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CAN A BANK CHANGE? THE EVOLUTION OF MONETARY POLICY AT THE BANK OF CANADA 1935–2000

I would like to thank the Faculty of Social Science here at the University of Western Ontario for inviting me to deliver this lecture. The Department of Economics within the Faculty is known for its long-standing interest in monetary economics, as well as its appreciation of economic history. I thought that it would be appropriate, therefore, to combine these two elements and use this occasion to reflect upon the dramatic changes that have taken place in the theory and practice of monetary policy in Canada during the Bank of Canada's 65-year history.

Over this period, there has been a fundamental transformation in the way monetary policy is conducted in Canada and in most other industrial countries. While globalization and technological change have played an important role in this area, as in so many others, they have not, to my mind, been the principal driving force behind this transformation. Far more important has been the interaction of experience and economic theory. The puzzling and, at times disappointing, performance of the economy has often served as the catalyst for major theoretical advances and policy innovations. Although the evolutionary process set in motion by these forces has not always been smooth or painless, it has, without question, deepened our understanding of how the economy works. It has also taught us valuable lessons about how monetary policy should be conducted.

One of the most important lessons that monetary authorities have learned through this process of analysis and experimentation is that there is no virtue or advantage in vague policy objectives and complex operating procedures. Simpler and more straightforward approaches have generally turned out to be better. Monetary policy does not need to be cloaked in secrecy or artificial intricacies to be effective. What is needed to get the job done are one clear objective and one simple instrument.

My career in central banking—of just over 37 years—covers more than half of the period since 1935 that I am going to review today. I do not intend, however, to describe every policy development since the early 1960s, when I first joined the Bank, nor all those from the preceding period. Instead, what follows is a selective overview of certain events that I believe were critical to the evolution of monetary policy in Canada. While the conduct of monetary policy will always involve a great deal of uncertainty and imprecision, the steps that we and other central banks have taken to make it simpler and more transparent have, in my opinion, improved its effectiveness and contribution to economic welfare.

1. The Beginning: Establishing the Bank of Canada

The Bank of Canada was established in 1935,[1] during the Great Depression. Public confidence in the behaviour of markets, and the financial system in particular, had all but disappeared. Traditional remedies and the natural re-equilibrating forces of the capitalist system did not seem to be having much effect, and there was growing sympathy for more radical solutions.

Still, many observers questioned whether the creation of a central bank would be the answer to Canada's problems. Other countries that had established central banks much earlier had suffered the same collapse in economic activity and were experiencing similar difficulties trying to extricate themselves from the situation. Keynes' *General Theory*[2] would not be published for another year, but there was already widespread scepticism about the likely effectiveness of a more aggressive approach to monetary policy. Interest rates were at historically low levels, and the provision of extra reserves was seen as only adding to the surplus liquidity that already existed in most commercial banks. Nevertheless, excessive credit creation in the period immediately preceding the Depression, and the severe liquidity problems that many borrowers had experienced once it was underway, were generally viewed as important contributors to the collapse, if not the primary cause. Perhaps a central bank, learning from past experience, could reduce the likelihood of a similar occurrence in the future.

Doubts about the usefulness of monetary policy in stabilizing output did not prevent the legislators who drafted the original Bank of Canada Act from giving the Bank a broad and ambitious mandate. According to the preamble of the Act, which is the only description that we have ever had of its basic functions, the Bank was expected to:

> . . . regulate credit and currency in the best interest of the economic life of the nation, 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,

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1. The Bank of Canada Act was actually passed in July 1934, but the Bank did not begin operations until March 1935.

2. J.M. Keynes, *The General Theory of Employment, Interest and Money*, (London: MacMillan, 1936).

> 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 the Dominion.[3]

While the legislators seemed to appreciate that not all of these objectives were mutually consistent or even attainable with a single policy tool,[4] they may have assumed that the Bank would have more than one instrument at its disposal. Indeed, moral suasion, interest rate ceilings, and various other means of directly influencing the volume and composition of credit had already been used extensively in Canada. The segmented nature of our financial system, in which banking, insurance, trust, and securities activities were all carefully segregated from one another, combined with the high levels of concentration that existed in most of these industries, contributed to the "success" of such an approach. In any event, according to the new Keynesian orthodoxy that was soon to take hold, most of the heavy lifting associated with economic stabilization would be performed by fiscal policy.

To ensure that the new central bank would not be subject to undue influence from either the government or the financial sector, the architects of the Bank of Canada made it a privately owned corporation with widely distributed shares. Neither the shareholders nor senior officers of the Bank were allowed to work in the financial sector, and the only formal representation that the government was permitted was through the Deputy Minister of Finance, who was expected to serve as a non-voting member of the Board of Directors. The Bank's accountability and reporting requirements were limited to the publication of weekly financial statements and an annual report.

Even though Parliament in 1935 was prepared to allow greater public regulation of the economic life of the nation, it realized that some separation of money creation from the government's spending activities was probably important. Subsequent legislation reversed some of this separation by eliminating private equity holdings and making the government the exclusive owner of the Bank's shares. Other restrictions, however, on the government's ability to participate in Board meetings and influence the daily conduct of monetary policy remained in place. The issue of whose will would prevail if there was ever a major disagreement between the Minister of Finance and the Governor of the Bank of Canada was not explicitly addressed until much later.

