Timothy Lane: The Canadian economy beyond the recession

Remarks by Mr Timothy Lane, Deputy Governor of the Bank of Canada, to the Canadian Association for Business Economics, Kingston, Ontario, 25 August 2009.

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Good afternoon. It's a great pleasure to join you at this year's CABE meeting. The theme of the conference, "managing the recovery," is particularly timely: As we move past the gravest dangers of the financial crisis toward better days, attention has turned to the policy challenges posed by the recovery. "Managing the recovery" may turn out to be almost as interesting as managing *during* the crisis!

While the outlook is clouded by uncertainty, there are encouraging signs that we will return to positive growth this quarter. Stimulative monetary and fiscal policies, improved financial conditions, firmer commodity prices, and a rebound in business and consumer confidence are spurring the growth of domestic demand. Globally, the vigorous policy actions taken by monetary and fiscal authorities appear to have reduced the probability of an extreme negative outcome for the global economy. But there remain significant upside and downside risks to the outlook for the Canadian economy.

As we return to positive growth, policy-makers are facing difficult decisions – when and how to remove stimulus, how to secure the stability of the global financial system, and, importantly, and over the long term, how to set the stage for a return to rising living standards. It is this last challenge that I'd like to focus on later in my remarks.

I will start with a few comments on how the recovery is likely to unfold and the forces that will be driving it, and what this outlook means in terms of the output gap. Then I'd like to look at Canada's growth trajectory beyond the recovery by focusing on two key variables that affect both potential and actual output – labour input and productivity. Given the significant changes foreseen in the labour market and their implications for output, it's clear that Canada, like many other nations, needs to improve its productivity if we are to reap the benefits of sustained growth. I'll also touch on the important role of monetary policy and financial system policy in setting the stage for sustainable growth. After I conclude, I'd be happy to respond to comments and questions.

The outlook for the economy

The Canadian economy is expected to start growing again this quarter. Our July Monetary Policy Report discusses the factors underpinning this earlier-than-expected resumption of growth. Globally, there are signs of a nascent recovery. More specifically, the U.S. economy is likely to start recovering this quarter, and growth is also picking up again in China, a major source of demand for raw materials. In Canada, domestic demand is strengthening, supported by improved financial conditions, a rebound in consumer and business confidence, and firmer commodity prices. We are projecting Canada's GDP growth at -2.3 per cent for 2009, 3.0 per cent for 2010, and 3.5 per cent for 2011.

Canada's economic recovery will be supported by a combination of factors, which is likely to make it somewhat more robust than elsewhere. First, the composition of economic activity in the United States as it recovers will prove favourable to Canadian exporters – as the sectors hit hardest by the recession, such as housing and automobiles, rebound. Second, Canada's relatively well-functioning financial system will enable credit to meet the needs of an expanding economy. A third supportive factor is the underlying strength of household, business, and government balance sheets. These favourable circumstances are expected to support the return to economic growth, with the output gap closing by mid-2011.

Of course, many uncertainties remain – and economic forecasters are notoriously more prone to error around turning points in the cycle. The July MPR identifies the upside risk of economic momentum in Canada being stronger and more sustained than expected. On the downside, the risks relate mainly to the external sector. There is a possibility that financial conditions may normalize more slowly than expected, and further setbacks cannot be precluded. Two downside risks require elaboration.

First, it's important to bear in mind that a good deal of the impetus for the recovery, in Canada and worldwide, is coming from the public sector – from policy actions by governments and central banks. The scale of fiscal expansion has been quite substantial. Monetary policy has also been eased aggressively, bringing policy interest rates close to their effective lower bound in most advanced economies. In Canada, the target overnight rate of 1/4 per cent is reinforced by our conditional commitment to keep the rate at its current level until the middle of next year. This monetary easing counters other factors – such as tighter lending conditions and wider-than-usual yield spreads on corporate bonds – that would otherwise have resulted in tighter overall financial conditions. Other central banks, given the situations they have been facing, have gone even further by providing additional stimulus through quantitative and/or credit easing. In many countries, the authorities have also had to provide substantial direct support to financial institutions facing difficulties. Although we have been spared that in Canada, this support has been an important bolster for the global recovery. While these policy actions have been timely and effective, they imply that the incipient recovery depends to a considerable degree on official action. At what stage will private demand be robust enough to make the recovery self-sustaining? Clearly, we haven't reached that point yet.

