thiessen also spoke directly to the reader in an informal manner:

> In carrying out the responsibilities of the Bank, our objective is to promote the economic and financial welfare of Canada. I hope this description of those activities will increase the public's understanding of how the Bank has fulfilled its responsibilities. Communicating what the Bank is up to and why is important if we are going to maintain the confidence of Canadians. This year we have changed the Bank's Annual Report. . . . This new style of annual report is designed to provide more information on what the Bank does, thereby providing a better account of our actions. (Bank of Canada 1995a, p. 5)

This decision was a conscious effort to increase the transparency of policy for the general public. At the time inflation targets were originally adopted, the Bank stated:

> The Bank of Canada will be reporting regularly on progress relative to the inflation-reduction targets and on its monetary policy actions in speeches, in the extracts from the minutes of meetings of the Board of Directors of the Bank of Canada and of course in the Bank of Canada's Annual Report to the Minister of Finance. In addition, an analysis of inflation developments relative to the targets will be published periodically in the *Bank of Canada Review*. (Bank of Canada 1991c, p. 15)

The *Review* switched from monthly to quarterly publication in 1993, however, and the experience of other inflation-targeting countries, particularly the United Kingdom, brought home the utility of a separate publication in eliciting and focusing public discussion.[18]

The semiannual *Monetary Policy Report* has varied slightly in outline in the five issues published to date, but all include some discussion of recent developments in inflation, progress in achieving the inflation-control targets, and the outlook for inflation. To summarize the aim of the *Monetary Policy Report*:

> This report reflects the framework used by the Bank in its conduct of policy. This framework includes: (I) a clear policy objective; (II) a medium-term perspective (given the long lags for the full impact of monetary policy actions on the economy); and (III) a recognition that monetary policy works through both interest rates and the exchange rate. (Bank of Canada 1995, May, p. 3)

The *Monetary Policy Report* is a very user-friendly periodical aimed at the layperson, with "technical boxes" explaining various concepts and procedures in a cumulative fashion (similar to the pedagogical efforts in the United Kingdom's *Inflation Report*). The format emphasizes white space and includes summary bullet points in the margins, and the presentation is limited to less than thirty pages (largely consisting of charts). In addition, the *Report* is made available on the internet or by calling a toll-free number, and a four-page summary (compiling the various summary points) is issued at the same time for those who do not wish to read the entire document. Again, the *Report* represents a major shift in tone and audience from the reporting efforts undertaken in the initial years of inflation targeting in Canada, when the discussion of inflation performance remained in technical language and was bundled with other topics in less accessible publications.

Around the same time, there were some other changes in the internal organization of the Bank of Canada. Most prominently, as summarized in the *Annual Report, 1994*, "the Board of Directors established a new senior decision-making authority within the Bank called the 'Governing Council.' The Council, which [the Governor chairs], is composed of the Senior Deputy Governor and the four Deputy Governors. A major decentralization of decision-making is being implemented in the wake of the Council's establishment" (Bank of Canada 1995a, p. 8). Since this change, all issues of the *Monetary Policy Report* have carried the note "This is a report of the Governing Council of the Bank of Canada" and listed the six individuals' names. The movement to collective responsibility, rather than giving the impression that the Governor embodies the Bank, may be seen as an attempt to increase public perceptions of accountability after Governor Crow had become personally identified with the Bank's policy in the early 1990s.[19]

The Bank of Canada remains a relatively independent central bank.[20] In line with its responsibility for the conduct of monetary policy, the Bank of Canada has full operational independence in the deployment of monetary policy instruments. Thus, the Bank alone determines the setting of policy-controlled short-term interest rates.

Nevertheless, the Bank is subject to the "doctrine of dual responsibility," putting ultimate responsibility for the thrust of monetary policy in the hands of the Minister of Finance, and the Minister can make the Governor follow a particular policy (or move interest rates at a specific time) by issuing a public directive, with which the Governor and the Bank must comply.

A conflict between the Minister and the Bank, however, has never occurred. Because the issuance of a public directive would imply that the Minister had lost confidence in the ability of the Governor to carry out the government's monetary policy, the directive would likely be followed by the resignation of the Governor. Obviously, such a situation would almost certainly have serious repercussions for the government. Thus, a directive would be used only in extraordinary circumstances, and it is not something that can be used routinely by the government to sway the conduct of monetary policy.

Indeed, it might be argued that the existence of the explicit directive power has strengthened the independence of the Bank of Canada, compared with a system in which the procedures for resolving policy conflicts are not spelled out so explicitly. In general, relations between the Finance Ministry and the Bank are quite close. The Minister and the Governor meet almost weekly (though not on a required schedule), the Deputy Minister of Finance holds a nonvoting seat on the Bank's Board of Directors, and there are a number of other less formal contacts as well. [21]

The Bank of Canada's inflation-targeting framework has been an exceedingly flexible one, undergoing constant refinement and development, with a marked trend toward greater transparency over time (discussed in further detail below). The targets changed from "inflation reduction" to "inflation control" of around 2 percent CPI inflation, without commitment to a specific long-run definition of price stability. Furthermore, additional reporting obligations (such as the *Monetary Policy Report*) were undertaken as were new, more transparent operational tactics (for example, the reference to the MCI and the mid-1994 move to target more explicitly an overnight interest rate range of 50 basis points). At the same time, the backward-looking assessment and the forward-looking prediction of the target inflation series have always been nuanced by reference to developments in core CPI, indirect taxes, and exchange rates, without resorting to a specified rule for how and when to judge success. Finally, the Bank of Canada has become more directly accountable to the public and the markets than to the government directly. In short, the similarity to the German framework [22] and the difference from the New Zealand framework are striking—despite the apparent closeness of the New Zealand and Canadian target definitions and economic situations.

