David Dodge: Inflation targeting in Canada - experience and lessons

Remarks by Mr David Dodge, Governor of the Bank of Canada, prepared for the Central Bank Governor's Panel on Inflation Targeting at a joint session of The American Economic Association and the North American Economics and Finance Association, Atlanta, 5 January 2002.

The references for the speech can be found on the Bank of Canada's website.

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Thank you, Andrew. I am pleased to be in Atlanta today to talk to you about the Canadian experience with inflation targeting.

In the 1970s and 1980s we found—in common with many other countries—that high and variable rates of inflation created a lot of economic damage. And it took a long time and a lot of work with various monetary policy frameworks before we got back on track. I would point to two particular sets of arrangements for policy during that time that were both designed to lead to low inflation rates.

The first was monetary targeting—specifically, targeting the narrow monetary aggregate M1, beginning in 1975. A close relationship between M1 growth and inflation held only over very long periods of time. Moreover, this relationship was subject to sizable downward shifts in the demand for money. Such shifts did indeed occur. Thus, after a period of disinflation between 1975 and 1978, inflation picked up again in 1979–82 despite the achievement of the M1 target.[1] Because of the lack of longer-term success in bringing down inflation, this approach to monetary policy was unable to build confidence and understanding on the part of the public.

The second policy approach took place from 1982-90, a period in which there was no clear monetary policy target. Rather, there was only a desire to bring inflation down and (particularly after 1987-88) to approach "price stability." After the disinflation of 1982-84, there was no further progress in reducing inflation. And with no explicit target, there was still little understanding of monetary policy and no focus for inflation expectations.[2]

The economic boom at the end of the 1980s, together with an oil-price shock and the introduction of the goods and services tax, led to fears that inflation would again escalate and stay high. It was against this background that, in 1991, the Canadian government and the Bank of Canada agreed on targets for inflation reduction. Canada was the second country, after New Zealand, to set out formal, medium-term inflation targets.

The Canadian experience: agreeing on a target

I would now like to turn to the question of how we adopted inflation targets in the first place. The Bank of Canada operates under the Bank of Canada Act. The preamble to the act notes that the central bank is established "to control and protect the external value of the national monetary unit and to mitigate by its influence fluctuations in the general level of production, trade, prices and employment, so far as may be possible within the scope of monetary action, and generally to promote the economic and financial welfare of Canada." In essence, this is like the broad mandate given to the U.S. Federal Reserve under U.S. legislation.

Theory and empirical evidence suggest that there is no long-run trade-off between inflation and production levels. Indeed, there is evidence that a low-inflation regime supports higher productivity. Moreover, monetary policy has essentially only one instrument. Therefore, the best that monetary policy actions can do to promote the welfare of Canadians is to aim for low, stable, and predictable inflation with a medium-term target horizon, which will maximize sustainable production levels. This will have the important benefit of tending to mitigate fluctuations in production and employment. It is also the best way to protect the external value of the monetary unit under flexible exchange rates.

The experience of the 1970s and 1980s left both the government and the central bank sensitive to the havoc wreaked by high and unstable inflation rates and thus moved them away from the notion of

[1] Freedman (1983) and Thiessen (1983) discuss various aspects of the Canadian experience with M1 targeting.

[2] Duguay and Longworth (1998) discuss the search for a new anchor during the 1980s.

trying to directly fine-tune short-run output and employment levels. By 1990, there was therefore a growing shared desire to create a policy that would provide a better anchor for inflation expectations.

It was important that both parties be involved. Since 1967, the Bank of Canada Act has granted a directive power to the government that allows it to openly instruct the Bank to carry out specific actions over a specific time period. This power has never been used. However, both it and the requirement in the act for regular consultations between the Governor and the Minister of Finance highlight the importance of consultations between the two parties on any major change in the objective of monetary policy. In a democratic society, the government must be comfortable with the overall direction of monetary policy. Moreover, for an objective to be credible, the government's backing is required. And, because of the expertise that resides in the central bank, it is important that the Bank provide the research and analysis regarding the framework that can deliver the agreed objective.

An agreement was indeed reached. It was announced in the form of a joint press release on the inflation-reduction targets at the time of the February 1991 budget. The Bank issued a detailed background document at that time elaborating on the framework it would use to achieve the targets.[3]

Given the empirical evidence for Canada, showing that the appropriate horizon for aiming at an inflation target was about 1 1/2 to 2 years, the first formal target was set for December 1992 at a rate of 3 per cent (plus or minus 1 per cent). The series of targets announced in the agreement was aimed at bringing the 12-month CPI inflation rate down to 2 per cent (again, plus or minus 1 per cent) by December 1995.

