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# Reflections on Monetary Policy After the Great Recession

## Introduction

I am delighted to be in Montréal and to address the International Finance Club of Montréal in the Mount Stephen Club─a beautiful and elegant venue steeped in Canadian and Quebec history. It was founded by business leaders and is still a gathering place of grace and influence. As a native Montrealer, I am particularly pleased to be coming home to deliver my first speech as Senior Deputy Governor of the Bank of Canada.

The Mount Stephen Club opened its doors during the Roaring Twenties. As a meeting place for Montréal's business elite, a great many frank discussions must have taken place in its early days about the stock market bubble, the Crash of '29 and the ensuing Great Depression. It is with some humility that I suggest those discussions were likely similar to more recent conversations that have taken place within these walls about the credit boom, the financial crisis, and the Great Recession.

What I thought I could do today is contribute to this tradition of frank discussion by sharing with you some of my reflections on monetary policy coming out of the Great Recession. My remarks today focus on three themes:

- What's worked well
- What's been missing
- And what needs to be brought back after a period of neglect

After spending many years at the Bank of Canada, I was recently at the Department of Finance, where I was Associate Deputy Minister and Canada's G-7 and G-20 Deputy. During that time, I continued to work closely with the Bank, as well as with the Office of the Superintendent of Financial Institutions (OSFI) and other partners coordinating Canada's response to the financial crisis.

But as far as monetary policy goes, that remained solely the purview of the Bank of Canada. I was a spectator like everyone else here today. So I offer these reflections as someone who was on the outside looking in during the Great Recession.

## Global Economic Growth Has Returned

Although the Great Recession is now over and global economic growth has returned, it is not a great recovery. Growth is uneven, and there is an unusual degree of uncertainty. Globally, the financial crisis has left scars of lost output and jobs, declines in household wealth, impaired financial systems and large fiscal deficits. With households, financial firms and governments all deleveraging, the global recovery is expected to be modest and unemployment to come down only gradually.

In most advanced countries the recovery remains dependent on monetary and fiscal stimulus. Private demand is recovering, but the hand-off from public stimulus to private demand has yet to be accomplished. With fiscal policy expected to begin to withdraw stimulus in the coming year, monetary policy is likely to remain stimulative for some time.

Globally, the modest recovery in advanced countries is being balanced by continued strong growth in most emerging market economies. Policy responses and strengthened economic frameworks are helping emerging economies to boost internal demand, although in some cases this needs to be supported by greater exchange rate flexibility.

The International Monetary Fund (IMF) predicts that annual growth for 2011 in emerging economies will be about 6 ½ per cent, while worldwide growth is projected to be about 4¼ per cent in 2011.

As you know, Canada withstood the crisis better than most other countries, thanks to solid foundations─a mortar mix of good management and sound policy.

Looking ahead, the IMF expects Canada's economic recovery to be among the strongest of the G-7 countries over the next two years. Nonetheless, by historical standards, this is still a modest recovery.

Globally, the costs of this crisis have been enormous. Economic output in the G-7 countries fell by almost 5 per cent from peak to trough with output losses of $2 trillion for the global economy.

In Canada, GDP fell by more than 3 per cent from peak to trough, with output losses at $50 billion and 400,000 jobs lost. Canada has now recouped these lost jobs, but has not recovered the lost momentum and opportunity the crisis left behind.

There is a great deal to fix to prevent such losses happening again. Much of this has to do with aligning incentives and enhancing risk management and governance in the private sector, strengthening financial regulation and supervision, and improving core financial infrastructure.

But today I want to focus on the lessons of the Great Recession for monetary policy.

**What's Worked Well**

Let me start with what worked. In the early 1990s, price stability became entrenched as the primary objective of monetary policy. This reflected both the bitter experience with inflation since the early 1970s and a growing consensus that price stability was the best contribution monetary policy could make to the welfare of Canadians.