Canadian Monetary Policy under Inflation Targeting

This section summarizes briefly the main events in Canadian monetary policy since the announcement of inflation targets in February 1991. It is based on accounts in the Bank's *Annual Report*s and semiannual *Monetary Policy Report*s (since 1995), speeches and articles printed in the *Bank of Canada Review*, some academic studies, the *OECD Economic Report*s, and various newspaper reports.

The paths of inflation, interest rates, the nominal effective exchange rate (henceforth the exchange rate), GDP growth, and unemployment in Canada depicted in Charts 1-4 (pp. 69-70) indicate that the economic background for monetary policy under inflation targeting can be usefully divided into two basic periods. The first—which ran from the introduction of targets through the end of 1993—was characterized by significant economic adjustment by firms and workers as well as declining inflation rates; at times, headline inflation dropped below the floor of the announced target range. The second—which runs from the announcement on December 22, 1993, when the inflation-targeting framework was extended, to the present—has generally been characterized (except in 1994) by a need to alleviate disinflationary pressures, which have threatened to push inflation below the target range.

One of the challenges that the Bank of Canada faced during these periods was political, rather than economic. The Bank's success in reducing inflation and then maintaining it at a low level was associated by some critics with a high cost in unemployment, although it is by no

means clear that the level of unemployment reached at the time was entirely due to monetary policy or that it would have been entirely avoidable if monetary policy had been different. The targeting framework for monetary policy has received support from the public and has thus been endorsed by the two different governments in power since it was first adopted. However, while all central banks that adopted inflation targets received some criticism of their priorities from certain quarters, Canada's critics have probably been the most prominent and vocal in objecting to an exclusive focus on inflation control and to the low level of the target range.

This experience contrasts with that of New Zealand, discussed above, where there was basic agreement that the monetary reforms, including the adoption of inflation targets, were beneficial, but the control problems of the central bank in meeting a tight inflation target band near zero are what drew attention. The Canadian experience also contrasts with that of the United Kingdom, discussed below, where the central bank, because of its lack of independence, did not control the setting of the monetary policy instruments and so was not an obvious target for public criticism. Instead, the primary challenge for policy in the United Kingdom arose from the separation between those accountable for forecasting and assessing inflation performance and those responsible for setting monetary policy.

Accordingly, in this section, we focus upon three critical junctures for the Canadian inflation-targeting framework. The first critical period came in 1991 at the time of the adoption of targets, when forces beyond the Bank of Canada's control—world oil markets and Canadian domestic tax policy—created inflationary impulses. The second came in late 1993 when the Liberal Party won a victory in a federal election with a campaign platform that decried the incumbent Conservative Party's "single-minded fight against inflation." [23] The third came in mid-1996, when the then president of the Canadian Economic Association (and critic of the Bank of Canada) gave voice to a concern about the perceived excessive tightness of monetary policy in the face of high and rising unemployment.

In all three instances, the Bank of Canada responded by directly engaging in substantive discourse and increasing its efforts at transparency and public outreach. The Bank's response should be seen as a success in that the Bank managed to defend its policies without altering its basic commitment to operational price stability. The fact that the Bank effectively won over a sufficient number of wage- and price-setters in the first instance, the Liberal Government in the second, and the general public in the third, demonstrates the potential of inflation targets—and of transparent accountability more generally—to shape and enhance the discussion of monetary policy. With the Bank of Canada's competence and responsibilities clearly defined and tracked, the Bank could justify its policies within a clear structure. Meanwhile, the Bank's critics were forced to argue openly for looser policy on its economic merits (or lack thereof) alone.

The first major challenge to Canadian monetary policy after the joint announcement of inflation targets by Governor Crow and Finance Minister Wilson, on February 26, 1991, was how to cope with contemporaneous upward pressures on the price level. Most important, the Canadian federal government had just introduced a GST along with other increases in indirect taxes by federal and provincial governments. The key for the Bank of Canada's strategy was that these were identifiable, onetime price adjustments with extremely predictable effects *if* the price rises were not passed on by the private sector through a round of price and wage hikes. The Bank had little incentive to raise interest rates, given that it had been pursuing a policy of easing monetary conditions since the spring of 1990, and growth for 1991 was expected to be minimal because of low U.S. aggregate demand and widespread debt overhang in Canada.

The Bank used the targets as a means of communicating to the public that these onetime shocks should not be passed through to trend inflation, keeping the threat of interest rate rises in the background. Looking back from his perspective at the end of 1991, Governor Crow stated in the *Annual Report, 1991*:

> The fact that the economy was able to absorb the GST and the other indirect tax changes without provoking an inflationary spiral—a process of wages

> chasing prices, prices increasing further as a result, and so on—has been especially welcome. Certainly, the Bank of Canada has sought to make absolutely clear that monetary policy would not finance such a destructive process. The way that the price effects of the GST have been successfully absorbed has become even more widely recognized with the recent publication of the January 1992 CPI numbers. (Bank of Canada 1992a, p. 9)

In fact, given the tight monetary conditions that had already been established and the unexpected sluggishness of the economy, the Bank was able to ease nominal short-term interest rates 6.5 percentage points between spring 1990 and February 1992, a larger drop than was seen in inflation. Once the tax effects were taken out of the CPI in January 1992, headline CPI inflation dropped to 1.6 percent, while core inflation went from 5 percent in December (still including the GST) to 2.9 percent in January (Bank of Canada 1992a, p. 20).

The Bank's own analysis of the economic situation at year-end 1991 attributed most of the ongoing sluggishness in the Canadian economy to the global slowdown, largely because of debt overhang in the rest of the Group of Seven, as well as low commodity prices for Canadian exports (Bank of Canada 1992a). In January 1992, the Bank announced that it had come in under its expected rate of inflation of 5 percent at the end of 1991.[24] The target success was described in terms of core CPI (that is, excluding food and energy prices) rather than the ultimate target, headline CPI, although both were well below target level (having risen 2.6 percent and 3.8 percent, respectively, over 1991). By February 1992, inflation had already dropped below the target level of 2 to 4 percent for year-end 1992, with core CPI 2.8 percent higher than a year earlier, despite a depreciating Canadian dollar.

