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Monetary Policy and the Underwhelming Recovery

Introduction

Good afternoon. Thank you for inviting me. I'm delighted to be here today with this group of accomplished investment professionals. What I will speak about today intertwines your professional world with mine.

Let me start with what we've all observed: the recovery from the global financial crisis has been underwhelming, to say the least. It has left us debating what kind of growth we can reasonably expect after so much disappointment. It has also left us debating how central banks should conduct monetary policy without compromising financial stability.

During the crisis, central banks and governments took unprecedented action. They worked together to prevent the failure of systemically important financial institutions, and to provide exceptional monetary and fiscal stimulus. These policies were successful in preventing the worst.

But even this forceful policy response could not prevent a severe and protracted global recession. Massive amounts of wealth were destroyed. The values of equities and housing plunged. The loss to global output was roughly \$10 trillion by the end of last year. All told, the crisis left the global economy with 62 million fewer jobs.¹

The recovery has had repeated false starts and still faces considerable headwinds. Global growth has averaged only around 3 per cent over the past two

¹ This estimation of job losses is relative to trend. See "Global Employment Trends 2014: The Risk of a Jobless Recovery," International Labour Organization, Geneva, 2014. Available at www.ilo.org/global/research/global-reports/global-employment-trends/2014/lang--en/index.htm

years. That's well below the average prior to the crisis, and it is unlikely that 2014 will be much better.

Financial markets are reflecting these lowered expectations. That's part of the reason why long-term interest rates in the major advanced economies, including Canada, are very low.

Today I'm going to talk about three important matters for central banks. First, to conduct monetary policy, we need to know how much of this slow growth is cyclical and how much is structural. Second, to calibrate our policy we need to know how these factors, taken together, are affecting the neutral rate of interest. And third, making judgments about the impact of these factors is not an exact science. As you know, there is a lot of uncertainty. That is why we take a risk management approach to achieving our inflation target.

Disentangling Cyclical and Structural Factors

So how much of this slow growth is cyclical and how much is structural? History teaches us that balance-sheet recessions such as the world has just seen are typically followed by growth that is much slower than in the wake of a normal recession. The legacy of a financial crisis is a heavy burden for any country, and paying down debt impedes normal economic growth for a long time.² This makes the task of disentangling the cyclical from the structural more difficult, but it needs to be done in order to determine the rate of non-inflationary growth. As inflation targeters, the rate of potential output growth matters a lot to us. It is a critical input to the appropriate path for policy rates.

Lost potential from the crisis

Cyclical factors have clearly been playing a starring role in this underwhelming recovery. During the crisis, demand plummeted and so did output. As workers left the labour force and firms cancelled capital investments or went out of business, potential output growth declined as well. We are still facing headwinds from the deleveraging of households, fiscal consolidation and uncertainty. We estimate that potential output in Canada is about 3 per cent below where it would have been without the recession. That's roughly \$3,500 per household. In the United States, where the crisis hit harder, estimates of lost potential range from 5 per cent to 13 per cent—that's US\$6,500 to US\$18,000 per household.

Demographics and labour supply

We also have structural factors weighing on potential. The population is aging, there are risks that some working-age people who left the labour market may not return, and there are concerns that technology is not going to deliver the leaps in productivity that we have seen in the past.

Let's start with demographic trends. Globally, over the next two decades, the number of people aged 65 and over will rise by more than 80 per cent, from 600 million to 1.1 billion. Canada is no exception to this trend. The baby boomers are starting to retire, and so the proportion of the population that is of working age is

² This pattern has been well documented by Harvard professors Carmen Reinhart and Kenneth Rogoff, among others.

shrinking. Early retirement is also taking people out of the labour force. For Canada, this has subtracted about 0.45 percentage points from potential GDP growth over the last five years.

A new wrinkle is that working-age people are also leaving the labour force. This was discussed at length last month by central bankers at Jackson Hole. The decline in the participation rate of young and prime age workers reflects the cyclical effects of a weak job market. But these cyclical effects could become structural. After a long search, if you don't think you are going to find a job, at some point, you become discouraged and you stop looking. The longer you stay out of the labour force, the more likely it is that your skills have deteriorated and your attachment to the job market has weakened. This is what economists mean when we talk about hysteresis.

Productivity growth

We know that with a relatively smaller labour force, a nation's capacity for growth will depend on the productivity and creativity of its workers and businesses. Trend productivity growth in advanced economies has declined over the past decade and a half—and Canada has lost ground compared with the United States and some other countries. Pessimists argue that the high rates of productivity growth seen in the post-war era or the late-1990s are history.³ Optimists say that technological progress in areas such as nanotechnology, computing and genetic engineering will once again generate strong productivity gains.⁴

At the Bank of Canada, we take a balanced approach when we factor all of this into our views on productivity. We expect business investment to pick up, which will lead to labour productivity growth that is a little higher than it was before the crisis. However, it will only be about two-thirds of its peak of around 2 per cent in the late 1990s. A similar decline is also expected to occur in the United States and the euro area.