A second important risk is the possibility of persistent strength in the Canadian dollar, which would work against the positive factors that I mentioned earlier. The recent rise in the dollar is, in part, a reflection of the same factors that are leading to a recovery in Canada, notably the rebound in commodity prices. It is also a result of a more generalized weakening of the U.S. dollar, as global financial conditions normalize. Other things being equal, a persistently strong Canadian dollar would reduce real growth and delay the return of inflation to target. If a stronger dollar were to alter the path of projected inflation relative to that presented in our July *Monetary Policy Report*, we would need to take that into account. As we have said before, even though we are at the effective lower bound for our policy rate, we retain considerable flexibility through the use of unconventional monetary policy instruments, including quantitative easing.

The output gap and the evolution of potential output

I'll now turn to the output gap and potential output. The output gap is the difference between actual and potential output – with the latter defined as the level of output that can be achieved with existing labour, capital, and technology *without* putting sustained upward pressure on inflation. The concept has been much maligned, partly because it is not an observed variable, and it is subject to considerable measurement problems. However, it remains a convenient "shorthand" for characterizing underlying inflation pressures, and for bridging between the current conjuncture and the factors that will condition economic growth over the medium term, as the output gap is closed. Our current situation of excess supply (a negative output gap) implies, all else being equal, that core CPI inflation can be expected to decline and then recover as actual output growth exceeds potential, while the level of output returns to potential.

The output gap is best used to complement more detailed and micro-founded analysis, particularly that captured in more formal models. For example, our main projection model for the Canadian economy, ToTEM, has a structure that is based on explicit assumptions about firms' profit objectives and the constraints that they face when setting prices. As a result, the output gap is not a direct determinant of inflation in ToTEM, in the sense that when firms set

prices, they do not explicitly take account of the aggregate output gap. More generally, we pay attention to a variety of indicators of inflationary pressures, such as core inflation, yield curves, and credit indicators.[1] I should emphasize that we don't use any of these indicators in isolation nor in a mechanical fashion. We use a good deal of judgment in interpreting changes in the economy, as well as in making monetary policy decisions.

Now, three quarters after the onset of a severe recession, the output gap has widened substantially. This is indicated by the fact that output is now below its trend level, as represented by the Bank of Canada's conventional measure of the output gap, and corroborated by other indicators of excess supply.[2] For example, the Bank's summer *Business Outlook Survey* showed that the percentage of firms that would have difficulty meeting an unanticipated increase in demand remained at an exceptionally low level. Most labour market indicators also mirror the weakness in product markets, and jobs continue to be lost. After reviewing all the indicators of capacity pressures and the ongoing restructuring in the Canadian economy, the Bank judged that the economy was recently operating about 3.5 per cent below its production capacity.

While the usual premise is that the output gap will close over time, the interesting question is how this will occur. In the current circumstances, we believe that it will come about both through lower potential and increased output.

There are several reasons to expect potential output to be altered by a major recession. In particular:

- Some of the decline in employment may turn out to be persistent – for instance, because high unemployment may discourage workers from seeking employment or because workers' job skills may deteriorate during long spells of unemployment. Labour displacement associated with firm closures and mass layoffs tends to increase during recessions, adding to structural unemployment, particularly for older displaced workers.
- The lower level of investment during the recession translates into lower productive capacity. In addition, plant closures mean that some capital is effectively scrapped (although this is not fully reflected in the measured capital stock).
- Total factor productivity may either increase or decrease, at least temporarily. It could decrease as spending on research and development declines, and as workers' job-specific human capital is lost as they find employment in different sectors. It could also increase if, for example, the recession weeds out the less-productive activities associated with a pre-crisis "bubble economy," or stimulates efficiency gains through changes in work practices.
- There is also evidence that recessions associated with financial crises are more severe and more protracted than other recessions, and that a financial crisis negatively and permanently affects potential output – as highlighted in a recent paper by Carmen Reinhart and Ken Rogoff.[3]

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[1] The Bank's main indicators of capacity and inflation pressures can be found on our website at <http://bankofcanada.ca/en/rates/indinf.html>.

