Notes for Remarks by Sheryl Kennedy
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Defining Price Stability

Good evening ladies and gentlemen. It's a pleasure to be in Frankfurt to attend this conference on "Defining Price Stability." I would like to thank all the presenters and discussants for their insightful work. I would also like to thank Larry Christiano of Northwestern University, Gabriel Fagan and Massimo Rostagno of the ECB, and Bob Amano of the Bank of Canada, who organized this conference. And I want to say a special "Thank You" to my colleagues at the ECB for being such gracious hosts.

Tonight, I will touch upon some of the issues central banks face when establishing a monetary policy framework and defining "price stability," particularly the challenges I see in the decades ahead. But before turning to the future, let me highlight some lessons from the past. I'll draw on Canada's monetary history, which although unique in some respects, has many elements in common with those of other countries. When our inflation-targeting agreement comes up for renewal with the Government of Canada in 2011, the issues facing us will be very different than those we faced when we embarked on inflation targeting in 1991. Recalling our experience during the 20 years before inflation targets, as well as during the 20 years with them, may be instructive as we think about what will be the best monetary policy framework for the 20 years to come.

So, we'll start with the 1970s – a turbulent decade for monetary policy globally. By 1974, we had double-digit consumer-price inflation in Canada. A wage-price spiral added fuel to the fire. Inflation expectations, which are helpful in keeping inflation in check today, were not at all helpful in the early 1970s.

In 1975, the Canadian government introduced wage and price controls. The controls did restrain wage growth, but the same cannot be said for prices.[1] With hindsight, we know that monetary policy was too easy over that period. And the system of wage-price controls was difficult to administer and compounded supply shortages.[2] Ultimately, the controls were eliminated by the end of 1978.

Also in 1975, the Bank of Canada adopted an explicit target for the growth of the M1 monetary aggregate. Besides providing a nominal anchor, it was

[1] John Sargent, "The 1975-78 Anti-Inflation Program in Retrospect," Working Paper No. 2005 -43 (Ottawa: Bank of Canada, 2005), 27.
[2] John Crow, Making Money: An Insider's Perspective on Finance, Politics and Canada's Central Bank. (Toronto: John Wiley & Sons Canada, 2002), 146

thought that the target would serve as a more reliable guide for the conduct of monetary policy than other approaches.[3] Inflation expectations were highly volatile at the time, making the real interest rate difficult to measure.

The design of the monetary targets was premised on the historically stable relationship between money and nominal spending. But, ironically, the monetary-targeting regime was introduced just as this relationship was undergoing major structural changes. By the early 1980s, M1 was growing slowly, but inflation was accelerating. In 1982, the Bank abandoned the monetary aggregate targets, or, to paraphrase then-Governor Gerald Bouey, the aggregates abandoned us.

With other monetary aggregates no more reliable than M1, the Bank was forced to look elsewhere for a nominal anchor. In 1988, Governor John Crow gave the Hanson Lecture, where he identified price stability as the principal objective of monetary policy. Although he did not define price stability, it was clear that it was less than the prevailing 4 per cent inflation rate. Governor Crow deliberately kept the idea of zero inflation as an option, and did not try to make a distinction between zero inflation and price-level stability.[4]

In 1990, the Government of Canada proposed the idea of explicit, public targets for inflation to the Bank, and one year later, Canada followed New Zealand, becoming the second country to adopt inflation targeting. Initially, the focus was on gradually reducing the rate of inflation to the 2 per cent midpoint of a 1 to 3 per cent range by the end of 1995, on the way to complete price stability. Again, the concept of price stability was not precisely defined but was characterized as a rate of inflation clearly less than 2 per cent. However, the transition to price stability stalled at 2 per cent and has remained there since 1994.

Like other early adopters, Canada's move to inflation targeting came more from expediency to try to anchor inflation expectations, than from a clear conviction that it would work. At the time, many questioned our ability to deliver good economic performance under this new monetary framework. There was not a clear body of research supporting this approach. But as Governor Crow has said: it was a "beau risque."

