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Remarks by Jean Boivin
Deputy Governor of the Bank of Canada
Economic Club of Canada
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Aging Gracefully: Canada's Inevitable Demographic Shift

Thank you for having me here today.

I'm here to talk about something inevitable and mostly dreaded: aging. Every day—if we're lucky—we get older. But don't worry, I'm not here to give a motivational talk about personal growth and aging—I'm not the most qualified person to do that. What I would like to discuss is the aging of Canada's population as a whole and its implications. And in this case, luck has nothing to do with it.

One of our gracefully aging Canadians, Leonard Cohen, once wrote, "Reality is one of the possibilities I cannot afford to ignore." I won't get into whether "reality" is just a "possibility"— I'm an economist, not a philosopher—but there is no doubt aging is a reality, and it is one we simply cannot afford to ignore.

Whether we like it or not, we are getting older as a society. The prospect of an aging population has been with us for a long time. Long before I was born, the United Nations published the first of several studies on the issue.[1] At the Bank of Canada, the importance of addressing this challenge has been raised many times and in many places.[2]

Not only has this prospect been with us for a long time, but it has also been entirely predictable (Chart 1).

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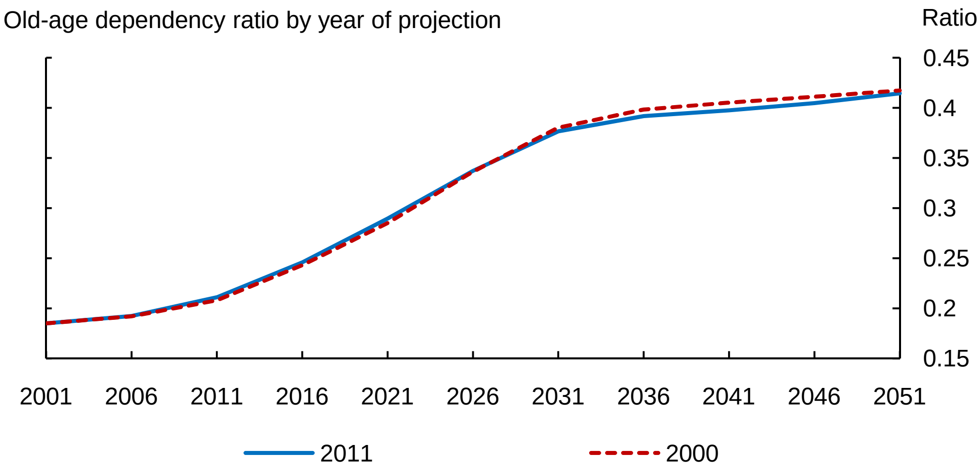
Chart 1: Aging projections right on track



Note: The old-age dependency ratio is defined as the number of people aged 65+ divided by the number of people between the ages of 15-64
Source: Statistics Canada

Aging in Canada has evolved almost exactly as projected 10 years ago and the outlook remains the same. Let me tell you: when compared with the typical economic phenomena that central banks work with, forecasting aging is a piece of cake.

What is much less easy to predict, however, is how society will adjust to aging, and the flexibility it will have to do so. Ten years ago, we didn't know the world would be facing the greatest financial crisis since the Great Depression which has resulted in vast amounts of lost wealth and higher debt levels for governments and individuals. What that means is that today in advanced economies we still face the problem of an aging population—it has not gone away—but with less room to manoeuvre. This is a situation that should give us cause for more than a few worry lines.

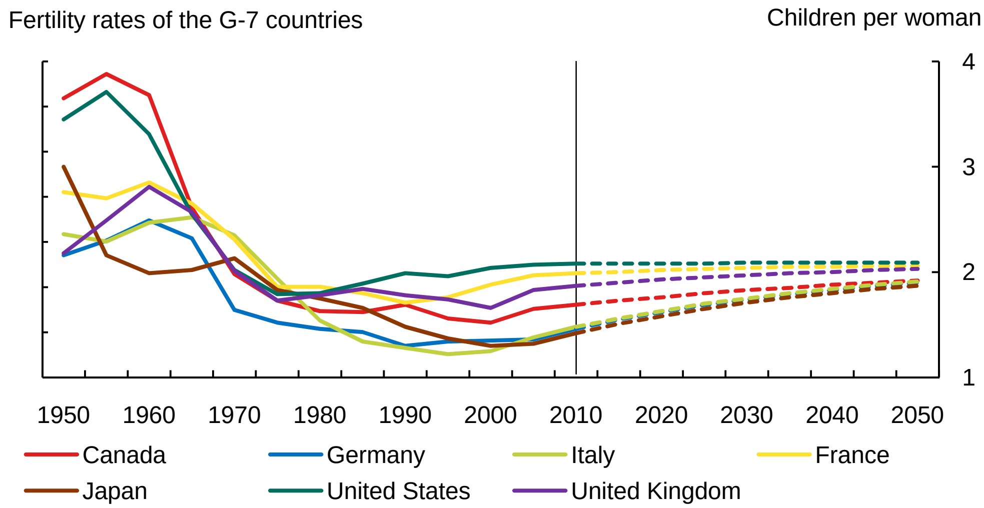
But no matter how we adjust, one thing is for sure: aging will change the Canadian economic landscape. We have started to see the impact of this process and it will intensify. This will have broad implications, including for monetary policy. This is what I would like to discuss today.