[2] The conventional measure of the output gap reached -4.3 per cent in the second quarter of 2009. However, this measure tends to have a higher margin of error around turning points in the economy. For a discussion of potential problems in estimating the output gap at the end of a sample, see J.-P. Cayen and S. van Norden, "The Reliability of Canadian Output-Gap Estimates," *North American Journal of Economics and Finance* 16, no. 3 (2005): 373-393.

[3] C. Reinhart and K. Rogoff, "The Aftermath of Financial Crises," *American Economic Review-Papers and Proceedings* (May 2009): 466-72.

These forces are at work worldwide, as economies absorb the impact of the global recession. A recent OECD study analyzed the factors influencing potential output across the advanced economies, and traced the implications for growth through 2017.[4] This study concluded that growth will be slower, to varying degrees, in most countries.

Similar forces are at work in Canada. In our April *Monetary Policy Report,* we lowered our estimate of potential output for the 2009-2011 period. Here, one key consideration is the structural changes under way in key sectors of the Canadian economy – notably, automobiles, energy, and forest products. We were also taking account of the sharp drop in investment that has taken place, particularly for machinery and equipment. As a result, we expected potential output growth to slow to 1.1 per cent in 2009, and then pick up gradually to 1.5 per cent in 2010 and to 1.9 per cent in 2011.[5] We will be reviewing this estimate in the October *Monetary Policy Report*.

So, that's the outlook for the medium term. Let me turn now to examine the evolution of potential growth over the long term. I'll discuss each of the two components, trend labour input and trend labour productivity, emphasizing longer-term trends and reflecting on how these trends may have been affected by the current recession.

Labour input: A drag on potential output growth

For the past 30 years, Canada, like some other nations, has been sailing with a favourable wind at its back. Potential output has increased fairly steadily at about 2.7 per cent per annum, largely because of long-term increases in labour input – that is, the total hours supplied by the labour force. Since 1977, trend labour input – a function of population, the labour force employment rate, and the change in average weekly hours worked – has grown about 1.6 per cent annually. Some key factors here have been the growth of the working-age population as baby boomers reached working age and, to a lesser extent, the increased participation of women in the labour force.

Over the next few years, these trends will begin to lose steam. Those on the leading edge of the baby boom are now in their 60s. Growth in the working-age population is slowing, and participation rates are declining. As these changes work their way through the population, they will have a dampening effect on trend labour input.[6] As well, the dependency ratio is likely to double over the next 20 years.[7] The demographic challenges that we have been worrying about for years have started to arrive.

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[4] D. Furceri and A. Mourougane, "The effect of financial crises on potential output: New empirical evidence from OECD countries" (Working Paper No. 699, OECD Economics Department, 22 May 2009). Available at: <http://www.olis.oecd.org/olis/2009doc.nsf/LinkTo/NT00002D9A/$FILE/JT03265117.PDF>.

[5] The Bank's previous estimates, as presented in the October 2008 *Monetary Policy Report*, were for growth of potential output of 2.4 per cent in 2009 and 2.5 per cent in 2010 and 2011.

[6] R. Barnett, "Trend Labour Supply in Canada: Implications of Demographic Shifts and the Increasing Labour Force Attachment of Women," *Bank of Canada Review* (Ottawa: Bank of Canada, Summer 2007): 5-18. Available at: <http://www.bankofcanada.ca/en/review/summer07/barnett.pdf>.

[7] The dependency ratio is the ratio of the population typically not of working age (the *dependent* part) to those typically of working age (the *productive* part). In published international statistics, the dependent part usually includes those under the age of 15 and over the age of 64. This estimate comes from Banerjee and Robson (2009) (see next footnote).

Immigration is not likely to diminish this challenge significantly. Even a large increase in immigration would be unlikely to provide a major offset to the projected downward trend of labour input.[8]

How will these trends be affected by the financial crisis and recession? One potential mitigating factor is the negative wealth effect that households have experienced over the past year. This loss of wealth could lead some older workers to defer retirement or even to re-enter the workforce – and there is anecdotal evidence suggesting that this may be happening. But our estimates suggest that such an effect is likely to be small – perhaps 0.1 or 0.2 percentage points for one to three years into the future. In the larger scheme of things, it is thus unlikely to provide any significant offset to the projected long-term decline in labour input.