Bottom line for potential

The bottom line is that potential output growth in Canada and other industrialized economies will be lower than it was in the years leading up to the crisis. Our most recent estimate for Canada is that it will average just below 2 per cent over the next two years. This is a percentage point lower than average potential growth in the decade prior to the crisis. We will update this estimate in our next *Monetary Policy Report* in late October.

We believe that some of the potential lost during the crisis will be restored through higher business investment and firm creation. But opinions vary on this. You may have read about a more extreme hypothesis, the idea of “secular

³ R. J. Gordon, “The Demise of U.S. Economic Growth: Restatement, Rebuttal, and Reflections.” Available at http://economics.weinberg.northwestern.edu/robert-gordon/NBER%20P383F%20Sequel_140126.pdf

⁴ J. Mokyr, “Secular Stagnation? Not in your life,” Chapter 6 in *Secular Stagnation: Facts, Causes and Cures*, a VoxEU.org Book edited by C. Teulings and R. Baldwin (London, UK: CEPR Press, 2014). Also Joel Mokyr's comments on “Growth, Innovation and Stagnation” at www.econtalk.org/archives/2013/11/joel_mokyr_on_g.html

stagnation.” This is the theory that there is chronically deficient demand in the global economy stemming from persistent headwinds and structural factors that predate the crisis. This is not the Bank of Canada’s baseline view. We expect the cyclical factors restraining growth to continue to dissipate over the next few years. We are already seeing the positive effects on growth in Canada and the United States.

Implications for the neutral rate

Let me turn now to what this all means for the neutral rate of interest.⁵ The gap between the policy rate and the neutral rate serves as gauge of the degree of monetary stimulus in the economy. It helps us to calibrate monetary policy.

The neutral rate is to economists what dark matter is to physicists. We are convinced it exists, it plays a central role in our models and analysis, but we can’t directly observe it. So it’s important to be clear about the concept and the uncertainty around it. The neutral rate I am talking about here is the real risk-free rate of interest that enables the economy to operate at full capacity with stable inflation after cyclical forces have dissipated. It is the interest rate that generates just enough savings to finance investment in the long-run. Since savings can flow across borders, the neutral rate in Canada is influenced by both domestic and foreign factors. We posted on our website today a [background paper](#) on the neutral rate that lays this out very clearly. Let me walk you through the highlights.

Real interest rates have fallen worldwide over the last few decades, including in Canada. Given this decline and with such low interest rates today, it is reasonable to think that the neutral rate is lower than in the past. There are a number of structural factors related to investment and savings that explain why.

Currently, investment is being held back by weak confidence and uncertainty about demand. These are cyclical factors, and hardly surprising given the duration of the crisis. The structural undercurrent here, though, is about the speed limit of the global economy. With the lower expected growth in potential output that I just discussed, we can expect lower returns to investment. With lower returns, investment will be weaker than it otherwise would be. When firms are investing less, their reduced demand for funds puts downward pressure on interest rates. The financial crisis also appears to have had a persistent effect on the capital-formation risk premium. As Robert Hall points out, this helps to explain why high profits and low interest rates are not boosting investment to a greater extent.⁶

⁵ The notion of a natural or neutral rate of interest was first used by Knut Wicksell. See K. Wicksell, *Interest and Prices: A Study of the Causes Regulating the Value of Money* (London: Macmillan and Company for the Royal Economic Society, 1936; original edition published in Sweden in 1898).

⁶ R. Hall, “Quantifying the Lasting Harm to the U.S. Economy from the Financial Crisis,” Hoover Institution and the Department of Economics, Stanford University, National Bureau of Economic Research *Macroeconomics Annual*, April 2014.

At the same time, effective business credit spreads in Canada today are around 15 to 45 basis points higher than they were before the crisis. Wider spreads are likely to persist because of tougher financial regulations and other factors.⁷

The neutral rate is also being affected by the level of global savings, which has risen significantly in the last decade and a half. There are a number of factors at play, and they are expected to persist. For example, many emerging-market economies (EMEs), especially in Asia, are pursuing policies that contribute to high savings rates. At the same time, elevated oil prices mean large current account surpluses in many countries that export oil. These savings are being invested in advanced economy assets, especially those denominated in U.S. dollars. EME reserves have increased tenfold to US\$8 trillion since 2000.