The contrast between the policy environment in 1935 and that of today could not be more dramatic. Diffuse policy objectives, uncertain reporting lines, interventionist policy

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3. *Bank of Canada Act*, 1934, c. B-2, Preamble.

4. Note the words "so far as may be possible within the scope of monetary action."

measures, and a distrust of financial markets have given way to clearly defined inflation targets, improved governance and accountability, simple operating procedures, and a more open approach to policy formulation and implementation. We now have a single long-run objective—price stability—and a single policy instrument—the overnight interest rate. The targets for our objective and our instrument are both publicly announced, and our actions are subject to constant scrutiny and review. The story of how this profound transformation was brought about is the subject of the rest of my lecture.

2. How Did We Get Here?

The changes that I am about to describe did not happen overnight or in any continuous way. They were the result of a long, and sometimes painful, process of experience, experimentation, academic investigation, and market pressures. At times, Canada was able to trade on the experience of other countries, but on other occasions it had to find its own way. The challenges and problems that we encountered were often unique or unprecedented. Our proximity to the United States, coupled with our smaller size and openness, forced us to confront many of the issues associated with globalization long before the term became fashionable. We have always been the archetypal small open economy.

2.1 The Early Years: 1935 to 1950

The Great Depression may have been exacerbated or even caused by monetary policy errors in Canada and elsewhere, but the newly created Bank of Canada had limited means of dealing with it. Financial markets were not very well developed in the 1930s and the monetary policy instruments at the Bank's disposal did not appear likely to be effective.[5] Interest rates, as noted earlier, had reached historically low levels and commercial banks, with few exceptions, had more than enough liquidity. No serious effort was made, therefore, to mount an aggressive countercyclical policy. Various fiscal initiatives were undertaken prior to the outbreak of the Second World War, but not much progress had been made in reducing unemployment or restoring industrial output to its pre-Depression levels.

Most of the Bank's activities from 1939 to 1945 were directed towards financing the war effort. This involved extending cash advances to the government and overseeing the sale of Victory Bonds. Determined not to repeat the economic mistakes made during the previous war, the government tried to finance most of its expenditures through taxes and new bond issues. Consequently, the Bank's main responsibility immediately after the war was to keep interest rates as low as possible, to facilitate the rollover of the massive public debt that had accumulated. In

5. Although Canada was no longer on the gold standard and might have used an exchange rate depreciation to help stimulate the economy, it had a large amount of foreign debt outstanding and a high priority was put on maintaining a stable exchange rate.

the event, the reconversion of wartime production facilities and the absorption of decommissioned military personnel into the domestic labour force were much easier than many had imagined.[6]

By the late 1940s and early 1950s, however, inflationary pressures had started to build. The Bank and the government tried to suppress them by imposing temporary controls on certain types of bank financing. Some of this was accomplished through explicit legislation, the rest through private conversations between the Governor of the Bank and the presidents of the 10 chartered banks. These actions proved to be insufficient, however, in the face of rising world commodity prices, a booming U.S. economy, large foreign investment inflows, and increased defence expenditures to support the war effort in Korea. All of these factors put upward pressure on the Canadian dollar and made it difficult to control the domestic monetary expansion. With some reluctance, the government was forced to undertake a more decisive and, at the time, revolutionary action.

On 30 September 1950, Douglas Abbott, the Minister of Finance, announced that

> Today the Government, by order in Council under the authority of the Foreign Exchange Control Act, cancelled the official rates of exchange which, since September 19th of last year, had been calculated on the basis of a 10 percent premium for the United States dollar in Canada. It has been decided not to establish any new fixed parity for the Canadian dollar, at this time, nor to prescribe any new official fixed rates of exchange. Instead, rates of exchange will be determined by conditions of supply and demand for foreign currencies in Canada.

With this announcement, Canada abandoned the Bretton Woods system of pegged exchange rates, which had been established at the end of the Second World War, and allowed its currency to float freely in international markets. The resulting appreciation would hopefully discourage some of the inflow of funds, defuse the inflationary pressures that the economy had been experiencing, and obviate the need to pick a new, more sustainable value for the dollar. The flexible exchange rate was expected to remain in place only until markets had settled and a more reasonable value for the dollar had been determined. In fact, the experiment lasted for almost 12 years and had far greater significance than anyone could have imagined.

Canada was the only major country in the world operating under a flexible exchange rate through the 1950s and early 1960s, and was regarded as something of a renegade in international circles. By the end of 1951, we had also eliminated all remaining controls on foreign exchange transactions and most, if not all, controls on foreign investment inflows. Canada's

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6. G.S. Watts, *The Bank of Canada: Origins and Early History*, edited by T.K. Rymes (Ottawa: Carleton University Press, 1993).

financial markets were now open and exposed to external shocks. Our experience during this period would serve not only as a model for other industrial countries after the Bretton Woods system collapsed, but also as the catalyst for a revolutionary advance in the theory of international finance.