Working in the other direction, the recession has resulted in sharply higher unemployment, and some of that unemployment may persist. During recessions, long-term spells of unemployment become more prevalent, and such spells can impair workers' ability to find other jobs. Some workers become discouraged and drop out of the workforce. Scenarios from the OECD suggest that such longer-term unemployment will dampen potential output growth in Canada as well as in other countries over the next few years.

In sum, the recession has not altered the basic situation: The favourable conditions we've had over the past decades are no longer with us – and indeed, we are about to face some headwinds. This sobering outlook for the likely evolution of labour input leaves one other possibility for boosting potential output: improved labour productivity.

Labour productivity: The key to increased living standards

Compared with other countries, the growth of labour productivity in Canada over the past decade has been disappointing. After some promising signs of improvement in the late 1990s, average labour productivity growth from 2000 to 2008 has been only about 1 per cent, well below the 2.6 per cent level achieved in the United States over the same period. Canada's productivity ranking has gone from third out of 20 countries in the OECD in 1960 to 17th out of the current 30 members.

What accounts for this disappointing performance, and is it likely to continue beyond the recession? Three factors help to explain the situation. First, relative to other countries, especially the United States, workers in Canada have lower amounts of capital with which to do their jobs. But particularly striking is the fact in Canada, Information and Communications Technology (ICT) capital is half the amount per worker in the United States. A study by Andrew Sharpe reveals that Canada's ICT investment gap relative to the United States is not primarily related to industrial structure and firm size; in fact, the gap exists in most industries.[9] This is important because ICT capital investment has been linked to stronger multifactor productivity growth in many countries, as firms reorganize their workplaces to take advantage of new technology. Bank of Canada research suggests that the contribution of ICT capital to productivity growth over the first half of this decade has been considerable.[10]

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[8] See, for example, R. Banerjee and W.B.P. Robson, "Faster, Younger, Richer? The Fond Hope and Sobering Reality of Immigration's Impact on Canada's Demographic and Economic Future" (C.D. Howe Institute *Commentary*, Issue 291, July 2009). Available at: <http://www.cdhowe.org/pdf/commentary_291.pdf>.

[9] A. Sharpe, "What Explains the Canada-US ICT Investment Gap?" (Research Report 2005-2006, Centre for the Study of Living Standards (CSLS), December 2005).

[10] D. Leung and Y. Zheng, "What Affects MFP in the Long Run?: Evidence from Canadian Industries" (Working Paper No. 2008-4, Bank of Canada, 2008). Available at: <http://www.bankofcanada.ca/en/res/wp/2008/wp08-4.html>.

A second, and related, factor is Canada's poor record on innovation. In a recent report, Peter Nicholson concluded that "too many businesses in Canada are technology followers, not leaders" and stressed the need for "innovation-based business strategies."[11] Canada stands only 16th within the OECD in the intensity of business research and development. Moreover, this situation exists despite the fact that Canada would appear to have all the ingredients needed for innovation: a highly educated work force, flexible labour markets, and high rates of firm entry and exit.[12]

A third influence on aggregate productivity growth is the reallocation of capital and labour across firms. Recent Bank of Canada research suggests that job reallocation across firms is a significant positive factor explaining Canadian labour productivity growth over the 1992-2006 period.[13] This in turn suggests that such reallocation may be associated with more efficient economic specialization and the adoption of new work practices. Of course, the short-run effects are likely to be negative, since it takes time and training for workers who have been reallocated to become fully productive. Thus, when the economy undergoes major structural changes – such as at the present time – productivity growth may suffer in the short term and then recover – perhaps even to a higher rate – but only with a lag.[14]

Interestingly, a recent study by John Baldwin and Wulong Gu, using a growth-accounting framework, shows results consistent with the three influences just discussed – that is, multi-factor productivity (MFP), rather than capital intensity, is the main culprit in Canada's lagging productivity performance. They note that two industries in particular – mining and oil and gas extraction and manufacturing – account for much of the slowdown in MFP growth in this decade.[15]

Against this background, we can consider the implications of the global financial crisis and recession for Canada's future productivity growth. Productivity growth tends to vary over the cycle, declining in the downturn and then rising during the recovery as labour is more fully utilized. But the recession may also have more persistent implications for productivity growth. First, investment has fallen off sharply, which in turn reduces the growth of capital per worker – even as labour is shed. And, because capital investment often embodies new technology, reduced investment will dampen MFP growth. Second, investment in research and development is likely to suffer even more in the downturn. Third, as I noted earlier, the ongoing process of sectoral adjustment and reallocation of resources dampens productivity growth during the adjustment process. The adjustments now occurring in several sectors of the Canadian economy, including automobiles and forest products, are a particularly important example. Both physical capital and human capital – in the form of industry-specific and firm-specific skills – are also inevitably lost in such an adjustment.