The decline in inflation was achieved in fairly short order, indeed faster than was consistent with the targets. By January 1992, inflation was close to 2 per cent.

The agreement with the government has been renewed three times; in each case, the midpoint of the inflation target range has been confirmed at 2 per cent. Through this period—and with two different governments—there has been a growing shared appreciation of what inflation control has been contributing to Canada's good economic performance. This includes the recognition of the automatic stabilizing feature of inflation targeting in response to demand shocks—a point that I will come back to later.

Overall, the government and the central bank are on the same wavelength in terms of the objective of policy. The successful implementation of a monetary policy aimed at low, stable, and predictable inflation and a fiscal policy aimed, in most circumstances, at running a small surplus with the goal of bringing about a significant decline in the debt-to-GDP ratio has enhanced the credibility of both policies.

The major lesson that we at the Bank of Canada draw from our experience with inflation control is related to the advantages of establishing a credible anchor for monetary policy by focusing on the predictability of inflation. That will be the theme of the rest of my talk.

Establishing a credible anchor by focusing on predictability

When the original inflation-reduction targets were announced in early 1991, the Bank was not relying on a credibility effect to reduce inflation. And subsequent studies have shown that this was the appropriate assumption—there was no evident reduction in the cost of disinflation arising from credibility. What the Bank did say was that

> The purpose of setting out formal targets is to provide a clear indication of the downward path for inflation over the medium term so that firms and individuals can take this into account in their economic decision-making. . . . The inflation targets also provide information on the specific objectives to which the monetary policy actions of the Bank will be directed in the period ahead and through the medium term. This information should make the Bank's actions more readily understandable not only to financial market participants but also to the general public and should provide a better basis than before for judging the performance of monetary policy.[4]

[3] See Bank of Canada (1991).

[4] Bank of Canada (1991), pp. 10-11

Credibility, inflation, and inflation expectations

After inflation fell to 2 per cent, the expectations of forecasters and businesses soon began to fall in line with the targets. At first this was for expectations at the 2-year horizon. This then lengthened to the 6- to 10-year horizon. Finally, long-term expectations of inflation in financial markets, as expressed by the difference between 30-year yields on conventional and index-linked bonds, fell in line with the 2 per cent target midpoint in 1997.[5]

What was particularly noticeable after just a couple of years of targeting was that expectations over a 2-year horizon or longer tended to be affected very little by what was happening to current inflation rates, whether for the total CPI or for a measure of core inflation. This was in marked contrast to earlier periods in Canadian history, in which expectations for the future had been fairly tightly linked to recently observed inflation rates.

With the low inflation target becoming increasingly credible, the whole nature of the inflation process seemed to change. The short-run response of inflation to measures of excess demand and supply appears to have fallen during this period.[6] And the response of inflation to relative price shocks, such as changes in the exchange rate and energy prices, also seems to have declined.[7] These changes have had the effect of reinforcing the stability of the inflation process and, therefore, of inflation itself.

Overall, it became increasingly evident through the last decade that the inflation target deals with expectational problems. Among close observers of the economy, as well as businesses and those bargaining over wages, it promotes a much greater degree of confidence and understanding than monetary targets or a vaguely expressed desire for price stability ever did. People care about inflation. Therefore, when the focus of policy is on inflation itself and when accountability is in terms of a specific measure of inflation, the public can see and interpret both what the central bank aims to do and what it actually accomplishes.

Inflation expectations are important in exchange markets. Canada has chosen to operate in a flexible exchange rate regime mainly because of the asymmetric shocks that it faces relative to the United States, its major trading partner. It is thus extremely important that Canada have a credible anchor for its monetary policy. The inflation target has played this role admirably. Shocks to the exchange rate have not threatened domestic monetary stability.

Credibility and the real economy

Greater stability on the inflation front was also associated with fundamental changes in the real economy in the 1990s. The average duration of union wage contracts and financial contracts lengthened markedly. New types of long-term financial contracts were created. And there were fewer work disruptions. While other factors also played a part in these changes, low and stable inflation was an important contributing factor.[8]

The real economy also became more stable. Both the output gap and the unemployment rate have been less volatile over the past decade of successful inflation targeting than in the preceding 10 years. And in the last two years the unemployment rate has been at its lowest level in 25 years.