Few students of Canadian economic history know that Milton Friedman played a role in Canada's decision to float. In 1948, Friedman, then a young Associate Professor at the University of Chicago, participated in a radio debate with Donald Gordon, Deputy Governor of the Bank of Canada, and William Mackintosh, a Professor at Queen's University and an adviser to the Department of Finance.[7] One of the topics that they were asked to discuss was whether Canada should move to a flexible exchange rate. The Bank of Canada and the Department of Finance were both strong supporters of fixed exchange rates, as were most governments at the time. Friedman, as you might expect, spoke with great conviction about the advantages of a flexible exchange rate. Indeed, many of the arguments that he presented would later appear in his classic essay, "The Case for Flexible Exchange Rates."[8] Although the debate did not have any noticeable effect on policy for the next two years, Friedman's ideas seem to have influenced official thinking in Ottawa. A number of secret memos were written within the Bank beginning in 1948, reviewing the feasibility and even desirability of his proposal.[9]

2.2 Monetary Policy Under a Floating Exchange Rate: 1950 to 1962

In June 1954, Graham Towers, the first Governor of the Bank of Canada, retired after 19 years of service and was replaced by James Coyne, one of the authors of the secret memos. Like many Canadians at the time, the new Governor had become increasingly concerned about the level of foreign ownership in Canada and was anxious to increase national savings as a means of reducing our dependence on foreign capital inflows. Another concern, which was not as widely shared, involved the domestic rate of inflation. Canada had experienced a sharp escalation in consumer prices during the Korean War, and inflationary pressures had persisted for some time after. While domestic spending had faltered in 1954, the subsequent recovery pushed inflation well above the level that the Bank implicitly associated with price stability. Coyne was convinced that the solution to both problems—low savings and high inflation—was a tighter monetary policy. Higher interest rates would reduce domestic demand and help raise national savings.

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7. M. Friedman, D. Gordon, and W.A. Mackintosh, "Canada and the Problems of World Trade." Transcript of a *University of Chicago Roundtable* radio discussion broadcast in cooperation with the National Broadcasting Company, 18 April 1948 (Chicago: The University of Chicago, 1948).

8. M. Friedman, "The Case for Flexible Exchange Rates." In *Essays in Positive Economics*, (Chicago: University of Chicago Press, 1953), pp. 157–203.

9. See, for example, "A Method of Combining a Free Exchange Rate With the Present System of Exchange Control in Canada." Memorandum, 31 January 1949. Bank of Canada Archives.

Although a rudimentary money market had started to form in Canada, with the active encouragement of the Bank, it was not well developed. Popular wisdom, in any case, suggested that traditional monetary policy mechanisms were unlikely to be effective, even when they involved tightening monetary policy.[10] As a result, Coyne decided to combine reductions in the supply of bank reserves with healthy doses of moral suasion, much as his predecessor had done in earlier periods.

The Bank continued with this restrictive monetary policy stance through most of the late 1950s and into the early 1960s. In the face of rising unemployment and weakening economic activity, inflation dipped below one per cent by the spring of 1961. Relations between the Bank and the Minister of Finance had deteriorated sharply, and numerous government ministers had demanded a change in policy direction. However, any desire to remove James Coyne and replace him with a more sympathetic Governor ran up against the ambiguous nature of the legislation regarding the government's powers vis-à-vis the Bank. The academic community also became involved in the dispute and circulated a pamphlet entitled "The Economists versus the Bank of Canada."[11] A.W. Phillips had just published his famous paper on unemployment and the growth of money wages in the United Kingdom, and shown how higher (wage) inflation was typically associated with lower rates of unemployment.[12] Not surprisingly, Phillips' work found a receptive audience in Canada, and researchers soon replicated his results with North American data.

Much of the commentary in the popular press during this period was also critical of the Bank's policies, and reflected the widespread view that a little more inflation was not such a bad thing—provided it could bring higher employment and stronger output growth. James Coyne remained unconvinced, however. While he had no formal model or elaborate regression results to put forward in his defence, his instincts seem to have told him that any attempt to improve the economy's performance by targeting a higher inflation rate was misguided and could only end in difficulty:

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10. Doubts about the effectiveness of monetary policy were usually related to the presumed difficulties associated with stimulating the economy (i.e., "Pushing on a string"). Policy tightening was also thought to be ineffective during this period, however, since large interest rate increases were regarded as "unacceptable" and probably destabilizing. See the Bank of Canada's testimony before the Porter Commission (Porter Commission Report. 1964. Report of the Royal Commission on Banking and Finance. Ottawa: Queen's Printer).

11. Thirty prominent Canadian economists also signed a letter to the Minister of Finance calling for the dismissal of Governor Coyne. See H.S. Gordon, *The Economists versus the Bank of Canada*, (Toronto: The Ryerson Press, 1961), pp. v–vi.

12. A.W. Phillips, "The Relation between Unemployment and the Rate of Change of Money Wages in the United Kingdom, 1861–1957." *Economica* 24, no. 100 (November 1958): 283–99.