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[11] P. Nicholson, "Innovation and Business Strategy: Why Canada Falls Short," *International Productivity Monitor*, No. 18 (Spring 2009): 51-71. Available at: <http://www.csls.ca/ipm/18/IPM-18-Nicholson.pdf>.

[12] R. Dion, "Interpreting Canada's Productivity Performance in the Past Decade: Lessons from Recent Research," *Bank of Canada Review* (Ottawa: Bank of Canada, Summer 2007): 19-32. Available at: <http://www.bankofcanada.ca/en/review/summer07/dion.pdf>.

[13] D. Leung and S. Cao, "The Changing Pace of Labour Reallocation in Canada: Causes and Consequences," *Bank of Canada Review* (Ottawa: Bank of Canada, Summer 2009): 31-44. Available at: <http://www.bankofcanada.ca/en/review/summer09/leung.pdf>.

[14] Statistics Canada research (J. Baldwin and W. Gu, "Competition, Firm Turnover and Productivity Growth" (Economic Analysis Research Paper Series No. 042, Statistics Canada, September 2006)) suggests that the longer-run gains can be large. For example, roughly 35 per cent of labour productivity gains in manufacturing over the 1989-1999 period were attributed to labour reallocation across firms.

[15] J. Baldwin and W. Gu, "Productivity Performance in Canada 1961 to 2008: An Update on Long-Term Trends" (*The Canadian Productivity Review*, Research Paper No. 025, Statistics Canada, August 2009). Available at: <http://www.statcan.gc.ca/bsolc/olc-cel/olc-cel?catno=15-206-X2009025&lang=eng>.

Although the recession is likely to exert some drag on productivity growth over the near term, two factors may provide a boost over the longer term. First, in the wake of a recession, resources may be reallocated to more productive uses, which would tend to stimulate productivity growth, once adjustment costs have been borne. Second, the shock we have experienced over the past two years may serve as a "wake-up call" to the financial system, resulting in better scrutiny of investment projects. This latter point leads me to a specific topic on which I would like to touch briefly: the role of the financial sector in aggregate productivity growth.

The financial sector and productivity

As services take on an increasingly important role in the Canadian economy, improving the productivity of services will grow in importance. The financial sector is key to productivity for two reasons. First, financial services are an important and growing sector of the Canadian economy in their own right – accounting for close to one-fifth of real output.[16] Second, the financial sector plays a pivotal role in the allocation of resources, and hence to productivity growth throughout the economy.

How productive is the Canadian financial services sector? Data from Statistics Canada point to a possibly worrisome trend. Productivity growth in this sector has declined from an average of 2.8 per cent per year in the 1990s to just over one-half per cent in this decade.

But there is an important caveat here. As you know, financial services, particularly banking and insurance, pose unique measurement difficulties, both in gauging the value of output and in finding an appropriate price series to deflate it. Given that different countries measure these things differently, international comparisons can sometimes be misleading. That said, if we compare Canada with the United States, our own research suggests that generally, the productivity of Canadian banks compares favourably with the productivity of U.S. banks.[17]

I said that the productivity of the financial sector also has implications for the wider economy. Since the financial sector helps to allocate resources efficiently, productivity gains in this sector are apt to fuel productivity gains more generally. More efficient allocation of credit means better-targeted loans and a lower cost of capital for firms. These gains, in turn, spread into the wider economy, supporting better-targeted investment by firms. A Bank of Canada working paper concluded that the overall level and quality of financial services is an important influence on long-run economic growth.[18] In other words, the most important issue is not markets versus intermediaries – but how to ensure the proper functioning of both markets and intermediaries.