New financial sector regulations are also reinforcing increased demand for safe assets in order to meet higher collateral requirements and liquidity buffers.⁸

All told, we think that the neutral rate of interest is lower than it was in the years leading up to the crisis because of these structural developments. We estimate that the real neutral policy rate is currently in the range of 1 to 2 per cent. This translates into a nominal neutral policy rate of 3 to 4 per cent, down from a range of 4 1/2 to 5 1/2 per cent in the period prior to the crisis. The neutral rate serves as an anchor for our models and analysis, but it is not a fixed beacon because the structural factors that influence it can change over time. Relative to this longer-term concept of neutral, the policy rate in Canada is stimulative.⁹ We need this stimulus to close the output gap and maintain inflation sustainably at target. But even with a closed output gap and inflation at target, the policy rate may not be at neutral. As long as the factors leaning on growth persist, a policy rate below neutral would be required to maintain inflation sustainably at target. In the

⁷ A joint analysis by the Financial Stability Board and the Basel Committee on Banking Supervision attempts to quantify this adjustment. It suggests that a 3-percentage-point increase in banks' common equity Tier 1 capital ratio would raise lending spreads by around 45 to 50 basis points. Estimates for Canada, prepared by the Bank of Canada, fall very close to this range. Available at <http://www.bankofcanada.ca/wp-content/uploads/2010/09/report.pdf>

⁸ O. Blanchard, D. Furceri and A. Pescatori, "A prolonged period of low real interest rates?" Chapter 8, *Secular Stagnation: Facts, Causes and Cures*, a VoxEU.org Book edited by C. Teulings and R. Baldwin (London, UK: CEPR Press, 2014). Also see: J. Cruz Lopez, R. Mendes and H. Vikstedt, "The Market for Collateral: The Potential Impact of Financial Regulation," Bank of Canada *Financial System Review* (June 2013): 45-52.

⁹ Common global developments play a central role in determining longer-run neutral rates in all countries, but country-specific differences in structural factors do introduce some heterogeneity. Shorter-run concepts of neutral can differ even more because they are influenced by cyclical factors that can vary substantially across countries (for a discussion of alternative definitions of neutral rates, see Box 1 in Mendes, 2014). For example, using a shorter-run concept, Carney (2013) concludes that "the equilibrium real interest rate [in the U.K.] has been, and continues to be, negative." Shorter-run definitions of neutral are more useful as normative measures of the currently warranted policy rate than as tools for gauging the degree of stimulus in the economy. Given the headwinds faced by the Canadian economy, shorter-run measures of neutral in Canada would currently be well below the 3 to 4 per cent range for longer-run neutral rates. This is reflected in the Banks' policy stance. See R. Mendes, "[The Neutral Rate of Interest in Canada](#)," Discussion Paper No. 2014-5, Bank of Canada 2014; and M. Carney, "The Spirit of the Season" (speech to The Economic Club of New York, New York, 9 December 2013).

absence of this policy stimulus, the output gap would re-emerge and inflation would fall below target.¹⁰

Some of the headwinds appear to be dissipating, but there is considerable uncertainty about how long they will persist. Let's not forget that advanced economies' debt doubled from roughly 160 per cent of GDP to 320 per cent between 1980 and 2010, and will take a long time to unwind. In fact, the global savings rate is expected to increase over the next five years.

As I said earlier, proponents of the secular stagnation interpretation of events believe that the factors restraining demand are a larger and more permanent feature of the global economic landscape. If they turn out to be right, the real neutral rate could actually be negative and monetary policy could be a lot tighter than we think it is. While we cannot completely discount this possibility, we believe that in Canada the real neutral rate is still positive and that, globally, monetary conditions are generally stimulative, although they vary across countries.¹¹

Challenges for Monetary Policy

Our estimates of potential and the neutral rate, and the models in which they are used, are critical inputs to our policy deliberations. They are not the end of the story, though. We also ask ourselves how various sources of uncertainty should influence these deliberations. And we clearly articulate the main upside and downside risks to our base-case outlook for inflation. That is what we mean when we talk about our risk-management approach to monetary policy.

As the economy recovers and we get closer to full capacity, judgments about potential output and the remaining slack in the economy become more important. So do judgments about the neutral rate and the amount of monetary policy stimulus. Inflation could surprise on the upside if there were less slack and more monetary stimulus than we think. We watch developments in inflation carefully to distinguish between temporary and lasting effects. Fortunately, central banks have considerable experience dealing with inflation that is above target and can act quickly to rein it in. In fact, given household debt levels, we think that interest rate increases could have a larger impact than in the past.

If inflation were to surprise on the downside and remain stubbornly below target, that could be harder to deal with. Given where the policy rate is today, there would not be much more conventional monetary policy could do. We have a

¹⁰ For a more detailed explanation, see Technical Box 2, Headwinds, Tailwinds and the Policy Rate, *Monetary Policy Report*, July 2011. Available at www.bankofcanada.ca/wp-content/uploads/2011/07/mpr-july2011.pdf.