> There are those who sometimes set out the false alternatives of either full employment with inflation, or stable prices with a high level of unemployment. They say the nation must choose between unemployment and inflation. No person in any position of responsibility could possibly subscribe to that doctrine. It is false. Full employment and stable prices are not only compatible, they are in the long run inseparable.[13]

The pathbreaking work of Milton Friedman and Edmund Phelps on the vertical Phillips curve would not be published until 1968, but their results were anticipated by Coyne in many of his speeches.[14,15] He was convinced that there was no long-run trade-off between unemployment and inflation, except possibly in the sense that lower inflation might actually lead to higher output and employment. Experience and the new theory of rational expectations that would emerge 10 years later confirmed this result and showed that any positive employment effects associated with higher inflation were likely to be shortlived.

There was one critical area, however, where Coyne and many other policy analysts, both within and outside the Bank, appear to have been misguided. Those who had questioned the effectiveness of monetary policy in earlier years had failed to appreciate that it was likely to be much stronger than fiscal policy under a flexible exchange rate system, especially when capital was highly mobile. The large capital movements triggered by any change in interest rates would put significant pressure on the exchange rate, amplifying the effects of monetary policy while undercutting the effects of any opposing fiscal policy. Coyne did not realize that, for similar reasons, it was unlikely that a tighter monetary policy would ever raise national savings or reduce foreign investment inflows. Robert Mundell, in his article on "The Appropriate Use of Monetary and Fiscal Policy for Internal and External Stability," was the first economist to explain this apparent reversal of Keynesian theory.[16] Mundell's article was published in 1962, one year after Coyne had resigned in response to mounting criticism and ongoing efforts to remove him.

The timing of Mundell's work was no coincidence. According to Mundell,[17] the inspiration for his work on policy effectiveness under fixed versus flexible exchange rates was a

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13. J.E. Coyne, Remarks to the Annual Conference of the Business Paper Editors Association, Ottawa, Ontario, 18 January 1961.

14. M. Friedman, "The Role of Monetary Policy." *American Economic Review* 58 (March 1968): 1–17.

15. E. Phelps, "Money–Wage Dynamics and Labour Market Equilibrium." *Journal of Political Economy* 76 (July/August 1968): 678–711.

16. R.A. Mundell, "The Appropriate Use of Monetary and Fiscal Policy for Internal and External Stability." *International Monetary Fund Staff Papers* 9 (March 1962): 70–76.

17. As told by R. Mundell to J. Murray, Bank of Canada.

conversation he happened to overhear while working at the International Monetary Fund (IMF). Wynne Plumptre, Canada's Executive Director at the IMF, was talking to another official in the elevator about a problem that the authorities back home had been wrestling with. The Bank of Canada had been pursuing a restrictive monetary policy in an apparent effort to reduce domestic spending, increase saving, and limit the flow of capital into Canada. While economic activity had slowed, very little progress had been made on improving the trade balance or reducing foreign investment, owing to Canada's strong dollar and high interest rates. Efforts by the Department of Finance to counter the negative effects of the Bank's monetary policy through fiscal stimulus and to return the economy to full employment had thus far been unsuccessful. Government analysts were at a loss to explain why.

The rest, as they say, is history. Mundell had written a number of papers on international capital flows as part of his PhD thesis, and this chance encounter seems to have been something of an epiphany. Suddenly, many of the ideas that he had been working on were transformed into a coherent model of the way the global economy worked in the presence of capital mobility.

2.3 Downward-Sloping Phillips Curves and the Dash for Growth: 1962 to 1970

The controversy surrounding James Coyne's departure in 1961, together with publicly expressed government concerns that the value of the dollar was too high and that a nationalist program was needed to reduce foreign investment, put downward pressure on the Canadian dollar. It fell from a slight premium vis-à-vis the U.S. dollar to roughly 95 cents (US) within a few months. Efforts to halt the decline through aggressive intervention in the foreign exchange market were unsuccessful. On 2 May 1962, the government decided to return to the Bretton Woods system and fix the value of the Canadian dollar at 92.5 cents (US). Unfortunately, it took some time for academics and policy-makers to appreciate the full implications of Mundell's work. Indeed, there is nothing that I am aware of in the official documents written over the next few years that would indicate whether the Bank or the Department of Finance fully appreciated that, by returning to a pegged exchange rate system, the government would effectively neutralize whatever independent influence monetary policy might have on the macroeconomy.

With domestic fiscal policy on a strong expansionary track, and monetary policy constrained by the new exchange rate peg, the Bank of Canada would have no way of resisting the inflationary pressures that were gradually building in the second half of the 1960s. Government expenditures in Canada were growing at an accelerating rate with the new health care and unemployment insurance systems that had been introduced. Similar pressures were emerging in the United States in response to the Vietnam War and President Johnson's program for a Great Society. With a fixed exchange rate, these pressures would inevitably spill over into Canada.

