Remarks by Stephen S. Poloz
Governor of the Bank of Canada
Western University President's Lecture
London, Ontario
24 February 2015

Lessons New and Old: Reinventing Central Banking

Introduction

I am delighted to be back at Western, and honoured to be asked by President Chakma to give the inaugural address in the President's Lecture Series.

While preparing for today, I did a little reminiscing, and I was struck by how prophetic some of the lessons I learned here back in the late 1970s have turned out to be.

Many of us came to Western at that time to learn from the high-profile duo of David Laidler and Michael Parkin. I can remember David Laidler telling me, "Steve, monetary targets will help keep us out of trouble, but if we do get into trouble, they might not get us out." And then there was Michael Parkin, who later was my thesis adviser, who said, "Steve, there are lots of monetary policy rules that deliver the same inflation outcome, but each will have very different consequences for the economy."

Well, those words ring very true 35 years later, particularly given our experience over the past decade. While central banks were diligently maintaining low and stable inflation, we witnessed the emergence of massive imbalances, an unprecedented expansion in leverage, a global financial crisis and a synchronized downturn in the world economy. Today, as we try to apply the lessons learned, we find ourselves weighing a wide range of consequences in charting the future course of monetary policy.

Thanks to some deft policy-making, the global economy avoided, barely, a second Great Depression. That said, the Great Recession has been very painful. Indeed, more than six years after the crisis, emergency monetary policies remain in place in many economies. In short, we are still a long way from home and the headwinds are strong.

The experience of the past decade makes a pretty strong case that central banking needs to be reinvented. Keeping inflation on track certainly was not sufficient to keep us out of trouble. Some would even argue that the tranquility

Not for publication before 24 February 2015
14:00 Eastern Time

fostered by successful inflation targeting helped to spawn the crisis by leading investors and financial intermediaries to take excessive risks. At the very least, it seems to me that we need to take account of a wider range of economic and financial consequences while targeting low inflation.

An evolution of central banking is already under way, supported by recent experience and new research. Today, I hope to inspire economists here and elsewhere to join these efforts.

The Lessons of History

It is worth thinking back to how central banks operated under the gold standard in the 19th and early 20th centuries. At that time, keeping the financial system stable—preventing banking panics—was the primary objective. Under most circumstances, currency could be converted into gold, so the price of gold served as a nominal anchor—a type of inflation rule—for the economy.

Central banks provided an elastic supply of money, expanding or shrinking that supply to meet demand and maintain the fixed gold price. The aim was to avoid the wide swings in liquidity and interest rates that often heralded banking crises. The central bank of that era also supported financial stability by acting as the lender of last resort, thereby preventing a liquidity shortage in one bank from becoming a full-blown panic.

The Bank of Canada—which, by the way, will celebrate its 80th anniversary in a couple of weeks—was established during the Great Depression with these objectives in mind, although there was a hint of a more ambitious set of objectives, given the state of the economy at the time. The Bank of Canada Act instructed the Bank to regulate credit and currency in the best interests of the economic life of the nation and to protect the external value of the currency, but was largely silent about how to accomplish these tasks.

In the event, the gold standard proved to be too rigid a framework for monetary policy. In 1944, the Bretton Woods Conference gave the world a system of pegged but adjustable exchange rates, replacing the gold standard with a U.S.-dollar standard, which in turn was pegged to gold, at US$35 per ounce.

This system also proved unsatisfactory in several respects. There is no need to go into detail, but the stresses of the early 1970s proved too much, and the Bretton Woods system collapsed, launching an era of high global inflation and a search for a new framework for monetary policy formulation.

A number of central banks, including the Bank of Canada, then adopted monetary targets as a means of getting inflation under control. Slow the growth of money and you slow the rate of inflation with minimal consequences for economic growth was how the theory went.

This was the state of play when I came to Western in 1978, and there was solid academic support for that policy framework. But by the time I arrived at the Bank of Canada in 1981, there was growing disenchantment with monetary targeting, as the link with inflation was proving to be unreliable. For practical reasons, the target had to be abandoned. But as former Governor Gerald Bouey famously put it in 1983: “We did not abandon M1, M1 abandoned us.”

The search for a better monetary policy framework continued through the rest of the 1980s, both in central banks and in academia. The questions were very fundamental: What is the optimal monetary policy? What is the best anchor for that policy? And should central bankers be bound by rules for policy, or should they be afforded some discretion? If so, how much?

As you all know, a consensus emerged that central banks should pursue inflation targets directly, rather than targeting an intermediate variable such as the money supply. In 1991, the Bank of Canada became the second central bank (after New Zealand) to adopt inflation targeting. And over the next 10 years, many other major central banks joined the inflation-targeting club.

At the time, it was hard to argue with the results. Inflation targeting was seen as a key contributor to the "Great Moderation"—a period of about 15 years of steady economic growth and low and stable inflation in most advanced economies. In Canada, and elsewhere, consumers and businesses could make longer-term financial plans with more confidence. Interest rates were lower, and economic cycles were more moderate. Unemployment was lower and less variable than in the past.