¹¹ The secular stagnation hypothesis posits that much of the current deficiency of demand is a structural feature of the economy. In order to explain why the structural deficiency of demand was not evident before the crisis, proponents of secular stagnation argue that it was masked by financially unsustainable growth prior to 2008. A more likely explanation is that deficient demand since the crisis has been due to deleveraging and uncertainty in many jurisdictions. In Canada, weak global demand is a more obvious explanation than secular stagnation. Moreover, the data suggest that as headwinds dissipate, growth is picking up and output gaps are closing in many economies, including Canada and the U.S.

greater appreciation of this risk now than we did before the global recession, when we were more concerned about the upside risks to inflation.

If we were actually in a situation of secular stagnation, well, we would need to consider a different policy framework. One option that has been put forward would be to raise the inflation target in order to deliver negative real interest rates, since nominal interest rates can't go below zero.¹² Not only would we face the costs of higher inflation, we would also risk stoking financial imbalances.¹³

We are weighing the risks to financial stability posed by a low interest rate environment. We have made it clear that household imbalances are at the top of our list of vulnerabilities. But monetary policy is not the primary tool to address these risks. Regulation and supervision, along with targeted macroprudential actions, are more effective lines of defence. These defences have been strengthened a number of times since 2008.¹⁴

Conversely, there are risks that a premature withdrawal of monetary stimulus could undermine the expansion. History provides us with a number of cautionary tales. A classic one is the tightening of monetary policy in 1937 that led the U.S. economy to falter as it emerged from the Great Depression.¹⁵

Monetary stimulus is important to the sustained recovery of demand and can potentially contribute to building supply by supporting investment in capital and increased labour force participation. Public policies such as structural reforms and fiscal stimulus play a more critical role. G-20 leaders have recognized the need to undertake measures to revive both demand and potential growth rates.¹⁶ Of course, decisions made by financial institutions, businesses and households are the most important determinants of our economic prospects over the long term.

¹² O. Blanchard, G. Dell'Ariccia, and P. Mauro, "Rethinking Macroeconomic Policy," IMF Staff Position Note, 12 February 2010, SPN/10/03; P. Krugman, "Inflation Targets Reconsidered," Draft Paper for ECB Sintra Conference, May 2014, https://www.ecbforum.eu/up/artigos-bin_paper_pdf_0134658001400681089-957.pdf

¹³ Some, including DeLong and Summers (2012) and Summers (2014), have argued that stimulative fiscal policies should be used to raise demand and counter adverse hysteric effects on potential output. See J. Bradford DeLong and L. H. Summers, "Fiscal Policy in a Depressed Economy," *Brookings Papers on Economic Activity* (Spring 2012): 233-297; Also L. Summers, "U.S. Economic Prospects: Secular Stagnation, Hysteresis, and the Zero Lower Bound," *Business Economics*, Vol 49, No 2 (2014): 65-73.

¹⁴ The Minister of Finance has tightened mortgage insurance rules, the Superintendent of Financial Institutions has developed stronger mortgage underwriting principles and the Canada Mortgage and Housing Corporation has improved its programs.

¹⁵ G. Eggertsson, B. Pugsley, "The Mistake of 1937: A General Equilibrium Analysis," *Monetary and Economic Studies* (Special Edition), Vol. 24, No s-1 (December 2006):151-190.

¹⁶ At its summit in Sydney, Australia, in February 2014, the G-20 agreed to take measures to boost global growth by 2 per cent over the next five years, largely by removing impediments to growth such as product and labour market rigidities.

Conclusion

To do our job right we need to judge how much of the underwhelming recovery is due to cyclical factors and how much to structural factors. The global economy continues to face headwinds associated with the balance-sheet recession. It also faces demographic changes, hysteresis in the labour market, and weak productivity growth.

We aren't buying the pessimistic view held by proponents of secular stagnation, although no one really knows how long the factors constraining demand are going to persist and how much damage they've done to global potential. Some countries have more baggage than others, so how long these factors persist will vary from country to country. But it is clear that potential growth rates in many economies are lower than they were prior to the crisis. Because of this, and given the high level of global savings, the neutral rate of interest is also lower.

Our approach is to consider the main sources of uncertainty in our deliberations on how best to achieve our inflation target. This helps us avoid making big errors that are difficult to correct.

When we do this, it is clear that continued monetary stimulus is needed to return the Canadian economy to sustainable growth and to maintain inflation at target. And, depending on the evolution of the data, it is possible that persistent headwinds will mean that some degree of stimulus will be required even after the output gap is closed to keep inflation at target.