The announcement in May 1991 introducing inflation-indexed (real return) bonds, with payments of interest and principal linked to the CPI, served as an additional indicator that the authorities intended to avoid inflationary policies in the future. The announcement was immediately seen (as intended) as an additional incentive for the government and the Bank of Canada to meet the announced inflation targets.[25]

By October 1991, Bank of Canada researchers suggested that Canada had already paid most of the cost of bringing down inflation, as measured by sacrifice-ratio calculations (Cozier and Wilkinson 1991). Some academic economists immediately responded in the press with concern that the Bank of Canada's estimates of the sacrifice ratio were low—possibly by as much as 50 percent.[26] Appealing to a hysteresis-type argument, but also indicating some belief that a persistently looser monetary policy could result in employment gains, these economists predicted that unemployment would remain high. It is important to note that the Bank's response did not include an attempt to deny that disinflation beginning before target adoption involved a cost in terms of real activity—in fact, the release of research on the topic of sacrifice ratios prompted this discussion. Nevertheless, various officials did, at times, hold out the hope that as Canadian inflation expectations adjusted under targets, the cost of future disinflations would drop (see the preceding section).

The debate was therefore about the Bank's policy priority on low inflation, rather than about the framework of targeting itself. This debate over the relative importance of low inflation would become a recurring theme, as we explain below, and the existence of the inflation targets helped to frame the discussion of monetary policy at this general level rather than allowing a conflict over the interpretation of specific policy movements or the competency of policymaking.

There was considerable discussion of the relationship between the Bank of Canada's independence and its inflation-targeting framework in 1991. The Bank of Canada was included in the Conservative Government's proposals for general federal reform published in September; the main changes recommended were to simplify the Bank's legal mandate to emphasize the pursuit of price stability (from its multigoal statement) and to make the Governor's appointment subject to confirmation by the (to-be-reformed) Senate. The Manley Committee in the House of Commons[27] held hearings on the proposals in late 1991, but the government was largely occupied with its agenda of constitutional reforms, then under discussion.

The Bank and others testified that a focused price stability mandate would clarify the accountability of the Bank, whereas it would be possible to defend almost any policy under the current vague mandate. The Committee concluded, however, that "the problem with a mandate narrowly focussed on price stability is that it would tend to enhance the Bank's accountability by reducing unduly the Bank's area of responsibility" (Paragraph 88). In the end, the Manley Committee decided, "The elected government must remain ultimately accountable for the monetary policy followed" (Paragraph 168). In the end, the system of dual responsibility and the old legal mandate were maintained.[28]

By September 1992, the Canadian dollar had fallen to 79 U.S. cents, from 89 U.S. cents a year earlier, and most of the Bank of Canada's activity was concentrated on exchange rate and interest rate interventions meant to slow and smooth the downward trend of both variables. The economy continued to stagnate without falling into recession. The *Annual Report, 1992* noted that the Canadian recovery was much slower than the norm of previous business cycles. Inflation did meet the target on a headline basis, reading 2.1 percent in December, while the 1.7 percent core inflation fell below the target range of 2 to 4 percent. Core inflation would remain between 1.3 and 2 percent until the target path's floor caught up with it in late 1993.

The second critical juncture for the Bank of Canada's targeting framework came in the summer before the November 1993 parliamentary election, when, in light of the unpopularity of the ruling majority and rising unemployment, then Prime Minister Brian Mulroney's Progressive Conservative Party seemed doomed to defeat (although no one foresaw the eventual size of that defeat). The Liberal Party included in its campaign platform a criticism of the Conservative Party's "single-minded fight against inflation."[29] Although the political attack initially focused on the Conservative Party's goals for monetary policy, it sparked debate over whether Governor Crow should be appointed to a second seven-year term when the Liberal Party took office. Market economists did warn the Liberal Party leaders through the press that, if Crow was not reappointed, some other measure would be necessary to reassure markets of the new government's commitment to low inflation.[30]

In October 1993, preceding the Liberal Party's victory, Deputy Governor Freedman's speech at an academic conference on monetary policy stated:

> With the unexpected sluggishness of the economy, the rate of inflation fell faster and further than initially anticipated, and this despite the fact that monetary conditions were easing for most of the period between the announcement of the targets and the first target date, the end of 1992. . . . [Although inflation was 2.1 percent at the end of 1992, versus a lower band of 2 percent,] it would be inappropriate to push up the rate of inflation once it had reached the lower band of the target range, given that the longer-term goal was price stability.[31] (Freedman 1994a)

On the one hand, this statement underlined both the Bank's unwillingness to engage in fine-tuning (or perceived attempts at it), and its complementary willingness to admit forecast errors and the limits of its control of inflation developments. On the other hand, this stance reaffirmed that the target bands were to be taken more seriously than the midpoint, and it gave the impression that, even then, inflation outcomes that erred on the side of being too low would be accepted.[32] As we saw in the case of New Zealand, as well as in the political pressures on the Bank of Canada, an emphasis upon firm target bands makes explanations of deviations of inflation from the range more difficult to justify publicly because the central bank appears to have already admitted and specified the extent of its required flexibility. The commonly held view is that the deviation must be by the central bank's choice if it is not due to incompetence.

Moreover, a seeming willingness to allow target undershootings for some time even at very low rates of inflation—a possibility also raised by the Bank of England's later interpretation of its target as 2.5 percent *or less*, discussed in Part VI—raises potential economic difficulties resulting from the probable asymmetry of the output-inflation trade-off at very low levels of inflation. More recent statements by the Bank of Canada (cited below), perhaps in reaction to the economic and political experi-

ences we discuss here, emphasize the advantages for policy of having a floor to an inflation target, which, if taken seriously, can help to stabilize output fluctuations.