Both the stability and the efficiency of the financial system are important for long-run economic growth. A system that is prone to crises is unlikely to support sustained growth. Credit booms are also a problem: Rapid increases in credit can ultimately hamper productivity growth when insufficient attention is paid to allocation decisions, when the link between the borrower and lender is broken or not adequately monitored, and when risks are ignored or mispriced. A well-functioning financial system creates the incentives to manage

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[16] The "FIRE" sector of the economy – finance, insurance, and real estate – accounted for about 18.5 per cent of real output in 2000 and just over 20 per cent in 2008, based on 2002 constant prices.

[17] J. Allen, W. Engert, and Y. Liu, "Are Canadian Banks Efficient? A Canada-U.S. Comparison," *Financial System Review* (Ottawa: Bank of Canada, December 2006): 61-65. Available at: <http://www.bankofcanada.ca/en/fsr/2006/research_1206.pdf>.

[18] V. Dolar and C. Meh, "Financial Structure and Economic Growth: A Non-Technical Survey" (Working Paper No. 2002-24, Bank of Canada, 2002). Available at: <http://www.bankofcanada.ca/en/res/wp/2002/wp02-24.pdf>.

the risks associated with financial innovation, in the context of an appropriate regulatory framework.

I'd now like to draw some of these threads together by discussing what policy can do to help.

The role of policy

The combination of factors that are thought to explain Canada's productivity problem suggests that efforts to tackle the productivity challenge must be broad based. Appropriate labour market policies, tax structure, competition policy, and an open trading system can all help to boost productivity. Let me say a few words about the Bank of Canada's roles in monetary policy and financial system policy.

Since 1991, Canada's monetary policy has been guided by an explicit inflation target. While we have been successful in meeting the target – for the past 15 years, inflation has averaged almost exactly 2 per cent – it's important to remember why inflation control is so crucial. Low, stable, and predictable inflation contributes to better economic performance. It enables clear price signals to be sent, which in turn helps people to make wise borrowing and investment decisions and thus makes the economy more resilient to economic shocks.

The Bank of Canada also has important responsibilities in supporting a stable and efficient financial system, which is critical to long-run growth. The Bank's work on financial stability is carried out in collaboration with federal and provincial regulators and other public sector partners, and as a member of international bodies. One important responsibility is financial system surveillance – identifying, monitoring, and reporting on risks to the financial system. The Bank also oversees Canada's clearing and settlement systems, providing liquidity, both on a regular basis and in times of stress, and acts as the lender of last resort. Stemming from this responsibility, the Bank has been undertaking initiatives to maintain continuously open core financial markets.

The Bank is also an active participant in discussions of financial system policy, both in Canada and internationally. The recent crisis has prompted initiatives, both at the global and national levels, toward making the financial system stronger and better able to support long-term economic growth. A central aspect of this work is the establishment of a macroprudential framework for financial supervision and regulation. Here, the emphasis is on systemic stability, for example, through appropriate capital requirements.

Finally, the Bank is engaged in research to better understand the sources of long-run economic growth, given its importance in anchoring current policy. While progress has been made in our understanding of productivity growth, there is still a good deal that we simply do not know. Over the next few years, the Bank will continue to explore how relative-price shocks affect the Canadian economy, including the reallocation of resources and its impact on productivity growth. The Bank will also be further investigating the linkages between the financial sector and the real economy – for example, how firm and household balance sheets adjust to various shocks, and the implications for investment and spending. Members of the Canadian Association for Business Economics also have an important role here. With your skills and responsibilities, you are in an ideal position to contribute to this research effort.

Conclusion

Two years after the onset of a global financial crisis and after three quarters of severe recession in Canada, the economic outlook for this country, and much of the world, has improved. The policies that were put in place to bring about the recovery, are starting to bear fruit. Although the recovery is likely to be muted, and effective and resolute policy implementation will be required, we are likely to experience positive growth this quarter, and a gradual closing of the output gap by the middle of 2011.

A serious challenge lies ahead, however – that of continuing to improve our living standards against a less-favourable demographic backdrop. Improved labour productivity is the key to meeting that challenge, and how we set about it will shape our economic well-being for years to come. Meeting the challenge will involve all Canadians: employees, business owners, researchers, policy-makers, inventors, and entrepreneurs. It will require creativity, adaptive learning, and innovation.

The Bank has an important role to play. By achieving the inflation target, and by working to make the financial system more stable and efficient, it is contributing to the recovery that will take hold over the medium term. This work also helps to ensure that a sound foundation is in place for the work that must be done to meet the longer-term challenges that lie ahead.