Few serious concerns about inflation, however, were expressed outside central banking circles. Phillips and his followers had shown how a little bit of inflation might be beneficial, and monetary authorities were encouraged to be more forgiving. “Reasonable price stability” was touted as a preferred policy objective by the Economic Council of Canada, and “inflation-unemployment trade-off zones” were dutifully reproduced in many of its publications.[18]

Another development during this period is also worth noting. It concerns the clarification of the roles and responsibilities of the government and the Bank of Canada with regard to monetary policy. Louis Rasminsky, who had succeeded James Coyne as Governor in May 1961, had insisted as a condition of his appointment that the government’s powers regarding monetary policy be clearly defined.[19] The Bank of Canada Act was amended in 1967 to allow the government to issue a directive to the Bank in the event there was a serious disagreement over the conduct of monetary policy. Under this amendment, the government would have the right to override the Bank’s policy decisions. To do so, however, the Minister of Finance would have to publish the reasons for his (her) dissatisfaction, indicating both the new measures that the Bank was supposed to undertake as well as the period during which they were to apply. It was generally agreed, I believe, that such a “nuclear weapon” would only be used when there was a fundamental disagreement between the Governor and the Minister, and that following its use, the Governor would resign. In this way, the rights of a democratically elected government to determine policy were balanced against the needs of the Bank for operational independence. While governments must always have the final say in important policy matters, the Bank had to be protected from undue political influence in its day-to-day operations. A key element that was missing from this solution was a clear measure by which the government and the public could judge the Bank’s performance.

2.4 Stagflation and Monetarism: 1971 to 1981

The early 1970s began much like the 1950s. Foreign capital was flowing into Canada at an unprecedented rate and the Bank of Canada was finding it difficult to resist the upward pressure on the Canadian dollar. Rather than guess where the new equilibrium exchange rate might lie, the government again decided to let the currency float. As in the 1950s, this move was regarded as a temporary measure. Within three years, however, the rest of the Bretton Woods system had collapsed. While Canada’s decision was in no way responsible for what followed, its positive experience with a floating exchange rate through the 1950s and the early 1970s did provide some assurance to other countries that the new regime was at least workable.

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18. See, for example, Economic Council of Canada, “Prices, Productivity and Employment.” In *Third Annual Review* (Ottawa: Queen’s Printer, 1966).

19. B. Muirhead, “Into the Breach.” In *Against the Odds: The Public Life and Times of Louis Rasminsky* (Toronto: University Press, 1999) pp. 167–82.

Canada was now able to pursue an independent monetary policy. The Bank's efforts in the face of building international inflation pressures, however, proved to be insufficient. Outdated views about the Phillips curve, overly ambitious estimates of the natural rate of unemployment, and a concern about letting the Canadian dollar appreciate much above US$1, contributed to the problem. The Bank of Canada was not unusual in this regard, and its performance did not differ noticeably from that of most other central banks. Economic thinking among the major industrial countries was very similar, and received wisdom was, for the most part, imported from the United States.

Although Canada's experience had, in effect, been providing the rest of the world with an example of how an open economy operates in the presence of near-perfect capital mobility, it went largely unnoticed. Closed-economy concepts continued to dominate most national policy discussions. While Mundell's results were slowly filtering through the academic community, they had not yet reached the ranks of practising economists. Little recognition was given to the effects that market liberalization and different exchange rate arrangements might have on policy outcomes.

In the meantime, the combination of generalized excess demand in the world economy and the OPEC oil cartel had sent inflation and unemployment soaring to post-war highs. Policy-makers in Canada and elsewhere were having difficulty dealing with this stagflation and were initially confused by the twin phenomena of rising inflation and high unemployment. Within a short time, however, three things had become evident. First, higher inflation was not always associated with higher output and employment. The Phillips curve was not only vertical in the long run, but was probably upward-sloping. Second, efforts to fine-tune the real economy were likely to end in failure. Optimism about our ability to forecast and about the level of full employment introduced a strong inflationary bias to fiscal and monetary policies. Third, money mattered and was the ultimate source of all sustained inflation. Excessive government spending and other positive demand shocks could not generate ongoing inflation unless monetary policy was prepared to validate it.

To avoid similar problems in the future, many central banks began to target the monetary aggregates. If, as Friedman suggested, inflation was always and everywhere a monetary phenomenon, a gradual deceleration in the rate of money growth would eventually squeeze it out of the system. Once this had been accomplished, money growth could be set just high enough to meet the legitimate needs of the economy—thereby ensuring long-run price stability. If the new money targets were publicly announced and fully credible, some monetarists argued, it might even be possible to achieve this disinflation without any significant loss in output. If this proved to be impossible, some deterioration in economic performance would have to be accepted. A "gradualist" approach, however, would ensure that this was kept to a minimum. While fixed money targets might not deliver the best of all worlds, they were regarded as the safest alternative in a second-best world. Trying to forecast the future and optimally adjust fiscal and monetary policy settings had proved not only to be impossible but also potentially destabilizing.

Canada adopted a target for the narrow monetary aggregate, M1, in the autumn of 1975, a short time after the United States and Germany. For a while, the strategy appeared to be working. Inflation began to decelerate, and the economy began to recover from the 1974–75 recession. While some of this early success could be credited to the wage and price controls that the government had introduced in late 1975, proponents of the monetarist view believed that Canada would soon be on its way to price stability.