On December 22, 1993, the new government and the Bank made a joint announcement extending the targeting framework, with the 1 to 3 percent inflation band to be reached by year-end 1995 now extended through 1998. As noted in the previous section, the Bank was careful to indicate that this target remained a medium-term goal, not the achievement of price stability, however defined. It is also worth pointing out that the new Liberal Government saw the need to extend the target beyond its stated endpoint once the change of Parliamentary majority had raised fears about the commitment to the regime. While the Liberal Government could not ultimately guarantee the survival of the commitment beyond the length of its own majority in the House of Commons, it could act to push off the endpoint of the regime toward a more open-ended future, thus removing the endgame pressures discussed earlier in the German case with regard to the run-up to European Monetary Union in Europe.

The Liberal Government elected in October 1993 had campaigned against the single-minded pursuit of low inflation. John Crow chose not to be considered for a second term as Governor, and Deputy Governor Gordon Thiessen was appointed as his successor for a seven-year term beginning February 1, 1994. As noted, on the appointment of Gordon Thiessen, the existing 1 to 3 percent range was extended three more years, that is, until the end of 1998.[33]

In 1994, employment finally rose, largely on the basis of strong export performance. Exports were helped by a declining Canadian dollar, particularly against the U.S. dollar; the Canadian dollar had depreciated for the two years up until the 1993 election and had only temporarily strengthened upon the Liberal majority's reaffirmation of the inflation targets. Interest rates had risen, not only because of U.S. rate increases, but also because of concerns over the Canadian fiscal situation and the high level of political power behind separatism in Quebec. In his last official act as Governor, John Crow used his statement in the Bank's *Annual Report, 1993* (released in March 1994) to call for the reduction of government debt burdens in order to take pressure off interest rates and exchange rates.

Governor Thiessen would make similar statements about fiscal policy in the years that followed, albeit more obliquely to start. In general, inflation-targeting central banks, even independent ones, face a difficult decision in determining what kind of public statements to issue on government fiscal policy. On the one hand, even the most politically neutral inflation forecast, or clear assessment of past monetary policy and inflation performance, requires some estimation of the concurrent fiscal stance and its effects; on the other hand, a central bank that shifts responsibility for outcomes onto the other macroeconomic policy lever or that takes an (actual or perceived) ideological stand on budgetary politics could well undermine its own political legitimacy. Like all the central banks we consider here, the Bank of Canada tended to limit its discussion of fiscal matters to statements about the fiscal stance broadly, its effect on the exchange rate risk premia on interest rates, and general encomiums to the ideals of long-run sustainability.

Over 1994, core CPI inflation had fluctuated between 1.5 and 2 percent, well within the target band. The headline CPI inflation rate had dropped to as low as zero because of a tobacco excise tax reduction in early 1994. Again, the Bank's judicious use of core versus headline CPI to distinguish onetime price shifts from trend largely avoided confusion and the pass-through of first-round effects to wage and price inflation—this time in what would have been a negative direction. Indeed, in February 1995 headline CPI jumped from 0 to 1.8 percent after the first-round effect of the federal and provincial tobacco tax reductions dropped out of the calculations. Since the Bank had already stressed the onetime nature of the preceding price drop (and the stability of core inflation), it felt no need to react to this rise when it occurred (see, for example, Bank of Canada [1995, May]).

Meeting the announced target—and therefore maintaining that target's positive inflation rate rather than driving it toward zero—bolstered the Bank's standing in two ways: it demonstrated the Bank's competence and its reasonableness with regard to the pursuit of price stability. In the *Annual Report, 1994*, Governor Thiessen spoke of the

third successive year of "maintenance of a low level of inflation . . . after two decades of high and unpredictable inflation" and remarked on "the progress that has been made towards price stability" (Bank of Canada 1995a, p. 5).

When the first *Monetary Policy Report* was issued in May 1995, the Bank stated in the four-page summary that "core inflation has been consistently within the Bank's inflation-control targets band since early 1993." Year-over-year core inflation had risen to 2.7 percent by that month (its highest level since the end of 1991) and then declined, while headline inflation also peaked at 2.9 percent. After lowering interest rates on three occasions during the summer, the Bank tightened monetary conditions toward the end of the year. First, it raised the overnight interest rate in November and early December 1994 in response to rising U.S. rates and the emergence of strong domestic economic data. Later, it raised rates five times in January and February 1995 to try to stabilize financial markets in the face of a rapid depreciation of the Canadian dollar during a crisis of confidence following the Mexican devaluation. By March 1995, monetary conditions as measured by the MCI were 2 percent tighter because the Canadian dollar had rebounded. Demand for exports was expected to remain strong through the end of 1995, while domestic demand declined in response to interest rate rises and government fiscal restraint. The Canadian economy had grown more strongly than expected in 1994—at a rate of 5.6 percent.

Inflation remained in the upper half of the 1 to 3 percent target band through October, largely because of the prior depreciation of the Canadian dollar.[34] The Bank accepted the inflation performance and its future course, and turned to other short-run concerns. "Throughout the rest of the second quarter [1995], it became increasingly apparent that the economy was not expanding as expected and that an easing of monetary conditions was warranted" (Bank of Canada 1995, November, p. 4).[35] The Bank was willing to admit a forecasting error and to link its monetary policy decisions to real economic developments as long as the inflation target was met. It can be argued that the Bank was able to do so having invested not only in previous credibility-building disinflations, but also in educating the public in understanding that monetary policy is forward-looking.

The Bank of Canada first cut interest rates 25 basis points in early May, then lowered the operational target for interest rates twice in June, while the Canadian dollar also depreciated. It then cut rates twice more in July and again in August, when the dollar rose. The Bank expected inflation to remain high within the target band until 1996, when "added downward pressure coming from greater-than-expected excess slack in the economy" would bring it into the lower half of the band (Bank of Canada 1995, November, p. 4). Interest rates were cut on October 31, the day after the Quebec referendum on sovereignty failed to pass; in December 1995, headline inflation declined to 1.7 percent, heading into the lower half of the target band and prompting another cut in the overnight interest rate.

