Remarks by Mark Carney
Governor of the Bank of Canada
Carleton University
11 March 2010
Ottawa, Ontario

CHECK AGAINST DELIVERY

Principles for Interesting Times

I would like to thank students from universities across Canada for joining me on this special day, the 75th anniversary of the Bank of Canada. This afternoon, I will speak about the past and the present in the hope of enticing some of you to participate in the Bank's future.

Let me caution market participants that nothing that follows relates to the "near future," that is, the horizon relevant for monetary policy decisions, so if you are not interested in the Bank's history, the Bank's gift to you on our birthday is an hour of found time.

Introduction

The Bank of Canada's mandate is to preserve the value of the nation's currency and to promote the economic and financial welfare of Canadians. As a consequence, we focus on the major macroeconomic issues of the day. Over the past two years, these have been considerable.

With current debates ranging from the relationship between price and financial stability to the future of the international monetary system, it is an exciting time in central banking. However, I would argue that for students such as yourselves, the issues facing central banks are always intriguing since they go to the heart of how modern economies function and, indeed, how human beings behave.

The Bank in turn needs you. The Bank is a learning organization, with immense responsibilities. Our work is grounded in academia, honed by analysis, and disciplined by an unrelenting focus on our mandate. Our response to the recent economic crisis has risen to the highest standard set over our history. Guided by well-researched, policy-based frameworks, the Bank has acted decisively. As a result, the clarity and credibility of these frameworks has made action more powerful. The importance of this combination has been repeatedly demonstrated.

The formidable economic and financial challenges facing Canada today are not necessarily more intractable than those in the past. Economic forces do not change. However, the speed and scale of information, capital flows, and trade are radically different. The global economy is more fundamentally interconnected than ever before—and that means the response times for policy-makers have shortened dramatically. In this environment, the value of principles-based policy frameworks is supreme.

Not for publication before 11 March 2010
13:50 Eastern Time

I am reminded of a story told to me by Jean-Claude Trichet, President of the European Central Bank. A mutual colleague, at the start of the crisis, was visiting a small village in the Scottish highlands. He was bereft of his BlackBerry and was anxious for the latest financial news. He entered a newsagent and asked for the Financial Times.

- The shopkeeper said, “Would you like yesterday’s paper or today’s?”
- Given the weight of events, he answered without hesitation, “I would prefer today’s.”
- To which the shopkeeper replied, “Then come back tomorrow.”

In today’s world, policy-makers cannot wait until tomorrow. They must act immediately. To do so effectively, they need guiding principles.

Permit me to elaborate by recounting three challenges that have resonated over the years.

Monetary Policy Response to Global Economic Crisis

First, consider a severe, synchronous global recession, triggered by a financial crisis at the heart of capitalism. Commodity prices crash, protectionism is on the rise. There are bank failures around the world, although not in Canada. Nonetheless, our country is not left unscathed. Unemployment rockets and economic activity plummets. Does that sound familiar?

Triggered by the stock market crash of October 1929, the Great Depression had a devastating impact on the global and Canadian economies. By 1933, Canadian equity prices had fallen more than 70 per cent from their peak, and national output had dropped by 40 per cent, with the drought-stricken prairies especially hard hit. Nationwide, deflation was punishing, with consumer prices falling by more than 9 per cent in both 1931 and 1932. The human cost was staggering, with the unemployment rate hitting a high of 20 per cent in 1933.

By 1933, with bank lending still contracting, pressure on the federal government to “do something” had become intense. Reflecting the high cost and low availability of credit, there was widespread public distrust of the chartered banks.[1] Western farmers, suffering from sharp declines in both crop yields and prices, were vocal critics of the Eastern-controlled banks and strongly favoured the creation of a central bank. The Government responded with the passage of the Bank of Canada Act, and we opened our doors for business and issued our first bank notes exactly 75 year ago.

So what did the Bank do? Initially, with respect to monetary policy, the answer was, not much. The economy was already starting to recover, and the Bank maintained its Bank Rate unchanged at 2 1/2 per cent.[2] As well, the notion that central banks could stabilize macroeconomic activity within their borders is relatively new.[3,4]

---

[1] The traditional rate for prime commercial loans was 6 per cent in the early 1930s, implying real interest rates (after inflation) of as much as 15 per cent or more.
[2] Indeed, the first cut in the Bank Rate did not occur until 1944.
[3] See D. Dodge, “70 Years of Central Banking in Canada,” *Bank of Canada Review* (Winter, 2005–2006): 3–5.
[4] The Bank believed that since chartered banks rarely, if ever, borrowed from the central bank, its Bank Rate had little impact on commercial rates. It did not apparently consider whether banks would change their

Moreover, the Bank retained a "gold mentality," even though Canada had officially broken the formal link between the Canadian dollar and gold in 1931. Consequently, there was a reluctance to do anything that might induce capital outflows. It was also widely believed that U.S. rates provided an effective floor for comparable Canadian rates.[5]

Contrast that to the recent experience. The so-called "Great Recession" from which we are just emerging had the potential to replicate the dire experience of the 1930s. However, while the reverberations of the recent experience are far from finished, the aggressive and timely actions of global central banks, including the Bank of Canada, have not only averted the worst, but also created the prospect of a sustained recovery.