Initial optimism over what the monetary targets could deliver soon gave way to frustration as inflation began to rise again in the late 1970s. A second oil shock and continued fiscal expansion added to the inflation pressures that were already in place. By the early 1980s, inflation had returned to double-digit levels, and inflationary expectations were again beginning to accelerate. Research at the Bank revealed that one of the reasons for the weak relationship between the movements in M1 and subsequent changes in prices was the high interest elasticity of the demand for this narrow money aggregate. The modest changes in interest rates that were required in the short run to keep M1 within its target band were not enough to have much impact on real output or prices.[20]

Another, more serious, problem in using M1 was the uncertain impact of financial innovation. Technological developments had allowed financial institutions to introduce a number of new products designed to help depositors protect themselves from high inflation by shifting their idle balances into daily interest savings accounts. This weakened the relationship between M1 and the other macroeconomic variables that normally influenced its behaviour, and made it difficult for the Bank to interpret its movements.

2.5 The Search for a New Nominal Anchor: 1982 to 1990

In 1982, after several disappointments, the Bank of Canada reluctantly conceded that the monetarist experiment had not worked and that the Bank would no longer be targeting M1. Movements in the monetary aggregates would continue to be monitored for any information they might provide on future economic developments, but no aggregate appeared to be sufficiently reliable to serve as an intermediate target. Similar difficulties were experienced in other industrial countries that had adopted money targets and, one by one, they were forced to follow Canada's example. Gerald Bouey, who had succeeded Louis Rasminsky as Governor of

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20. G.G. Thiessen. 1983. "The Canadian Experience with Monetary Targeting." In *Central Bank Views on Monetary Targeting*, 100–104. Proceedings of a conference held at the Federal Reserve Bank of New York, May 1982. New York: Federal Reserve Bank of New York.

the Bank of Canada in 1973, probably summarized the situation as well as anyone when he said: "We did not abandon M1, M1 abandoned us."[21]

The search for a new nominal anchor had begun well before the Bank announced it would no longer be targeting M1, but without much success. Alternative definitions of money were tested and found to be equally unstable. For a time, nominal income was used as a guide for the Bank's internal forecasting exercise, but it was also deemed to be unsuitable as an intermediate target. While it included the two variables that macroeconomists cared about most—output and prices—precise judgments were still required about the state of the real economy in order to make it work. Moreover, explaining nominal-income targeting to the public would be difficult. Inflation and money growth were generally regarded as legitimate central bank objectives, but efforts to control the level of spending and income might be seen as too invasive and suspiciously close to trying to control the level of employment.

Although conducting monetary policy without a clear objective posed certain problems, the eclectic approach that the Bank was forced to follow after it abandoned M1 did yield some results. The strong monetary policy medicine that Canada had applied in early 1981, following similar action in the United States, soon brought inflation down. And within a short period of time, output and employment also began to recover. Through most of the 1980s, inflation hovered in a range of 3 to 5 per cent. While the decade as a whole was viewed by many as a time of prosperity and growing optimism, much of this apparent affluence was based on speculative activities focused particularly on the real estate sector. Expansionary fiscal policies and rising world commodity prices were again generating strong inflationary pressures, which monetary policy was trying to resist. These pressures were largely masked, however, by the sharply appreciating exchange rate.

Without an explicit target for monetary policy, the Bank had difficulty explaining its policy actions. In addition, there was no obvious basis on which to judge its performance. One could use rough qualitative benchmarks such as strong growth, rising employment, and the absence of high inflation as performance measures, but monetary policy needed a firmer place to stand. It was supposed to provide a nominal anchor for the economy, but seemed to be lacking an anchor of its own to help guide policy decisions and ensure accountability. As Gerald Bouey explained in 1982,

> Central bankers are always looking for more reliable guides to the conduct of monetary policy than they have had. Part of the reason is that they want to find a better place to stand against the constant pressures that arise from many sources—

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21. Canada. House of Commons Standing Committee on Finance, Trade and Economic Affairs. *Minutes of Proceedings and Evidence,* No. 134, 28 March 1983, p. 12.

> almost irrespective of economic conditions—for easier money and lower interest rates.[22]

From today's perspective, explicit inflation targets might seem like an obvious alternative, but price stability had not yet been widely accepted as the pre-eminent objective of monetary policy. Graham Towers, James Coyne, Louis Rasminsky, and Gerald Bouey had extolled the virtues of price stability and had regarded it as one of the Bank's most important objectives. But it had never been defined and the extent of the Bank's commitment to achieving it was not always clear. The major preoccupation of the 1970s and early 1980s had been to "get inflation down." How far down was a question that could be postponed for a later day, once we were within striking distance of this nirvana.

The problems that arose because there was no clearly articulated and credible objective or end point for monetary policy were most evident in financial markets. Changes in U.S. interest rates or some other external shock would often produce exaggerated swings in Canadian interest rates and the exchange rate, and made it difficult for the Bank to control domestic monetary conditions. A sudden increase in U.S. interest rates, for example, would put sharp downward pressure on the Canadian dollar, causing import prices to rise and raising concerns about the future course of inflation. Because inflation expectations were not firmly anchored, prices in other areas of the economy would also come under upward pressure, setting off a potential inflationary spiral. Investors, worried about the future value of their money, would start to demand much higher rates of interest. The end result was higher interest rates, a weaker dollar, and much stronger inflation expectations than the domestic economic conditions alone would warrant.

Any efforts to keep interest rates low and to support economic activity were often misinterpreted as signs that the Bank was, in fact, pursuing an inflationary policy and would only make matters worse. As a result, the Bank found itself having to follow the U.S. lead on interest rates and resist downward movements in the exchange rate for tactical reasons. Failure "to defend the Canadian dollar" would produce even larger increases in domestic interest rates and inflict more serious damage on the economy.