When the output gap remained greater than the Bank's 2.5 percent estimate through the first two quarters of 1996, contrary to expectations, monetary easing continued. The overnight rate was cut on January 25 and again on January 31 following a U.S. federal funds rate reduction. Rates were cut once in March and once in April. Since October 1995, the MCI had declined the equivalent of 200 basis points to its lowest level since 1994 (Bank of Canada 1995, November, p. 43). Inflation expectations were unaffected by the loosening and remained at historical lows—the Canadian Conference Board *Survey of Forecasters* and *Consensus Forecasts* both displayed downward trends in two-year-ahead inflation expectations, from around 4 percent in the first half of 1990 to 2 percent in the second half of 1995. The differential between Canadian "real bonds" and thirty-year conventional bonds was 3.25 percent, on par with the smallest differential recorded since the bonds were first issued in 1991.

Most significantly, the Canadian–U.S. short-term interest rate differential turned negative, while the Canadian dollar remained firm, raising hopes at the Bank that Canada's inflation-targeting regime had become such a sufficiently independent source of counterinflationary credibility that the two countries' interest rates might be decoupling. Given the positive effects of these develop-

ments on expectations and inflation, and the pressing needs of the real economy, the Bank began to emphasize how seriously it took the floor on its inflation target and the potentially stabilizing effect on real output of so doing.[36]

The third critical juncture for Canadian monetary policy occurred in summer 1996, with the continuing stagnation of Canadian GDP and employment. Criticisms of the Bank of Canada's policies were given more weight because they were delivered by Pierre Fortin, the elected president of the Canadian Economics Association. On June 1, 1996, Fortin delivered a presidential address entitled "The Great Canadian Slump" (Fortin 1996a) to the annual meeting of the Canadian Economics Association. In his address, he characterized Canadian economic performance since 1990 as

> a long slide in economic activity and employment . . . [with the] accompanying employment and output losses still accumulating, but . . . they surpass the losses experienced by other industrial countries since 1990. The last decade of this century will arguably be remembered as the decade of The Great Canadian Slump. (Fortin 1996a, p. 761)

After considering and dismissing a number of possible structural explanations for Canada's economic performance, he forcefully argued that the depression of domestic demand was largely attributable to interest-sensitive consumer durables and business fixed-investment demand. "This gives us the clue to the true cause of the great slump of the 1990s: old fashioned monetary and fiscal contraction. I argue that monetary policy has been the leader, and that fiscal policy was *induced* by the monetary contraction" (Fortin 1996a, p. 770).

In Section IV of his address, "Monetary Policy and the Slump," Fortin cites Bank of Canada statements affirming the Bank's control over short-term interest rates and then poses a question:

> The only serious question is why the Bank of Canada has kept the short-term real interest rate differential with the United States so large for so long in the 1990s. The answer to this question has two parts: first, since 1989 the central bank has focused exclusively on the goal of zero inflation; second, contrary to expectations, achieving this objective has forced it to impose permanently higher unemployment through higher interest rates. (Fortin 1996a, pp. 774-5)

The first part of Fortin's explanation is attributed to the Bank of Canada's exclusive focus on inflation, its religious zeal in doing so, and its excessive independence from popular preferences and political control (pp. 775-7). The second part of his explanation is based on his application of the argument of Akerlof, Dickens, and Perry (1996) about a floor for nominal wage changes at or near zero in the Canadian labor markets.[37] If one believes that workers resist nominal wage cuts strongly, whether for reasons of "fairness" or other factors, Fortin argues,

> the zero constraint can take a large macroeconomic bite when the median wage change itself is around zero, as was observed over 1992-4. . . . But if inflation is to fall to a very low level, such as the 1.4 per cent of 1992-6 in Canada, and is to stay there, the proportion of wage earners that are pushed against the wall of resistance to wage cuts must increase sharply. The long-run marginal unemployment cost of lower inflation in this range is not zero, but is positive and increasing. (Fortin 1996a, p. 779)

He goes on to state that the Bank of Canada not only has misjudged the output-inflation trade-off at low inflation rates, but also "has displayed a strong deflationary bias that has not reflected the true state of knowledge on the benefits of zero inflation, the true preferences of the Canadian population, and the spirit and letter of the Bank of Canada Act, which reflects those preferences by asking for a reasonable balance between the inflation and unemployment objectives" (Fortin 1996a, p. 781).

Fortin acknowledges that "the Bank of Canada has made every effort at explaining this strategy through public speeches, appearances in Parliament, research papers, *Annual Report*s, and, more recently, *Monetary Policy Report*s. But it is also true that these attempts have more often been exercises in advocacy of a controversial and extreme policy orientation than genuine dialogue with the public" (Fortin 1996a, p. 781). His two primary policy recommendations are to make the Bank of Canada more like the U.S. Federal Reserve System (in his description), with five governors holding staggered terms, and to raise the inflation target's midpoint 1 percent, to 3 percent (Fortin 1996a, p. 781).

In the press discussion that ensued, including Fortin's own summary of his arguments for mass readership, permanent and transitional costs of achieving low inflation were repeatedly confused.[38] Without coming down on either side of the argument, we note that the Canadian–U.S. interest rate differential had dropped along with interest rates more broadly, suggesting that the Bank of Canada was successful in containing inflation. In addition, this suggests that the Bank of Canada had eased monetary conditions because the considerable slack in the real economy implied disinflationary pressures that might cause inflation to drop below the target range. Whether the Canadian economy had borne too great a cost in lost output during the transition process to be justified by the benefits of lower inflation—despite the Bank of Canada's acknowledgments of the cost of disinflation and conscious gradualism documented above—is an issue that merits discussion.