This success contributed to the widespread belief that maintaining low and stable inflation was the best, indeed the only, contribution that a central bank could make to the economy's performance. Countries with dual central bank mandates—low inflation and strong growth or low unemployment—could rely on the "divine coincidence" that stable inflation would emerge only when the economy was operating at full capacity.

And what about the issue of financial stability? Central banks would remain available as lenders of last resort, the purpose for which they were originally created, but financial stability issues were seen primarily as the responsibility of regulators and, perhaps, a problem for emerging-market economies with banking systems that weren't fully developed.

This policy consensus began to wobble as financial stability concerns grew during the mid-2000s, and by 2007 it had fallen apart. Confidence that keeping inflation low and stable would keep us out of trouble had bred complacency, and complacency bred calamity. We all know the rest of the story. So far, the crisis has cost the global economy over US$10 trillion in lost output, and we are discovering just how ineffective our policies can be in getting us out of trouble, once in.

Crisis and Response—Early Lessons

There is no need to document all the monetary actions that have been deployed since 2008. Suffice to say that, with interest rates at all-time lows, in some cases even less than zero, and massive expansions of some central bank balance sheets, monetary policy is still pushing flat out—and yet still we see a lacklustre outcome for the world. Obviously, the headwinds we face are powerful ones, and they are dissipating only gradually. Although we are not out of the woods yet, it is nevertheless the right time to be thinking about what monetary policy should look like once we are.

The first lesson of the crisis is that low and stable inflation is a necessary, but not sufficient, condition for financial stability. The low nominal interest rates that came with low and stable inflation led investors to increase leverage and risk tolerance in a desire to boost their returns, and similarly encouraged consumers to ramp up borrowing. We learned that these vulnerabilities can build up over time, raising the risk of a crisis even while the economy looks to be safe and sound.

The second lesson is that, while imbalances can make an economy vulnerable, debt-fuelled imbalances are particularly hazardous. That's because when there is a shock—such as the financial crisis—it can take a very long time for balance sheets to be repaired, and the economy simply does not recover in the usual way. The massive price tag for cleaning up the crisis has demonstrated the value of preventing these imbalances from building up in the first place.

The third lesson is that maintaining a low and stable inflation rate is a two-edged sword. Yes, there are the expected benefits in terms of the efficient functioning of the economy and financial markets. But there is a downside, too: the low equilibrium level for nominal interest rates means that central banks have very little room to manoeuvre when there is a large negative shock, such as the one we encountered in 2008. Being constrained by the effective lower bound for interest rates has clearly prolonged the global economy's adjustment.

A fourth lesson is that policy-makers cannot safeguard domestic financial stability simply by focusing on the safety of their domestic banking system. Policy-makers didn't fully understand the risks associated with new forms of financial intermediation—complex instruments like collateralized debt obligations. And they didn't comprehend how interconnected the global financial system had become, and how easily shocks can be amplified and transmitted.

Responses to some of these lessons are already being put into practice, and there is considerable supporting research, both at the Bank and in academia.

At the regulatory level, the G-20 countries recognized the need to make the world's financial system safer. The Financial Stability Board was given the task of coordinating the development of minimum global standards around capital, liquidity and resolvability, as well as for market infrastructure, to reduce the risk and severity of any future financial crisis. By and large, the FSB has delivered and countries have begun to implement the new standards.

On the monetary policy front, central banks must, at the very least, understand emerging financial stability risks when conducting monetary policy. All central banks have upgraded their capacity in this area. The Bank of Canada now takes a more structured approach to our analysis in our semi-annual Financial System Review.

Specifically, we use more and better data to assist our financial system monitoring, backed by deeper conversations and models where appropriate, to make more informed judgments about financial stability risks. We've added other potential sources of vulnerability, such as the balance sheets of households, companies and banks, to our macroeconomic models.

We’re also making progress toward a better understanding of how monetary policy actions influence risk taking. For example, when a central bank cuts interest rates to cushion the economy from a shock, the hope is that people will borrow more at that lower interest rate and spend more money. What this means is that financial imbalances are a necessary by-product of monetary policy action, especially if the action is prolonged, so these additional adjustment dynamics must be fully taken into account when conducting policy.

Clearly, though, incorporating financial stability into our monetary policy framework remains a work in progress. As a practitioner, it still feels to me like we are adding various rooms onto a house we love, rather than creating a new, elegant and coherent structure. We need to make sure there’s enough flexibility and clarity about the role of financial stability in our monetary policy framework. We need to better understand how macroprudential policies—such as mortgage insurance rules—that are aimed at promoting financial stability interact with monetary policy.

Above all, our experience of these past few years reminds us that, as economists, there is a great deal that we just do not know. Our models are simple abstractions, and the notion of uncertainty that we build into them is usually of the benign, white-noise type that policy-makers can generally ignore. I would argue, rather, that the uncertainty that central bankers face is truly fundamental—Knightian in nature and scope—and we run the risk of making major policy errors if we simply assume that uncertainty away. This necessarily transforms monetary policy-making from something akin to reverse engineering into an exercise in risk management.

