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## **Prudent Preparation: The Evolution of Unconventional Monetary Policies**

### **Introduction**

It's no secret that economists love a good debate, so much so that they often have the same debates over and over. A lively argument is currently under way about what's causing disappointingly weak growth in the world economy.

A prominent Harvard University economics professor once suggested that the U.S. economy was headed for what he called "secular stagnation." Extended periods of strong economic growth were no longer likely, he said, because of a chronic shortfall in demand.

I'm not referring to Harvard's Professor Lawrence Summers, who holds this secular stagnation view today. Rather, I'm talking about Professor Alvin Hansen, who coined the phrase "secular stagnation" in 1938, during the Great Depression.

Of course, soon after Hansen published his views, U.S. growth took off amid a burst of spending and demand related to the Second World War. And stagnation did not return after the war ended; instead, the United States experienced one of the strongest and longest-lasting expansions on record.

What happened? Hansen's population assumptions changed, for one thing, as the post-war period saw increased immigration and a baby boom. Technological advances helped boost productivity growth, for another thing. But an important ingredient was the revival of what John Maynard Keynes famously described as "animal spirits." During the Depression, consumer and business pessimism was pervasive. Once confidence revived, pent-up demand was unleashed and self-sustaining growth returned.

### **Current Economic Perspectives**

This bit of history should help us to understand the global situation today. Many countries, including Canada, are again facing the sort of demographic challenges that Hansen saw in the 1930s. And many would argue that technological advances are less likely to fuel steady growth as they did in the 1950s and

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1960s. Summers and other secular stagnation supporters argue that the level of interest rates needed to bring the economy back to full capacity is below the effective lower bound for monetary policy, so central banks are powerless to stimulate enough demand to use up excess supply.

Others, including me, disagree. It's true that demographic forces are leading to slower growth in the labour force, which reduces the neutral interest rate in the economy and increases the chances that monetary policy will be constrained by the lower bound on interest rates. But recovering from a shock like the global financial crisis can be a long drawn-out process—just as it was in the 1930s—as consumers and businesses repair their balance sheets and rebuild their confidence in the future. Ultimately, I see this as a cyclical issue, not a secular one, although the cycle is proving to be longer than usual.

More to the point, I take issue with the word “stagnation.” The world's policy-makers put in place measures to mitigate the damage of the crisis and prevent the worst. We have strengthened our financial architecture to protect against future crises, and the system is still adjusting. Growth has been slow, but it hasn't been non-existent. Many of those policies remain in place, sustaining growth and avoiding stagnation until such time as Keynes's animal spirits, which have been crushed over the past seven years, revive.

No matter where you stand on the issue, it's clear that the expansion in the developed world is slower now than it was in previous decades, and it will probably remain that way. This is because population growth is slowing as the positive impact of the post-war baby boom is mostly behind us now. However, economic progress can still come through productivity-enhancing technologies, which historically have defied prediction. And there is a plethora of structural policies that can raise trend economic growth—such as trade liberalization or labour market reform—which are being actively discussed by the G20.

In the Bank's last *Monetary Policy Report* (MPR) in October, we forecast that the Canadian economy would return to positive growth in the second half of this year, and that annual growth would continue to increase in 2016 and 2017. That would see the economy use up its excess capacity, and return inflation sustainably to the 2 per cent target, around mid-2017.

So far, that forecast seems to be playing out, as we said in our interest rate announcement last week. Beneath the surface, however, our economy faces a complex and lengthy adjustment to lower resource prices—an adjustment that will unfold over the next several years. While the resource economy works through this adjustment, the non-resource economy should continue to gather momentum, driven by improved export performance. This will be followed by rising investment, growth in the population of companies and a steadier trend in new job creation. The adjustment process is being facilitated by a stronger U.S. economy, a lower Canadian dollar and low interest rates.

The risks around this outlook are roughly balanced, which is to say that there are things that could disappoint us and others that could surprise us on the upside. On the downside, weakness in emerging markets such as Brazil and China could turn out to be more pronounced than we expect, or commodity prices could fall further as new supply weighs on prices. On the upside, however, it is possible

that as momentum builds consumer and business confidence will see a synchronized upturn—not just in Canada, but in the United States—adding more momentum to growth. This factor is important to economic cycles, yet inherently it can't be forecast.

There are many such elements of uncertainty in the process of making monetary policy. That's why the Bank has characterized its decision-making process as one of risk management. We go beyond determining the most likely outcome for the economy. We also identify the major risks we face, in either direction, and think about how we should react if those risks materialize. In short, we're paid to worry, and to be prepared. That's just prudent policy-making.

So it's fair to ask what we would do in the unlikely event that the economy was hit with another major negative shock, one that significantly threw off our projection. With the economy already exhibiting slow growth and interest rates already very low, there would appear to be very little room to manoeuvre. Indeed, the Bank's policy rate today is 0.5 per cent, just one-quarter point above the record low set in 2009, a dark time for the global economy. Back then, at the height of the financial crisis, we believed that our key rate was at its effective lower bound, and we would need other tools in order to provide any additional monetary stimulus.