Recognizing the strong headwinds caused by the seizing up of financial markets, the Bank has dramatically eased monetary conditions and provided significant liquidity to the financial system. The Bank's actions were guided by its forward-looking inflation-targeting framework, which prompted easing before the recession began and accelerated stimulus once the crisis intensified.

Between December 2007 and April of last year, the Bank lowered the overnight target by a total of 425 basis points, cutting it to a historic low of 1/4 per cent, its lowest possible level. Once we reached that effective lower bound, we developed and published a framework for unconventional monetary policy. Our conditional commitment is the only element of that framework that we have activated. While the Bank's unconventional policy framework demonstrated to Canadians that we were not out of bullets, the use of the conditional commitment reassured them that we were not trigger happy but, rather, disciplined by the pursuit of our inflation target.

Action alone is not sufficient. It must take place within the proper context. Once again, I stress that the Bank places supreme importance on policy measures within a well-developed framework.

The Bank's monetary policy response to the current crisis has been consistent with Ben Bernanke's *mea culpa* to Milton Friedman and Anna Schwartz, regarding the lack of action by the Federal Reserve during the Depression: "You're right, we did it. We're very sorry. But thanks to you, we won't do it again."

Bernanke's admission underscores the importance of research and learning – something the Bank has long understood. In-depth, comprehensive, and impartial research has always been critical to our success. One of the first steps taken by our first governor, Graham Towers, was to create a research and statistical department.[6] Through aggressive recruitment of promising young academics and co-operation with university-based

---

policy if the Bank Rate were dropped. The Bank Rate was seen as a lender-of-last-resort rate as opposed to a monetary policy tool.

[5] The Bank was active on other fronts. In April 1936, Alberta defaulted on its provincial debts and unilaterally reduced the rate paid on bonds. Other Western provinces threatened to follow suit. As monetary policy is national in scope, it could not address such regional problems. Fearing a second provincial default, Towers instead advanced $3 million to Saskatchewan. This was an extraordinary move, unique in the history of the Bank.

[6] See D. McQueen, "Economic Research at the Bank of Canada, 1935-65," *Canadian Business Economics* 5, No. 2–3 (Winter/Spring 1997): 89–95.

researchers and international colleagues, innovations have included leading macro models (such as RDX and ToTEM), work on price-level targeting, and cutting-edge research on payments systems.[7]

The Bank has also learned from the conduct of policy, including from our mistakes. Gerald Bouey famously recognized that “we did not abandon M1, M1 abandoned us,” before initiating a search for a new monetary anchor. More recently, the Bank has been determined not to repeat the errors of the 1970s, when we overestimated the rate of potential growth in the wake of a major global shock.[8]

Most significantly, the Bank is now guided by the discipline of an inflation target. Canada helped pioneer inflation targeting, having adopted it in 1991 under the Governorship of John Crow.[9] During the Great Recession, its value was clear. By disciplining our objectives and promoting transparency and accountability, the target has anchored inflation expectations, thereby ensuring that reductions in our overnight rate drive down real interest rates and stimulate the economy.

Financial System Stability and the Provision of Liquidity

Consider now a second challenge that has echoed across the decades. In the midst of an economic crisis, a mid-sized financial institution fails, potentially triggering a host of counterparty defaults across financial systems. The shock spreads globally, threatening market functioning and financial stability.

This is the story of Bankhaus Herstatt, a mid-sized German bank, active in foreign exchange markets, that failed in 1974 during the first oil shock. It was shut down at the end of the business day, when many banks still had foreign exchange contracts for settlement. The international impact was substantial, even in the “less-connected” world of the 1970s. As the repercussions from failed transactions mounted, gross funds transferred in New York fell by 60 per cent over the next several days.

The Herstatt failure exposed how inadequate market infrastructure and more open capital accounts transmit shocks globally. It led to a deliberate, global process to address these shortcomings.

That same year, governors of the central banks of G-10 countries, including Bouey, established the Basel Committee on Banking Supervision, which continues to serve today as an important forum for co-operation on banking supervisory matters. In 1980, a second group on payments systems was established; later upgraded to the Committee on Payment and Settlement Systems (CPSS).

Following smaller episodes of settlement and other financial failures, the work of these committees eventually led to the establishment of CLS Bank.[10] CLS links national payments systems and simultaneously settles on its books the foreign exchange transactions submitted by its member banks.