At the time, however, with the public record of the Canadian inflation-targeting framework's goals, actions, and results available for all to see, discussion was limited to debate over the costs and benefits of low inflation and did not address topics of ideology or of competence. This focus forced participants to take an explicit stand (as Fortin did) on defining the goal of monetary policy. The Bank of Canada's response was to articulate further its rationale for the existing 1 to 3 percent inflation target. In a speech to the Ecole des Hautes Etudes Commerciales in Montreal on October 9, 1996, Governor Thiessen put the debate in exactly these terms while addressing Fortin's argument (without mentioning him by name):

> A distinction should be made here between *reducing* inflation and *maintaining* it at a low level. Reducing inflation requires a downward adjustment in inflation expectations and may entail transition costs, which is not the case with simply maintaining low inflation. It is generally agreed that the gains achieved by reducing inflation exceed transition costs when inflation is high. Where opinions are more divided is on the question of how far inflation should be reduced. Some fear that if inflation falls below a certain threshold, the economy will be deprived of a lubricant. . . . I must say that this argument assumes a degree of money illusion that I find difficult to reconcile with the observed behavior of wages in inflationary periods. . . . Recent experience will provide us with more useful information in [the wage behavior during periods of slow wage growth]. We have therefore undertaken new research on this question. . . . Since this research is just getting under way, I will confine myself here to reporting that our preliminary examination of the major wage agreements concluded between 1992 and 1994 does not lend evident support to the thesis of inflation as lubricant. (Thiessen 1996d, p. 3)

There are three key points to make about Governor Thiessen's remarks: first, the costs of disinflation are once again forthrightly acknowledged; second, the argument is made on the basis of empirical claims, with the Bank assuming the burden of having to provide supporting (or opposing) research; and third, the discussion is centered on the appropriate level of inflation to target and the pace at which that level should be reached, not on what the goals of monetary policy should be. Later in his remarks, Thiessen attributed the stalling of the expansion in 1994 and 1995 to increased interest rate risk premia due to international market fluctuations and to political uncertainties about Canada. "In such a context [of high interest rates], the benefits of low inflation were slow to be felt" (Thiessen 1996d, p. 7). Referring to the easing of monetary conditions since that time and the decline in the Canadian–U.S. interest rate differential, he stated, "It shows that keeping inflation down is a low-interest-rate policy and not, as some critics have often claimed, a high-interest-rate policy" (Thiessen 1996d, p. 7).

A month later, Thiessen gave another speech responding even more directly to the Fortin argument, titled "Does Canada Need More Inflation to Grease the Wheels of the Economy?"[39] He opened by characterizing

> some ideas you have probably heard about recently. . . . The suggestion is that the Bank, with its focus on bringing inflation down, is largely responsible for Canada's sluggish pace of economic expansion and stubbornly high unemployment in the 1990s. . . . Moreover, in this view, a monetary policy that emphasizes price stability will somehow always be too tight to allow the economy to achieve its full potential in the future. (Thiessen 1996a, p. 63)

After making an extended argument that most of what slowed the Canadian economy in the early 1990s was the combination of externally induced high interest rates and widespread structural change in response to globalization and technical changes, and that the economy was now poised to pick up over the long term, Thiessen made explicit his vision of the relationship between maintaining low inflation and economic growth:

> In fact, when the Bank takes actions to hold inflation inside the target range of 1 to 3 per cent, monetary policy operates as an important stabilizer that helps to maintain sustainable growth in the economy. When economic activity is expanding at an unsustainable pace . . . the Bank will tighten monetary conditions to cool things off. But the Bank will respond with equal concern, by relaxing monetary conditions when the economy is sluggish and there is a risk that the trend of inflation will fall below the target range. (Thiessen 1996a, p. 67)

Having drawn the policy implication of the distinction between disinflating and maintaining low inflation given an announced inflation target, Thiessen then reiterated his belief that the process of wage setting in a low-inflation environment would be flexible enough to allow for occasional wage reductions in industries that required it, thus countering the view that zero inflation would be costly to the economy because of downward nominal wage rigidity.[40]

The purpose of our extended treatment of this third critical juncture in Canadian monetary policy since the adoption of inflation targets is not to give credence to one side of the argument, or even to the existence of the argument itself, but rather to emphasize the form the argument took. The existence of the inflation-targeting framework channeled debate into a substantive discussion about appropriate target levels, with all sides having to make explicit their assumptions and their estimates of costs and benefits while working from a common record of what the goal had been and how well it had been met.

Interestingly, although this argument gave a potentially far better-grounded means of attacking the Bank's stance than that utilized in the 1993 elections, the run-up to the 1997 elections has, in contrast, not included criticism of the Bank of Canada as a major issue. What this difference indicates most of all is that the failure of political accountability claimed by Fortin in "The Great Canadian Slump" address did not exist—rather, this difference indicates that the Bank's form of response, as with previous challenges, had to be through its acknowledged communications efforts. Indeed, the Bank won support through its response, its responsiveness, and its record.

Key Lessons from the Canadian Experience

The Canadian experience suggests that an inflation-targeting framework that shares the ultimate goals of the New Zealand framework but relies on a different operational structure can be highly successful. The key lessons are as follows: First, although some have argued that tight constraints upon or contracts for central banks are necessary to establish counterinflationary credibility, as in New Zealand, inflation has been low under the Canadian inflation-targeting regime, which is characterized by close informal links between the Bank of Canada and the Ministry of Finance and a greater emphasis on accountability to the general public than on meeting specified contracts. Canada's good inflation performance occurred even in the face of negative supply shocks, such as VAT increases and depreciations of the exchange rate induced by fiscal and political developments. Indeed, the Bank's concerted efforts at transparency may have helped the public to distinguish between onetime shocks and movements in trend inflation.

Second, inflation targeting has worked to keep inflation low and stable in Canada even though the inflation-targeting regime is more flexible, similar to Germany's, with misses of the target range less explicitly tied to punishment. This flexibility has allowed the Bank of Canada more room to deviate from the targets when unforeseen shocks occur. As in the German case, a key component of Canada's success with inflation targeting is the Bank of Canada's strong and increasing commitment to transparency and the communication of monetary policy strategy to the general public.