As a result, the Bank spelled out how it would conduct unconventional policies in an annex to our April 2009 MPR. Since then, we have reflected on our experience and have seen how other central banks have conducted their own unconventional policies. We have updated that document and are publishing it on our website today.

I'm going to elaborate on these policies, but before I do, I need to be absolutely clear about two things. First, today's remarks should in no way be taken as a sign that we are planning to embark on these policies. To reiterate, our base case sees the Canadian economy returning to full capacity around mid-2017 and the risks to the outlook are roughly balanced. We don't need unconventional policies now, and we don't expect to use them. However, it's prudent to be prepared for every eventuality.

Second, I should stress that the framework we're publishing today won't be the last word on unconventional policies. The post-crisis adjustment process is still unfolding and central banks continue to learn lessons from the experience. Best practices will continue to evolve.

### **Tools in the Central Bank Tool Kit**

So, what's in the central bank's tool kit when interest rates are already very low? Let me remind you of some key principles around the use of unconventional policies. These haven't changed since 2009.

Regardless of the situation, the Bank will keep its primary focus on achieving the inflation target. And because we want our policies to be as effective as possible, we'd concentrate the use of our tools in specific sectors or markets, while aiming to minimize any unnecessary market distortions. Finally, we would conduct operations carefully in order to minimize the risks to our balance sheet.

## **Forward guidance**

The first tool is one that many have used to good effect, and that's forward guidance. By forward guidance I mean more than simple boilerplate language a central bank might use to indicate the expected direction of the next interest rate move. I'm referring to statements such as the conditional commitment we made in 2009—when we pledged to keep the key policy rate unchanged for a year as long as the outlook for inflation didn't change.

Forward guidance can lower longer-term interest rates by signalling to investors that the policy rate will stay at a given level longer than previously anticipated. It also provides more certainty about the path for short-term interest rates, reducing the risk premium built into longer-term rates. By lowering the entire yield curve, the policy action affects a wider range of borrowers, boosting demand in the economy and leading to higher output and inflation.

For forward guidance to be most effective, it has to be credible. When we made our conditional commitment, both words were important: "conditional" and "commitment." We backed our commitment by offering term financing at the overnight rate for the entire period. And we repeatedly stressed that the pledge was conditional on the inflation outlook. As it turned out, we raised interest rates weeks before the commitment expired because we saw signs that inflation was returning to its target more rapidly than we anticipated. That conditionality demonstrates that the inflation target remains the Bank's primary mission.

As I've said before, forward guidance comes with costs. It distorts the market's processing of new information by taking specific types of uncertainty off the table. This concentrates the market's position on one side of the distribution of possible outcomes. Exiting from forward guidance restores two-way trading and the market's ability to absorb economic and financial volatility, which is natural.

## **Large-scale asset purchases**

A second tool that the Bank outlined in 2009, but has never used, is large-scale asset purchases. I emphasize the term "large-scale" because a central bank engages in asset purchases in the normal course of business—that is how the central bank balance sheet grows along with the economy and enables the distribution of a growing stock of bank notes.

Large-scale asset purchases, often referred to as "quantitative easing," entails the central bank creating new reserves and using them to purchase large quantities of securities such as government bonds or private assets including mortgage-backed securities and corporate bonds, from the private sector.

Such purchases have three effects. First, they create new liquidity in the banking system, which can increase the availability of credit if the system has tightened, allowing firms and households to continue to make buying decisions and supporting economic growth.

Second, large-scale asset purchases tend to lower the interest rates on the purchased assets, and on other types of debt of similar duration, which in effect flattens the yield curve, bringing longer-term interest rates down closer to short-term interest rates. As with forward guidance, this can enhance the impact of lower policy rates by spreading the effect to a wider range of borrowers, thereby

boosting economic growth. At the same time, higher asset prices can create a “wealth effect,” which can also boost spending and confidence.

Third, such purchases of assets tend to put downward pressure on the exchange rate, since they reinforce market expectations of a lower profile for interest rates for a longer period. This can boost aggregate demand further, through increased export sales or, more simply, because existing export sales produce more revenue measured in domestic currency.

All this can happen while the central bank’s policy rate is unchanged. Several major central banks have deployed this tool since the crisis, including the U.S. Federal Reserve, the Bank of England, the European Central Bank (ECB) and the Bank of Japan. Their experience shows that this tool can be effective in extending the central bank’s impact well out on the yield curve.

### **Funding for credit**

A third unconventional monetary policy tool that has been developed since 2009 is called funding for credit. The idea is to make sure that economically important sectors continue to have access to funding even when the supply of credit is impaired. In this case, the central bank would provide collateralized funding at a subsidized rate as long as banks met specified lending objectives. The Bank of England and the U.K. Treasury set up such a program in 2012. It was designed to encourage lending to households and businesses at a time when banks were facing increasing funding costs, which meant that borrowers weren’t getting the full benefit of low policy rates.