In 1991, the objective of price stability was formalized and Canada became only the second country in the world, following New Zealand, to target inflation. That same year, I was a relatively newly minted PhD working at the Bank. The move to an inflation target presented an exciting opportunity to translate my educational investment into real-world policy advice on how to implement this new inflation-targeting regime.

It was a fascinating time, although the early days of inflation targeting were difficult. There was considerable skepticism about whether the Bank of Canada could control inflation and achieve the targets.

In addition, in the first half of the 1990s, Canada's government debt was high and rising. So when global risk appetite pulled back with the outbreak of the Mexican peso crisis, many foreign investors dumped Canadian-dollar assets. And the growing sovereign risk premium demanded by foreign investors to hold Canadian-dollar assets undermined the Bank of Canada's ability to set interest rates to achieve the inflation target.

This offers a cautionary tale to other countries with high and rising debt. But that is the topic for another speech.

With Canada's dramatic fiscal turnaround that started in the mid-1990s, the early challenges facing inflation targeting dissipated. The result was a tremendously successful economic expansion that spanned 16 years.

By 2006, when the inflation target was last renewed, it was clear that inflation targeting was very successful—indeed, more successful than even its most ardent supporters had predicted. Inflation in Canada was much lower and more stable than it had been in the previous two decades. GDP growth was higher and more stable, and unemployment had declined.

And Canada's experience has not been unique. As other countries have implemented inflation targeting—26 had done so by 2009—similar results have been achieved. Many point to inflation targeting as a leading factor in the extended period of strong growth and low inflation known as the Great Moderation.

But the true test of a successful policy is not how well it performs in good times, but how well it performs under stress.

**Monetary Policy During the Crisis**

While the financial crisis emanated beyond Canada's borders, we were not immune, either to the virtual shutdown in global credit markets or to the consequences for the real economy. In Canada, industrial production fell 15 per cent, with exporters suffering the most as U.S. economic activity dropped sharply.

The first-line monetary policy response of central banks during the crisis was to lower the policy interest rate.[1] The Bank of Canada began cutting interest rates in December 2007. This was followed by a series of aggressive reductions until the policy rate reached one-quarter of one per cent in April of last year, the lowest it can effectively go and the lowest it has ever been in the Bank's 75-year history.

In addition, the Bank provided extraordinary guidance on the likely path of interest rates that would be necessary to achieve the inflation target in order to maximize the monetary stimulus from its policy rate. The focus of monetary policy on inflation control through the financial crisis and global recession provided a beacon as well as an anchor for the bold policy response.

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[1] The first response of central banks to the crisis was to inject liquidity into the financial system, but this was designed to address financial stability while protecting the monetary policy interest rate.

The series of decisions that resulted in the policy interest rate being lowered effectively to zero reflected the symmetric commitment to target 2 per cent inflation. This policy response, coupled with the conditional commitment to keep the rate that low for a fixed period of time, allowed real interest rates to go negative and helped to re-establish confidence among businesses and households.

The Bank of Canada provided a conditional commitment to keep the policy interest rate at one quarter of one per cent from April 2009 to mid-2010 to provide additional monetary policy stimulus by influencing rates at longer maturities. The commitment was conditional on the outlook for inflation. In other words, it was based on the Bank's view that this path for the policy rate was consistent with hitting the inflation target.

Preliminary research on the effect of this conditional commitment indicates that expressing a specific period of time proved particularly effective. Evidence suggests that the Bank of Canada's conditional commitment lowered Canadian interest rates out the yield curve relative to what their historical relationship with inflation and unemployment rates would imply.[2]

But while Canada's inflation-targeting framework has served Canadians well, this does not mean that we can rely on the commitment to price stability to ensure financial stability. In fact, stable inflation and the associated moderation in the economic cycle may have encouraged excessive risk taking. The crisis reminds us that unless you ensure financial stability, you can't achieve price stability either. This leads to my second theme.

**What's Been Missing**

The Great Recession has forced us to look much more closely at crisis prevention. How do we stop history from repeating itself? The question forces us to broaden our view to consider the interaction among price stability, financial system stability, and the roles of monetary policy and other policy instruments. In particular, should monetary policy actively restrain a buildup of financial imbalances or are other instruments better suited for this role?