Known Unknowns

So, let me now touch on some of the “known unknowns” that are on my mind, speaking as a practitioner of monetary policy—ideas for further research, if you will.

First, there is the globalization of production, by which I mean the optimal geographic distribution of production chains by companies. We see research and development in one country, manufacturing of components in several other countries, and final assembly in yet another.

This phenomenon is well documented, but its effect on some of the things we hold dear is not well understood. For example, there is evidence that fluctuations in global inflation account for a large and growing share of the variation in inflation in individual economies. How does this affect our ability to target domestic inflation? And how does the international rearrangement of manufacturing processes affect the way that monetary policy influences the domestic economy?

Second, there has traditionally been a reasonably well-understood role for exchange rate fluctuations in monetary policy actions, and in the equilibration of the economy in response to shocks. Canada, in particular, remains committed to a flexible exchange rate regime. But a growing share of global output is now produced in economies with fixed or heavily managed exchange rates; plus, as I said, companies have spread their supply chains across multiple countries with multiple exchange rates. How does all this affect the transmission of monetary policy actions to the economy?

Third, there are interesting questions around the impact of changing income distribution on the monetary policy transmission mechanism. Globally, we are in the midst of two dramatic waves: a demographic wave, as large numbers of workers in their peak earning years retire; and a technological wave, which is producing structural adjustments in labour markets, especially in the middle of the income distribution. How do these forces affect the responsiveness of the economy to monetary policy, and our ability to maintain low and stable inflation?

Fourth, our macroeconomic models are based on the so-called “representative firm” that reacts to policy changes by, for example, borrowing, hiring and investing more when interest rates are lowered, and less when they are raised. But we know that smaller firms behave very differently from large firms, and the credit channels they deal with are not the same at all. In our current situation, where so many firms have simply disappeared, we need to understand these processes well, because our ultimate recovery will depend on a rebuilding process involving high levels of new firm creation.

These are just some of the things on my mind, and they arise just as the Bank prepares to renew its inflation-targeting agreement with the government, which is scheduled for 2016. The technical issues directly related to that agreement were laid out in a speech in Calgary in November by my colleague, Deputy Governor Agathe Côté, which I recommend to you. But it should be clear that the lessons of the recent crisis are colouring the research agenda.

As Agathe Côté said in her speech, nothing is broken, and the bar for changes to the inflation-targeting agreement will be high. In spite of the financial stability issues I have raised today, inflation targeting has served us well, and we remain committed to the concept. As I said at the beginning of my remarks, however, there are lots of monetary policy rules with the same inflation outcome, each with different implications for the economy, and we need to understand these better within an agreed inflation-targeting regime.

We have learned that the interest rates associated with 2 per cent inflation leave very little room to manoeuvre in response to large shocks. Furthermore, we know that the so-called neutral real interest rate will be lower in future, for demographic reasons in particular, and this will reduce our manoeuvring room even more. Together, this could mean a greater risk in the future of hitting the effective lower bound for interest rates for any given inflation target. We will need to consider the risks of any changes to the current flexible inflation-targeting regime, including any possible side effects on policy credibility, before we make any decisions.

Conclusion

Let me conclude with a few thoughts on our current situation. Since the onset of the crisis, central banks, including the Bank of Canada, have been reworking the way they balance risks to financial stability and inflation with their policies. In a discussion paper last year, I tried to detail how we apply this risk-management framework, using the experience of 2013 and the first half of 2014 as an illustration. But the events of the last six months have illustrated these points even more vividly.

The Bank has been setting policy with a view to balancing the risks facing both the outlook for returning inflation sustainably to its target, and the risks to financial stability such as those posed by the indebtedness of Canadian households. The sudden drop in global oil prices has increased both risks. The oil-price shock is an important setback in our progress toward full capacity, full employment and stable inflation because it is a net negative for economic growth. And because lower oil prices mean lower Canadian income, the shock will worsen the debt-to-income ratio of Canadian households, thereby increasing financial stability risks.

Our decision to lower the policy interest rate last month was intended to take out some insurance against both sets of risks. It gives us greater confidence that we can get back to full capacity and stable inflation by the end of 2016, instead of sometime in 2017, and it will cushion the decline in income and employment, as well as the rise in the debt-to-income ratio, that lower oil prices will bring.

Using the term "insurance" underscores that we are in a very uncertain setting, and what we are trying to do is to manage the risks we face, not eliminate them—we are not in a position to engineer the perfect outcome. The negative effects of lower oil prices hit the economy right away, and the various positives—more exports because of a stronger U.S. economy and a lower dollar, and more consumption spending as households spend less on fuel—will arrive only gradually, and are of uncertain size. Plus, the oil price shock itself is of uncertain size. So, the downside risk insurance from the interest rate cut buys us some time to see how the economy actually responds.

As you can tell, it's an exciting time to be a central banker. Monetary policy-making is evolving in real time and, as I have argued, is deserving of true reinvention. We need to develop a monetary policy framework that integrates inflation risks and financial stability risks, both statically and dynamically, and captures much more accurately the uncertainties we face—in short, a true synthesis that takes full account of the lessons of the past, both new and old. Let's get to it.

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