While the Bank of Canada has never engaged in funding for credit, at the height of the crisis the government put in place the “Insured Mortgage Purchase Program.” Under this program, Canada Mortgage and Housing Corporation bought insured mortgages from lenders, which made room on their balance sheets for new mortgage lending. This program was clearly aimed at one market segment that was at risk of impairment and so had a similar purpose to funding for credit.

### **Negative interest rates**

The fourth unconventional monetary policy tool I want to cover is negative interest rates, which is something you have heard a lot more about recently. In 2009, the Bank said it couldn’t cut its policy rate below 0.25 per cent, because we believed that zero or negative interest rates might be incompatible with some markets, such as money market funds. This was a common view at the time.

Since then, we have seen the experience of several central banks, such as the ECB and Swiss National Bank, which have adopted negative policy interest rates. There, we’ve seen that financial markets have been able to adapt and continue to function. Given these and other developments, the Bank is now confident that Canadian financial markets could also function in a negative interest rate environment.

Let me pause at this point to answer an obvious question. Why would anyone ever accept a negative nominal return when they could always simply hold cash and earn a zero return? A big part of the answer is that there are costs to holding currency, particularly in large quantities, and these costs affect the lower bound.

Because of the costs, which include storage, insurance and security, central banks can charge negative rates on commercial bank deposits without seeing a surge in demand for bank notes.

Last month, the Bank published a staff discussion paper that analyzes those costs and the convenience benefits of electronic payments, and reflects on the experience of other countries. We now believe that the effective lower bound for Canada's policy rate is around minus 0.5 per cent, but it could be a little higher or lower. This suggests that we have more room to manoeuvre in response to adverse shocks than we believed back in 2009. We will continue to watch the experience of other countries—the Swiss policy rate, for example, is currently minus 0.75 per cent—and we will also consider what adjustments might need to be made to the Bank's operational framework should they ever be required.

To sum up, once interest rates reach very low levels, the central bank still has meaningful tools that it can deploy in its pursuit of its inflation target: offering forward guidance to financial markets to enhance policy effectiveness, large-scale asset purchases, funding for credit, and pushing short-term interest rates below zero.

## **What Else Have We Learned?**

There are a few other lessons we've learned about unconventional monetary policies in the past few years. Let me just touch on a couple.

One lesson concerns when to use which tool. When we published our unconventional policy framework in 2009, there was an implied sequence to the various measures. Forward guidance was tried first, with quantitative easing and other measures held in reserve in case forward guidance proved to be insufficient. But what we've learned since is that there shouldn't be a pre-determined order. The effectiveness of each tool will depend on the situation, making it more a matter of choosing the right one at the right time. Furthermore, the various measures can be mutually reinforcing when used in combination, so it makes little sense to commit to a particular sequence for using them.

Another lesson we've learned from the global experience is that while unconventional monetary policies can help stimulate the economy, there may be limits to their impact. Take negative interest rates, for instance. While we now believe that interest rates can be pushed below zero, there still is a lower bound, so we can't be cavalier about how much more room to manoeuvre we have. Further, there is evidence that consumers and businesses respond less to interest rate declines when interest rates are already very low. And there is evidence that their responsiveness is also lower when confidence is low and they are trying to reduce debt. I expect that few of us find this to be surprising.

At the same time, it is fair to say that the limits of large-scale asset purchases are still being tested. Our understanding of this tool will grow as we watch it being used in other economies—and this includes the eventual conclusion, and exit from, their programs.

Fundamentally, economists have long been aware that the effectiveness of monetary policy has its limits once interest rates reach very low levels. As Keynes noted as he watched the Great Depression unfold, fiscal policy tends to

be a more powerful tool than monetary policy in such extreme circumstances. It may sound ironic, but the circumstances under which it may be appropriate to consider unconventional monetary policies are also those under which fiscal policy tends to be most effective. Even so, it is worth knowing that monetary policy can still make a meaningful contribution in such extreme conditions, alongside fiscal and structural policies, in restoring growth and achieving our inflation targets.

A final lesson I must touch on is that very low interest rates—and the unconventional monetary policy tools that can be deployed to enhance their effects—tend to create financial imbalances that can grow through time. These risks must be accepted should the downside risk to the economy lead to even worse outcomes if realized. But the dynamic effects of those growing financial imbalances on the future economy must be taken into account by policy-makers—and that is a complex task, indeed.

## **Conclusion**

It's time for me to bring us back to the present and conclude. In a world where many economies continue to resort to unconventional monetary policies, Canada's outlook is encouraging. The lower Canadian dollar and the interest rate actions taken earlier this year are working and it will be some time before we see their full impact. The overall economy is growing again, even as the resource sector contends with lower prices, because the non-resource sectors of the economy are gathering momentum. This is all taking longer than we imagined back in 2008, but our judgment is that our economy can get back to full capacity with inflation sustainably on target around mid-2017.

Given this outlook, it may seem like an odd time to be updating our unconventional monetary policy tool kit. I certainly hope we won't ever have to use these tools. However, in an uncertain world, a central bank has to be prepared for all eventualities. We will continue to watch how these policies work in other economies and adjust our own thinking at the Bank of Canada as appropriate. In short, should the need arise, we'll be ready.