[7] See J. F. Helliwell, “From Flapper to Bluestocking: What Happened to the Young Woman of Wellington Street?” *Bank of Canada Review* (Winter, 2005–2006): 31–39.

[8] See Bank of Canada, “Revisions to Potential Output,” *Monetary Policy Report* (April 2009): 12.

[9] New Zealand was the first country to adopt an inflation target, doing so in 1990. Canada followed, 11 months later.

[10] For instance, Drexel Burnham Lambert, Bank of Credit and Commerce International, Barings Bank, Long Term Capital Management.

Although the response to the failure of Herstatt was slow, it did eventually develop market infrastructure to remove daylight payment risk. It also promoted the deepening of institutional structures such as the G-10. Crucially, this work paid off during the recent crisis. The G-10 has coordinated some of the most important central bank initiatives. The foreign exchange payments system itself was rock solid, despite the enormous financial turmoil. However, new channels of contagion were revealed in new markets.

Following the collapse of Lehman Brothers, a mid-sized U.S. investment bank, in September 2008, the cost of interbank borrowing spiked up to unprecedented levels. The functioning of repo, stock, loan, and derivatives markets seized as collateral values plunged and a panic over counterparty risk swept the financial system. Within days, other storied institutions either collapsed or were pushed to the brink. The seizure of the entire global financial system was a very real possibility.

The virulence of open global capital flows meant that the response, this time, had to be crafted in days, not decades.

G-10 central banks, including the Bank of Canada, acted swiftly, by conducting a coordinated 50-basis-point interest rate cut. Then, in a historic meeting, G-7 countries, including Canada, committed to:

- use all available tools to support systemically important financial institutions and prevent their failure; and
- take all necessary steps to ensure that banks and other financial institutions have broad access to liquidity and funding.

The G-7 actions – while absolutely necessary – left the system awash in moral hazard. The need for principles-based policy frameworks once again became clear.

The Bank's extraordinary liquidity operations met this standard. As the crisis intensified, we introduced facilities anchored to a principles-based framework developed in the spring prior to the Lehman failure. Total outstandings peaked at $41 billion. These are now being unwound consistent with market conditions and our principles.[11]

The crisis also revealed grave shortcomings in market structure and regulation. On the former, rather than wait three decades, the Bank has already assisted an industry-led process to develop a central counterparty for Canadian repo markets. This initiative, which will go live later this year, will help keep core funding markets functioning continuously, including in times of stress. The Bank is also very active through the BIS in advancing reforms of global margining practices in order to dampen liquidity spirals, consistent with both the findings of academic literature and practical experience.[12]

---

[11] See D. Longworth, "Bank of Canada Liquidity Facilities: Past, Present, and Future," remarks delivered to the C.D. Howe Institute in Toronto, 2010. Available at http://www.bankofcanada.ca/en/speeches/. See also W. Engert, J. Selody, and C. Wilkins, "Financial Market Turmoil and Central Bank Intervention," Bank of Canada *Financial System Review* (June 2008): 71–78; L. Zorn, C. Wilkins, and W. Engert, "Bank of Canada Liquidity Actions in Response to the Financial Market Turmoil," *Bank of Canada Review* (Autumn 2009): 3–22; C.A. Northcott and M. Zelmer, "Liquidity Standards in a Macroprudential Context," Bank of Canada *Financial System Review* (December 2009): 35–40.

[12] See "The Role of Margin Requirements and Haircuts in Procyclicality," a report of the Bank for International Settlements' Committee on the Global Financial System, forthcoming, March 2010; M. K. Brunnermeier and L. H. Pedersen, "Market Liquidity and Funding Liquidity," *Review of Financial Studies*

Finally, through the G-20 and the Financial Stability Board, the Bank is helping to create a more resilient global financial system. In this regard, imperatives include a new bank capital regime, the development of a more systemic approach to regulation; and a series of initiatives to create a system that can withstand failure.[13]

In all of these initiatives, the Bank is relying on a combination of academic research, in-house analysis, and pragmatic judgment.

International Monetary System

Finally, consider a third challenge. The international monetary system frustrates adjustment and builds stresses. Current account surplus countries accumulate massive reserves, forcing a deflationary response on others. As a consequence, global economic growth is both more volatile and suboptimal. There is a need for a new international architecture, one that promotes timely and symmetric adjustment.

This challenge bedevilled the global economy during the 1930s. It could only be addressed after World War II, during the career of Louis Rasminsky, our third governor. Allow me to provide a little history. In the 1930s, the combination of fidelity to gold and tight Federal Reserve monetary policy meant that the deflationary pressures from the United States spread quickly, further weakening the global economy. Unable to adjust, countries were forced to abandon the gold standard, which had been adhered to for more than a hundred years. Though deficit countries experienced the crisis first, all countries suffered from the eventual collapse of the rules of the game.