To the extent that financial imbalances affect the inflation outlook, monetary policy does respond to them. Canada's inflation target is expressed as the rate of change of the consumer price index (CPI). So if a financial imbalance affects the outlook for consumer price inflation, either directly through its impact on some prices in the CPI (such as house prices), or indirectly through its effects on income and wealth and hence overall price pressures, they are taken into account when the Bank sets the policy interest rate. Inflation targeting necessarily requires monetary policy to take into account anything that is affecting the inflation outlook.

So the real question is not whether monetary policy takes into account financial imbalances, but should it work to mitigate them beyond what is required to keep inflation on target over the usual two-year monetary policy horizon? Or to put it more starkly, under what circumstances might it be worthwhile to accept greater deviations of inflation from target over the usual horizon to allow monetary policy to mitigate financial

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[2] Z. He, "Evaluating the Effect of the Bank of Canada's Conditional Commitment Policy" (Discussion Paper No. 2010-11, Bank of Canada, 2010).

imbalances and potentially do a better job of maintaining low and stable inflation over a longer horizon?

Prior to the crisis, many espoused the "clean doctrine," that monetary policy should not be used to address financial imbalances in the build-up phase, but rather should restrict itself to cleaning up the mess when they unwind. This approach looks less convincing in the wake of this crisis.

In considering the role of monetary policy, the first step is to understand the range of tools available to promote financial stability and what types of risks each tool is best suited to address.

The first line of defence is sound regulation and supervision institution by institution. In Canada, federally regulated financial institutions are supervised by OSFI. And as Julie Dickson, the Superintendent likes to say, "a sound financial system is made up of sound financial institutions," so getting the regulatory rules right and applying them rigorously is key to ensuring resilient financial firms.

In this regard, the recent agreement at the Basel Committee to substantially increase the loss-bearing capital that financial institutions must hold relative to a more stringent definition of their risk-weighted assets, combined with a limit on leverage, provides a very significant strengthening of the rules and is an excellent outcome. With this strengthening, the rest of the world will look more like Canada. But here in Canada, financial firms will need to make adjustments as well.

The second line of defence is system-wide regulation. This is a shared responsibility of the Department of Finance and all of the federal financial regulatory authorities, including, of course, the Bank of Canada, OSFI, and the Canada Deposit Insurance Corporation. An important lesson from the crisis is that regulation institution by institution is not enough. The risk to the financial system is greater than the average risk to individual institutions. This points to the need to complement institution-by-institution prudential regulation with a system-wide perspective. And this requires new system-wide policy instruments.

The countercyclical capital buffer included in the new Basel Committee agreement provides a leading example of a new system-wide instrument. The countercyclical buffer provides for additional capital to be built up during periods of excessive credit growth that are associated with an increase in system-wide risk to provide additional loss-bearing capacity in the anticipation of a correction. The countercyclical buffer should also dampen excess credit growth.

The development of this and other system-wide tools is a very important step forward. These tools have been missing or at least under developed and will fill a much-needed gap in the policy arsenal. There remains considerable work to be done to put them into practice and much experience will be gained in their implementation in the years to come.

But even with improved prudential oversight and effective system-wide instruments, the question remains: Are there circumstances when monetary policy should "lean" to supplement these tools? As the costs of the recent crisis have made all too clear, this is an important question to consider as we approach the renewal of the inflation-targeting agreement between the Bank of Canada and the Government of Canada by the end of 2011.

At this point, what we can say is the effectiveness of monetary policy to mitigate financial imbalances will depend on the sources of the shock or market failure and on the nature of the other regulatory instruments available.

If financial imbalances are specific to a sector or market and a well-targeted prudential tool is available, monetary policy would likely have little role to play. If, however, the imbalances in a specific market spill over to the entire economy or if the prudential tool is itself broad-based, it is more likely that monetary policy could have a role to play. In these instances, there would likely be a need to coordinate the use of the two policy instruments.[3]

**What Needs To Be Brought Back**

My final reflection on monetary policy after the Great Recession is that some of what was old in central banking is new again.