As it happened, inflation targeting has surpassed our expectations. It has proven to be a durable and robust monetary policy framework, helping to anchor inflation expectations and dampen economic fluctuations[5]. Well-anchored inflation expectations have helped to reduce the propagation of price shocks to wages and prices and have dampened the sensitivity of inflation to excess demand and supply. This has made the conduct of monetary policy more efficient

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[3] Ibid., 147
[4] Ibid., 162
[5] David Longworth, "Inflation and the Macroeconomy: Changes from the 1980s to the 1990s," *Bank of Canada Review*, Spring 2003.

and more effective. In short, better monetary policy has led to better inflation outcomes, increased policy credibility, and a more stable macroeconomic environment.

Moreover, consumers and businesses have been able to manage their finances with greater certainty about the future purchasing power of their savings and income. Economic signals sent by movements in relative prices have been clearer, and labour markets have been able to function better. Low and stable inflation has also meant that interest rates, both in nominal and real terms, have been lower.

We have discovered additional benefits to inflation targeting. Under Governor Thiessen, inflation targets proved very helpful in promoting greater transparency and accountability.[6] If inflation persistently deviates from the target, we are committed to explaining the reasons why, what we will do to return it to target, and how long we expect the process to take. Further, because we make our monetary policy announcements on eight pre-determined dates each year, our research and analysis has become more focused and rigorous. Targets and the progress of inflation relative to expectations have helped us as we struggled to judge unobservables such as the output gap.

With experience and research, our conduct of inflation targeting has continuously evolved. This has led us on occasion to take policy actions that at the time were considered to be risks, but in the end proved to be better monetary policy. For example, I am thinking of our action in early 1996 to bring the Canadian policy interest rate lower than the comparable rate in the United States.

Over time, we also evolved in our thinking about the exchange rate, abandoning regular intervention to support orderly markets, as well as interest rate moves designed specifically to affect the currency.[7] Under Governor Dodge's leadership, we have come to distinguish between currency movements that are directly related to changes in the demand for Canadian goods and services and those that are not.[8] This is easier to say than to put into practice, but with this perspective, monetary policy can be focused on the inflation target, and the exchange rate can serve its important role as a price signal that promotes efficient allocation of resources, facilitates adjustment, and acts as a shock absorber.

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[6] Gordon Thiessen, "Accountability and Transparency in Canada's Monetary Policy," Speech to Metropolitan Halifax Chamber of Commerce (2000).
[7] Sheryl Kennedy, "Monetary Policy during Economic Shocks: Lessons Learned," Speech to the Canadian Association of Business Economists (2003).
[8] David Dodge, "Monetary Policy and Exchange Rate Movements," Speech to the Vancouver Board of Trade (2005), and Christopher Ragan, "The Exchange Rate and Canadian Inflation Targeting," *Bank of Canada Review*, Autumn 2005.

In general, our positive experiences with inflation targeting have been similar to those of other countries. Those countries that have adopted it have kept it. Two of the biggest non-targeters – the U.S. Federal Reserve and the Bank of Japan seem to have moved slightly closer to it. China may also consider inflation targeting as its market structures mature and it moves to a more flexible exchange rate. So the question can be asked – given more than 15 years of success – Why would we, or these other central banks, consider anything other than the current inflation-targeting systems? Why would we ever consider major changes, such as abandoning the 2 per cent target to pursue another goal of "price stability," or other refinements to the monetary policy regime?

I would answer, quite simply, that good past performance is no guarantee of future success, and certainly should not be taken as proof that our monetary policy framework can never be improved. While I can argue that inflation targeting was absolutely the right system for Canada over the past 15 years, it is certainly not a "given" that the inflation-targeting system as we know it today will continue to be the best we can do as we face new issues in the increasingly globalized economy of the future.