In 1944, to avoid revisiting the problems of the 1930s, 730 delegates from 44 nations gathered in the village of Bretton Woods, New Hampshire. Rasminsky was prominent in these efforts.[14] During three weeks in July, he and his peers hammered out a new international monetary order aimed at establishing a system that allowed for a symmetric adjustment of balance of payments problems and a liberalized trading regime.

The Bretton Woods system of pegged, but adjustable, exchange rates was a direct response to the instability of the interwar period. Bretton Woods was very different from the gold standard: it was more administered than market-based; adjustment was coordinated through the International Monetary Fund; there were rules rather than conventions; and capital controls were widespread.

Despite these institutional changes, surplus countries still resisted adjustment. Foreshadowing present problems, countries often sterilized the impact of surpluses on domestic money supply and prices. Like today, these interventions were justified by arguing that imbalances were temporary and that, in any event, surpluses were evidence of virtue rather than “disequilibria.” In contrast, the zero bound on reserves remained a binding constraint for deficit countries, which eventually ran out of time.

22, 6 (June 2009): 2201–38; and M. K. Brunnermeier, "Deciphering the Liquidity and Credit Crunch, 2007–2008," *Journal of Economic Perspectives* 23, 1 (Winter 2009): 77–100.

[13] For a more detailed discussion, see M. Carney, “Reforming the Global Financial System,” remarks delivered to the Rendez-vous avec l’Autorité des marchés financiers, Montréal, 2009. Available at http://www.bankofcanada.ca/en/speeches/.

[14] As chair of the drafting committee, Rasminsky helped to reconcile views, mediating between the British and the Americans. After the formation of the IMF, Rasminsky became Canada’s first Executive Director, on a part-time, unpaid basis, while remaining a senior official of the Bank of Canada. J. Powell, *A History of the Canadian Dollar* (Ottawa: Bank of Canada, 2005): 65.

In 1950, Canada faced adjustment problems of its own, and the Bank, as a learning institution responded. Large capital inflows threatened to drive up inflation in Canada in the context of our then-fixed exchange rate. In an effort to maintain price stability, the decision, unpopular internationally, was taken to float the Canadian dollar, which duly appreciated. While this was inconsistent with the rules of Bretton Woods, it was consistent with their spirit, as a floating dollar allowed both for domestic stability and for the market to determine the rate, rather than being set by government for national advantage. Canada's move to a flexible exchange rate was a precursor to the breakdown of the Bretton Woods system 20 years later.

Fast forward to today.

The intensity and scope of the recent crisis reflected unprecedented economic disequilibria among national economies. Integral to the buildup of vulnerabilities in many asset markets were large, unsustainable current account imbalances across major economic areas. Once again, the international monetary system failed to promote timely and orderly economic adjustment. Some emerging markets today face challenges similar to those of Canada in the 1950s.

Last November, the G-20 launched an important process to address the challenges. Countries committed to promote strong, sustainable, and balanced growth in global demand and agreed on a framework that stresses the shared responsibility of member countries to ensure that their policies support the commitment.

In short, the success of these discussions is critical for sustainable medium-term, global growth. Canada brings to the table one of the soundest financial systems in the world and a macroeconomic strategy that contributes to sustainable and balanced global growth. Our economy is among the most open, and our policy response to the crisis has been one of the most aggressive. We also have a long experience with floating exchange rates and a deep understanding of how to best manage domestic policies in that environment.[15]

Conclusion

In conclusion, the Bank of Canada has faced formidable challenges over the past 75 years. These experiences have led us to innovate and to become a more effective institution.

As the global crisis revealed, the stakes are high. Canada is a small open economy subject to immense global economic forces. Shocks can be large and response times short. This reality places a premium on the disciplined application of principles-based policy frameworks. The Bank must combine the best of academic research, empirical analysis, and practical experience to manage in such a world.

[15] See, among others, J. Murray, S. Van Norden, and R. Vigfusson, "Excess Volatility and Speculative Bubbles in the Canadian Dollar: Real or Imagined? Bank of Canada Technical Report No. 76, 1996; J. Murray, L. Schembri, and P. St-Amant, "Revisiting the Case for a Flexible Exchange Rate in North America," *North American Journal of Economics and Finance* 14(2003): 207–240; J. Murray, "Why Canada Needs a Flexible Exchange Rate," in *The Dollarization Debate*, eds. D. Salvatore, J. Dean and T. Willett (New York: Oxford University Press, 2003); R. Issa, R. Lafrance, and J. Murray, "Turning Black Tide: Energy Prices and the Canadian Dollar," *Canadian Journal of Economics*, 41, 3(2008): 737–769.

This means that we will need people such as you: to take the torch and join our effort to maintain an environment in which Canadian households and firms can invest and plan for the future with confidence.