A major step towards dealing with this problem was taken in January 1988, when John Crow, the Bank's new Governor, delivered his Hanson Memorial Lecture at the University of Alberta. Price stability was set out explicitly as the Bank's prime objective and, realistically, the only thing that it could deliver with the tools at its disposal. The hard lessons that had been learned from past experience were reviewed, as well as the advantages that might be realized with the consistent attainment of this objective:

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22. G.K. Bouey. 1982. "Monetary Policy: Finding a Place to Stand." The 1982 Per Jacobsson Lecture, University of Toronto, Toronto, Ontario, 5 September.

> What pace of monetary expansion is most helpful to the development of the Canadian economy? Theory and experience—much of this experience not overly cheerful but certainly instructive—both point to a very clear answer. Monetary policy should be conducted so as to achieve a pace of monetary expansion that promotes stability in the value of money. This means pursuing a policy aimed at achieving and maintaining stable prices.[23]

The Hanson lecture contained probably the strongest commitment to price stability that had ever come from the Bank of Canada. It was designed to convince people that the Bank would do whatever was necessary to achieve price stability. Businesses, households, and the government were, in effect, put on notice—any investment and spending plans that were based on inflationary expectations were likely to end in disappointment.

Price stability, although often referred to, was not, however, clearly defined. It was presumably much lower than the prevailing rate of inflation (which was hovering around 4 per cent and under upward pressure), but this was not made explicit. In addition, the path that inflation was expected to follow on the way to price stability was not outlined. A desired inflation path was an important part of the Bank's internal projection exercise, but it was not announced publicly.

2.6 Inflation Targets: 1991 to 2000

All of this changed in February 1991, when the Bank of Canada, in a joint statement with the Minister of Finance, announced the introduction of inflation-reduction targets. Academic economists had not been advocating targets focused directly on inflation. They had, however, already built a strong case for some form of nominal anchor, arguing that an explicit commitment of this sort would improve central bank accountability, help shape expectations, facilitate the disinflationary process, and allow central banks to avoid something known as the time-inconsistency problem.

According to the time-inconsistency theory, monetary authorities were subject to a serious inflationary bias. If a central bank could initiate an unexpected easing in monetary policy, it might be possible to raise short-term output and employment. However, once businesses and households realized what had happened, they would quickly revise their inflation expectations, and output and employment would return to their original equilibrium levels. Because businesses and households knew that central banks were always subject to this temptation, they would assume that central banks might try to trick them (even when no monetary policy easing was being planned) and would raise their inflation expectations in anticipation. The end result was a

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23. J. Crow. 1988. "The Work of Canadian Monetary Policy." The Eric J. Hanson Memorial Lecture, University of Alberta, Edmonton, Alberta. *Bank of Canada Review* (February): 3–17.

kind of prisoner's dilemma, in which inflation was higher than it would otherwise be, while employment and output remained unchanged. Without some form of credible commitment that would allow monetary authorities to foreswear such policy actions, society was trapped in an inferior equilibrium.

Inflation targeting, though it had not been proposed by any of the time-inconsistency authors, might be a way to correct this problem. The public nature of announced targets would raise the costs associated with any failure to meet them and, hopefully, move the economy towards the preferred, low-inflation equilibrium.

Central banks were quite skeptical about whether the time-inconsistency literature provided a useful or accurate description of the situation in which they found themselves.[24] Even so, the idea of inflation-reduction targets did have strong appeal, but central banks were still reluctant to adopt them. Their resistance can probably be credited to two things. First, central banks were worried about what would happen to their credibility if, for some reason, they failed to meet the inflation objectives. Second, they were concerned that the inflation targets might be too constraining. Their ability to deal with unexpected shocks, such as an oil crisis or a jump in other world commodity prices, would be severely restricted unless the target bands were quite forgiving. But if the inflation target range was wide enough to accommodate these sorts of disturbances, it was unlikely to provide much discipline or comfort in more tranquil periods.

The answer to both problems is now clear. If central banks are unable to achieve and maintain their targets on a regular basis, this is something that should be shared with the public. Credibility is not enhanced by the absence of targets. Special exceptions can be made for commodity-price shocks and other unusual events, as long as the monetary authority has a plausible explanation. The advantage of inflation targets, even if they occasionally cannot be achieved, is that they provide a convenient basis from which policy actions and outcomes can be judged.

It was one thing to understand these points on a conceptual level, it was another to put them into practice. Canada was the second country in the post-war period to introduce inflation targets (New Zealand was first). Even then, it is unlikely that targets would have been adopted as early as 1991 if the government had not been planning to introduce a new goods and services tax (GST). The government actively supported the introduction of inflation targets because it was seen as a way of preventing the one-time jump in prices associated with the GST from becoming entrenched in inflation expectations. More specifically, it would help to reassure

24. Central banks believed that there was an inflationary bias in the system, but that the pressure came from governments rather than any desire on their part to boost output and employment through an unexpected jump in inflation. (See P. Howitt. 2000. "Learning about Monetary Policy and Theory." Brown University Working Paper. Unpublished.)

government employees who were subject to salary restraints, as well as other wage earners, that inflation would be held in check.[25]

The lower and upper bounds of the original inflation-reduction targets were set at 2 and 4 per cent, respectively, with a midpoint of 3 per cent. These bounds were to gradually decline to 1 and 3 per cent by the end of 1995. At this point, a new inflation target was to be announced, consistent with long-run price stability and based on the experience of the previous four years. While the inflation targets have been renewed twice during the past nine years, neither the government nor the Bank were convinced on those occasions that the conditions were right for a final determination of where the long-run target should be set. The Bank decided that further research and experience with the existing targets were needed before committing itself in this manner.