The coming decades will hold several challenges that can be expected to influence any definition of price stability and how we go about achieving it. We have already started to feel the effects of the economic emergence and integration of China, India, and other countries through relative price shocks. Demand from these economies drives up commodity prices, while their huge labour forces restrain real wages. Asset-price misalignments pose another challenge, especially in an increasingly globalized financial system. In recent years, low and stable inflation has proved to be insufficient to prevent asset-price bubbles. Borio and Lowe have pondered the existence of a "paradox of credibility" – that highly credible inflation targeting may cause excess demand pressures to show up as asset-price inflation, rather than as consumer-price inflation.[9] Currency markets can also become misaligned, given the differences in regimes and, particularly, in the extent of flexibility allowed by individual countries. Well-anchored inflation expectations also have a potential "dark side," or on the other hand, there is a fear that they may abruptly become unhinged. Could our target once again abandon us? Finally, many countries are facing a demographic transition that may have implications for monetary policy. With the aging of the population, a growing number of people will rely on fixed incomes, leading to greater political demand for lower inflation. Some studies suggest that population aging will also lead to capital deepening and lower equilibrium real interest rates, increasing the probability of hitting the zero bound on nominal interest rates. So, demographics are potentially a double-edged sword in our search for the best monetary policy framework for the future.

[9] Claudio Borio and Philip Lowe, "Asset Prices, Financial and Monetary Stability: Exploring the Nexus," Working Paper No. 114 (Basel: Bank for International Settlements, 2002).

Recognizing the success of our framework to date, the Bank and the Government of Canada renewed our inflation-targeting agreement last year for another five-year period. But, at the same time, given the future challenges that I just mentioned, we also announced plans to lead a concerted research program to examine whether and how the monetary policy framework in Canada might be improved.[10] Specifically, our research program focuses on the potential costs and benefits of targeting a lower rate of inflation or of pursuing a price-level target instead of an inflation target, but we also are open to other questions that bear examination.

We have seen that the economy functions better at a low rate of inflation. But would a still lower inflation rate help the Canadian economy to function even better? There are a number of reasons to think so. Lower inflation would reduce the misallocation of resources by reducing price dispersions and making price signals clearer. It would also reduce the costs of updating prices and the economic distortions coming from a non-indexed tax system.

Two main arguments have traditionally been advanced against the idea of targeting a lower inflation rate. The first is the concern about downward wage rigidity – that it is more difficult to adjust real wages downwards in a very-low-inflation environment, because this will likely involve cuts to nominal wages. The second argument is that central banks could find it difficult to implement a stimulative policy in such an environment, because nominal interest rates cannot go below zero.

With respect to downward wage rigidity, recent research, as well as labour market developments generally, do not appear to provide a compelling argument against a lower inflation target. But the zero-bound constraint on interest rates remains a critical issue.

Economic theory suggests that targeting a path for the price level would benefit the economy by adding certainty about prices over the long term. This should support economic efficiency by reducing the risks associated with long-term financial contracts. Providing added certainty about future prices would be of particular benefit to the increasing numbers of people who will be living on fixed incomes. Further, price-level targeting might also help central banks avoid some of the difficulties associated with the "zero-bound" issue. If people anticipate that the central bank would take the appropriate measures to achieve the target, expectations about the future price level could become very well anchored. In these circumstances, it would take smaller moves in nominal interest rates to bring about the needed change in aggregate demand. Hence, the zero bound would be less likely to become a problem.

There has been a lot of research on optimal monetary policy recently. I am pleased to see that there also is growing interest in researching optimal inflation, defining price stability, and in going back to first principles to consider

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[10] Bank of Canada, *Renewal of the Inflation Control Target: Background Information* (2006).

what is the best monetary policy framework. This research is timely, not only for us at the Bank of Canada, but also for other countries that may be considering these questions over the coming years.

Clearly, there are a lot of questions to explore: too many for us at the Bank of Canada to address ourselves. That is why we wanted to get all of you, as well as others, involved in this research agenda, so that we can benefit from your knowledge, expertise, and diversity of views. That is why the Bank is happy to support and actively participate in conferences such as this one. And it is why we have created a website: www.inflationtargeting.ca to publish not only our work, but also through links and a calendar of events to provide a clearinghouse for all our efforts to determine price stability, optimal inflation, and the best monetary policy framework to address the challenges ahead.

On that note, let me close by reiterating my thanks to all the presenters and discussants, and to the organizers and our ECB hosts. I have learned a lot today, and I look forward to continuing to discuss and debate the best framework for conducting monetary policy with you tomorrow and over the next few years. I hope you enjoy the conference.