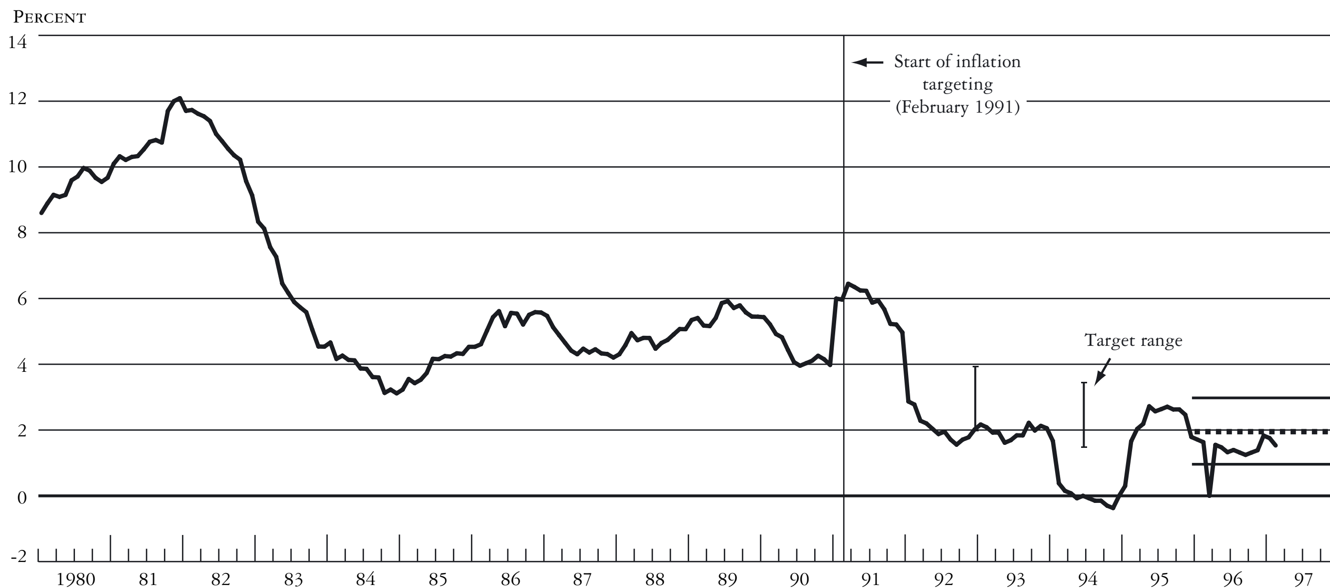
Third, Canadian inflation targeting has been seen by the central bank as helping to dampen business cycle fluctuations, because the floor of the target range is taken as seriously as the ceiling. Indeed, at times, the Bank of Canada has been able to justify easing of monetary conditions in the face of a weak economy by appealing to the inflation targets, with the confidence that this easing would not lead to expectations of higher inflation in the future. Thus, inflation targeting did not force the Bank to forswear all responsibility for stabilization of the real economy.

The views expressed in this article are those of the authors and do not necessarily reflect the position of the Federal Reserve Bank of New York or the Federal Reserve System. The Federal Reserve Bank of New York provides no warranty, express or implied, as to the accuracy, timeliness, completeness, merchantability, or fitness for any particular purpose of any information contained in documents produced and provided by the Federal Reserve Bank of New York in any form or manner whatsoever.

Economic Time Line: Canada

Chart 1

Core Inflation and Targets

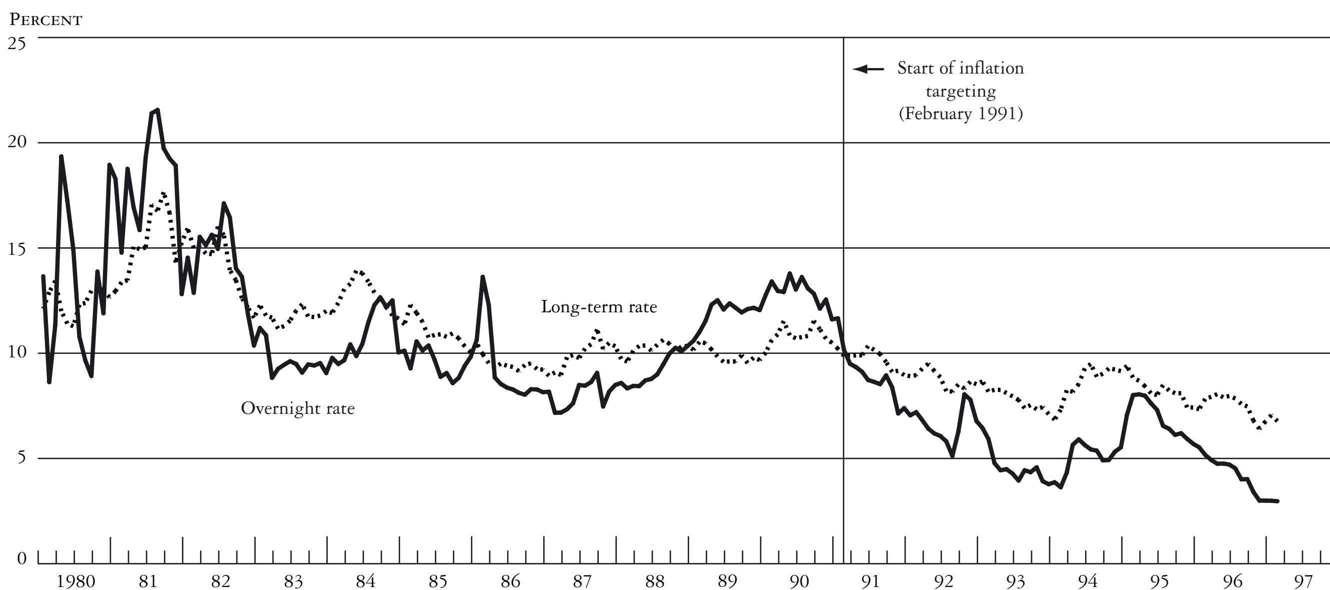


Sources: Bank of Canada; Bank for International Settlements.