As I have pointed out elsewhere,[26] inflation-control targets have had a major impact on the Bank and on the way it conducts monetary policy. Perhaps the most important influence has been to encourage greater transparency. With an explicit target for inflation and the central bank accountable for achieving that target, there is a strong incentive to be as forthright as possible about any trends in the economy likely to influence inflation, the decisions policy-makers may have to take to achieve the targets, the shocks that may temporarily push inflation outside the target range, and the pace at which inflation can be returned to the target.

As monetary policy has become more transparent, it has become evident that it works more effectively when financial markets and the public understand what the Bank is doing and why. We no longer regard surprise as an important element in monetary policy actions. We prefer to see private agents anticipate, rather than respond to, monetary policy actions.

3. Where Are We Now?

Monetary policy has come a long way since 1935. It is now directed towards a single long-run objective: the attainment and maintenance of price stability. Monetary authorities in Canada and elsewhere have realized that this is the best contribution that monetary policy can make to economic welfare, and indeed the only one that they can deliver on an ongoing basis. There is no inherent conflict between price stability and most of the other objectives that are set out in the preamble to the Bank of Canada Act. Focusing on price stability helps us to guard against the sort of systematic errors that often occurred when we tried to aim directly at output

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25. The Economic Council of Canada had also recommended that Canada adopt inflation targets in its 1990 report. Economic Council of Canada. *Transition for the 90s. Twenty-Seventh Annual Review* (Ottawa: Supply and Services Canada. 1990).

26. G. Thiessen. 1998. “The Canadian Experience with Targets for Inflation Control.” The 1998 Gibson Lecture, Queen’s University, Kingston, Ontario, 15 October.

and employment. Optimistic estimates of potential output and full employment in the early 1970s introduced a strong inflationary bias into the policy-formulation process and did not deliver any of the long-run improvements in real economic performance that the Phillips-curve literature had promised.

Today's monetary policy differs from past approaches in yet another important way. It is conducted in a far more open and less-complicated manner. Secrecy and surprise are no longer critical elements of our modus operandi. The Bank tries to work with markets, rather than against them, to avoid surprising them with unexpected actions. Greater transparency facilitates the policy-transmission process by conditioning market expectations, and helps avoid unnecessary confusion about the reasons for our actions.

Various techniques for manipulating domestic credit conditions and the external value of the currency by means of direct controls, moral suasion, and active foreign exchange market intervention are no longer used. Globalization and market liberalization have eliminated many of the barriers that used to separate different segments of the domestic financial system and have subjected them to increased international competition. As a result, these techniques became both less effective and more costly in terms of their impact on market efficiency. Monetary authorities now have a clearer understanding of the limitations of alternative policy measures, as well as more sympathy for indirect, market-based solutions.

Monetary policy is now implemented in a more straightforward manner. Today, policy adjustments are effected and signalled to the market mainly through announced changes in the Bank Rate and the target band for the overnight interest rate. Private agents are then free to determine how these changes will be transmitted through the rest of the financial system and the economy in general. The Bank simply issues a press release indicating what the new Bank Rate is, and this in turn anchors the short-term end of the yield curve.

Central bank independence and accountability have also been more clearly defined. As I explained earlier, the 1967 amendments to the Bank of Canada Act allow the Minister of Finance, acting on behalf of the government, to issue a directive to the Governor if serious differences arise on the conduct of monetary policy that cannot be resolved. The directive must indicate the specific policy changes that the Bank is supposed to undertake. Ultimate responsibility for monetary policy, therefore, rests where it should in a democratic society—with the elected government. But because of the consequences of issuing a directive, it is likely to be used only in unusual circumstances. Thus, a high degree of operational independence has, nevertheless, been preserved to allow the Bank to maintain its medium-term focus for monetary policy without the short-run pressures that arise in the political process.

Moreover, the explicit targets for inflation control in Canada have been set jointly by the Bank and the Minister of Finance. It is then the Bank's responsibility to achieve the agreed target. An explicit objective, a clear assignment of responsibility for achieving it, as well as the appropriate instrument and independence of action to do what is required to meet the objective, are crucial ingredients in an effective process of accountability. That is what we now have in place in Canada for monetary policy.

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Where does all this leave us? We now have a much better understanding of what monetary policy should be asked to do, who should be responsible for it, and how it should be conducted. But has the evolutionary process been pushed as far as it can go? Is the transformation of monetary policy coming to an end? The answer, of course, is no. But I will leave it to my successor to return at some point in the future and update you on the evolving path of monetary policy in Canada.