How is it that the variability of both inflation and output has fallen? I believe there are two main reasons. First, the increased credibility of monetary policy has led to a more stable behaviour of the economy, as I have alluded to above. Second, policy itself has been improved by the forward-looking framework of inflation targeting, which has allowed Canada to avoid the major boom and bust cycles experienced in the period from the late 1960s to the early 1990s by reacting promptly to new information.

In particular, when there are demand shocks, the inflation-targeting framework acts as an automatic stabilizer for the economy. For example, a negative shock to demand leads to interest rates being lower than they otherwise would have been. This has the effect of moving output back towards potential output and inflation back to its target midpoint. In this regard, it is important to note the role of

[5] Perrier and Amano (2000) discuss the credibility of Canadian monetary policy.

[6] Kichian (2001) provides evidence on this point.

[7] See Bank of Canada (2000).

[8] See Jenkins and O'Reilly (2001).

symmetric responses to positive and negative shocks, facilitated by the emphasis on the target midpoint.

In response to supply shocks, which take the form of inflation being higher than expected for a given level of demand, the focus on inflation 1 1/2 to 2 years ahead means that temporary shocks can be ignored as long as they do not feed into inflation expectations. As noted above, they typically no longer do so. Consider price shocks coming from volatile components, like energy or fruit and vegetable prices. As our operating guide, we use a core measure of inflation that excludes such components. This gives us and the financial markets some confidence that we are looking at the underlying trend of inflation. Thus, the interest rate response to what is perceived to be a temporary price shock can be minimal. As a result, there will be little movement in output. Output will therefore tend to be more stable than in a situation where a lack of firmly held expectations meant that the monetary authority had to react more strongly to price shocks, even if it believed that they would be fairly short-lived.

As the public's appreciation for the value of low, stable, and predictable inflation has grown, so has its predilection for discussing monetary policy choices in terms of the appropriate inflation-targeting framework. In the periods leading up to the renewal of the inflation-targeting agreement between the Bank of Canada and the Canadian government in both 1998 and 2001, the debate was about the appropriate level of the target (say, target midpoints of 1, 2, or 3 per cent) and some of the specific details, rather than about whether there should be a target for inflation at all.

Refinements to increase predictability

Our recent agreement in May of last year reaffirmed the target midpoint of 2 per cent. The Bank issued a background note describing the refinements in the way that it will implement the targeting arrangements.[9] These refinements, which should increase the predictability of inflation over the longer term, are fourfold: first, extending the length of the agreement to five years from the three years of the previous two agreements; second, clarifying that the Bank aims at the midpoint of the 1 to 3 per cent inflation-target range; third, committing to give special attention in the Monetary Policy Reports and Updates to situations where CPI inflation persistently deviates from the target midpoint; fourth, modifying the definition of the measure of core inflation to better capture the underlying inflation trend.

The benefits, in terms of predictability, of having a longer agreement are self-evident. The reinforcement of the message that the Bank aims at the 2 per cent target midpoint, combined with the special attention to be given to persistent deviations from that midpoint, is meant to make it clear that we are not indifferent to the various outcomes in the target range. Rather, we consistently aim to get back to 2 per cent over a horizon of 1 1/2 to 2 years. Following such a practice means that the average inflation rate over successively longer periods of time will tend to be increasingly close to 2 per cent.[10]

Until last year, the Bank of Canada used as its core measure of inflation the CPI excluding food, energy, and the effect of changes in indirect taxes. Volatile food and energy prices tend to reverse themselves fairly quickly. Therefore, since monetary policy actions affect inflation over a longer period, it would be inappropriate for monetary policy to try to offset the short-run movements in the total CPI caused by these fluctuations. Among food components, however, only fruit and vegetable prices are highly volatile. And among energy components, electricity prices have not been particularly volatile in Canada. Thus, our new measure of core inflation excludes only the volatile components of food and energy, as well as the three other most volatile components of the CPI: tobacco prices, intercity transportation prices, and mortgage interest costs. As before, the effect of changes in indirect taxes on the remaining elements is also excluded. Not only does the new measure of core inflation have a stronger statistical basis for its creation, it is historically a better predictor of future total CPI inflation than the old measure.[11]

Overall, we expect that these refinements will help to further increase the predictability of inflation in Canada in the years to come. This should add to the benefits that the Canadian economy has experienced from having a credible anchor in the form of the inflation-control targets.

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[9] See Bank of Canada (2001).

[10] This is shown in Crawford (2001).

[11] Macklem (2001) provides further details on the new measure of core inflation and its properties.