Note: The I-shaped bars indicate the target range for inflation in effect before adoption of an ongoing target range of 1 to 3 percent in January 1996; a dashed line marks the midpoint of the ongoing target range.

Chart 2

Overnight and Long-Term Interest Rates

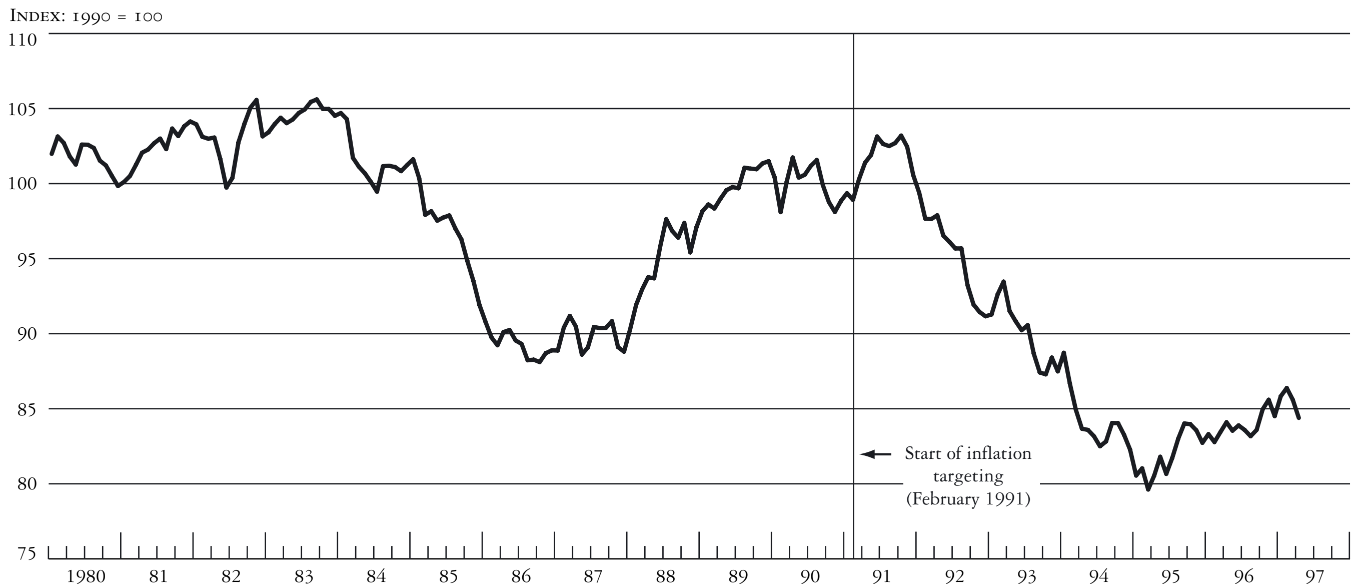


Sources: Bank for International Settlements; International Monetary Fund, *International Financial Statistics.*

Economic Time Line: Canada (Continued)

Chart 3

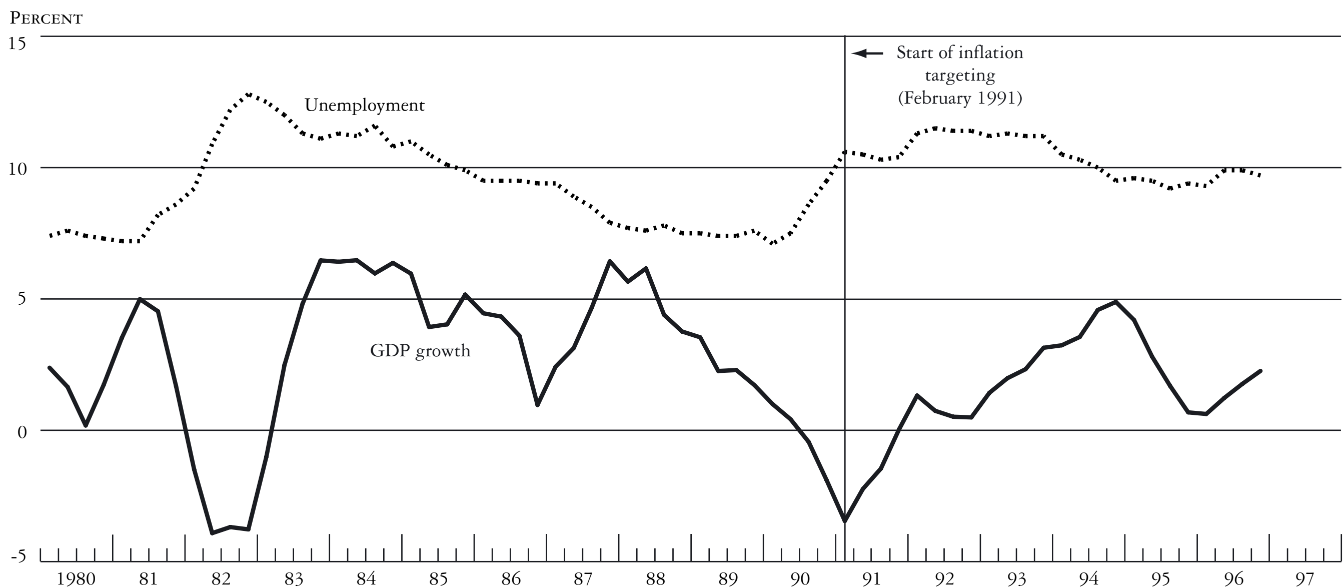
Nominal Effective Exchange Rate



Source: Bank for International Settlements.

Chart 4

GDP Growth and Unemployment



Source: Organization for Economic Cooperation and Development, *Main Economic Indicators.*