When I first started working at the Bank of Canada in 1984, research was focusing not on inflation targeting, but on finding a monetary aggregate to target. In 1981 the Bank abandoned the M1 target─or, as Governor Bouey quipped─"M1 abandoned us." And subsequently, much of the research at the Bank was aimed at finding a new M with a stable relationship with prices, income, and interest rates.

The search proved fruitless, but we did learn a great deal about how the expansions and contractions in money and credit filter their way through the financial system to affect household spending and business investment.

Moreover, a legacy of the monetary-targeting era in my early days at the Bank was that there was a great deal of ongoing attention devoted to tracking financial flows and the build-up and draw-down of money and credit balances between different players in the financial system and the real economy.

But with the rise of inflation targeting in the 1990s, this analysis was relegated to the back seat. Our primary focus turned to the policy interest rate and its impact on other interest rates, asset prices, the exchange rate, and these influences on output and inflation. Money and credit became invisible in much of our economic analysis.

As I said earlier, the test of a good policy is how it functions under stress. Focusing on the transmission of interest rate changes to spending and inflation works well in normal times, but the crisis has reminded us of the complexity of the global financial system.

When the financial system is not working normally, we cannot rely on the short-cut from interest rates to output and inflation. We need a deeper understanding of how the central bank's balance sheet affects financial intermediation and the credit and money balances of businesses and households.

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[3] For further discussion of the potential role for monetary policy in mitigating financial imbalances, see J. Boivin, T. Lane, and C. Meh, "Should Monetary Policy Be Used to Counteract Financial Imbalances?" *Bank of Canada Review*, (Summer 2010).

In other words, we need a better understanding of money and credit flows at a more disaggregated level and we need to develop models that include money, credit, and the key institutional features of banking and capital markets.

If we look only at interest rates, inflation, and output, we may miss bubbles and other elements of systemic risk as they build. And, if we are to begin to consider the role of monetary policy in dampening financial imbalances, we need a deeper understanding of how one affects the other.

Since the onset of the financial crisis, the Bank has intensified its effort to take into account credit flow and money in its policy analysis. Recent research at the Bank has taken important steps forward in incorporating the balance sheets of banks into standard macro-economic models. This will allow us to examine how developments in financial sectors affect the transmission of monetary policy and to analyze how monetary policy should deal with financial shocks, both international and domestic. Finally, we are also developing tools to detect the emergence of financial imbalances, which has implications for credit creation.

Our research efforts continue. The Great Recession and the not-so-great recovery make clear that we face interesting challenges when it comes to the conduct of monetary policy.

**Conclusion**

Let me conclude. This crisis has taught us many lessons and reminds us of past approaches that should be dusted off and given their due. The focus of monetary policy on price stability implemented through an inflation target has been the most successful monetary regime to date.

It brought us the period of the Great Moderation, or the decade that Bank of England Governor Mervyn King referred to as the NICE decade—non-inflationary and consistently expansionary—and it performed well under stress throughout the crisis.

Nevertheless, the crisis has revealed some gaping holes in our regulatory rules, core financial infrastructure and policy tools. While it is unrealistic to expect a combination of microprudential, system-wide and monetary policies to eliminate procyclicality in the financial system and the broader economic cycle, our objective is to make the system more resilient to economic downturns and other aggregate shocks and to moderate the buildup of financial risks.

We learned much from history in crafting the extraordinary policy response at the height of this crisis. Whereas I expect that many early members of the Mount Stephen Club may have lived through very hard times during the Great Depression of the 1930s, this time around the scale of the economic fallout was considerably less severe for Canadians. Monetary policy focused on price stability combined with bold fiscal and financial stabilization measures averted a much worse disaster. We now need to be equally diligent in learning from history in averting future crises. Ensuring that we have the policy and analytic arsenal for the job is part of that challenge.