Current Demographic Situation

Let's first quickly remind ourselves of the facts.

When we think of population aging, we immediately think of the baby boomers who are just starting to retire. Canada did indeed have the most sizable baby boom among the G-7 countries, and it is certainly an important demographic phenomenon (Chart 2).

Chart 2: From baby boom to baby bust



Source: United Nations

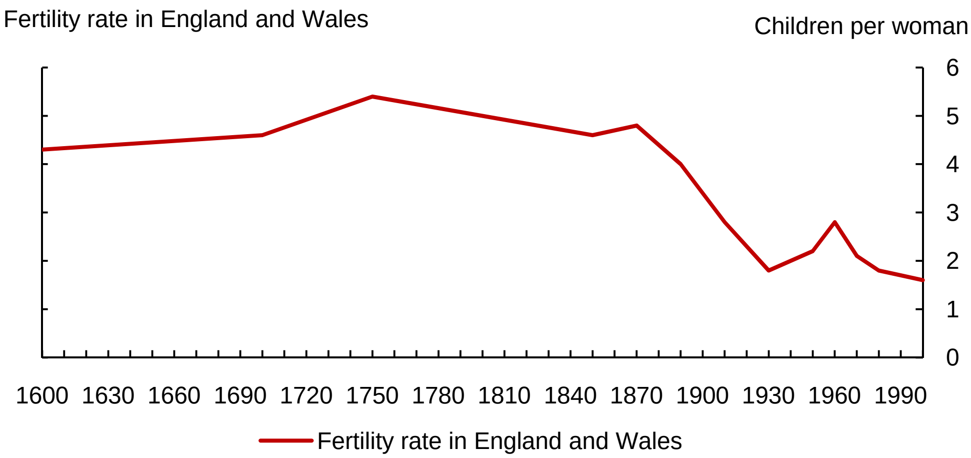
But as someone who has come of age in the shadow of the baby boom, let me say this: baby boomers, this is not just about you.

Although the post-WWII baby boom is speeding up the transition toward an older population, it is neither the cause nor the main driver. The aging of Canada's population would have occurred, with or without the baby boom.

There are two much more important and persistent drivers at play: first, a *decrease* in total fertility below the replacement rate of 2.1 children per woman and second, a considerable *increase* in life expectancy.

We can trace the beginning of this shift to northern European countries as far back as the 1870s, where fertility rates have been on a downward trend (Chart 3). In Canada, total fertility rates peaked in the early 1960s, during the baby boom, and then plummeted to where they are today. For 40 years now Canada's total fertility rate has been below 2.1.

Chart 3: Declining fertility rates long in the making

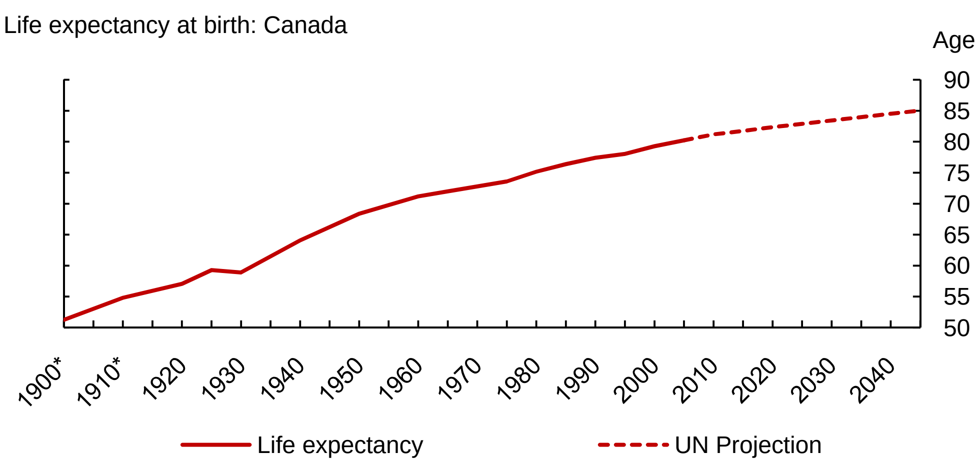


Source: E. Wrigley and R. Schofield, "The population history of England, 1981" Cambridge Studies in Population, Economy and Society in Past Time, no. 46 (1989).

Last observation: 2001

At roughly the same time in the 1870s that fertility rates dropped, we saw large declines in mortality, mostly of children. As the once commonplace death of a child is thankfully far in the past, at least in advanced economies, the big change we see now is in the significant increase in life expectancy. Consider this: Canadians born in 2000 could expect to live almost three decades longer than those born in 1900 (Chart 4).

Chart 4: Canadians living longer

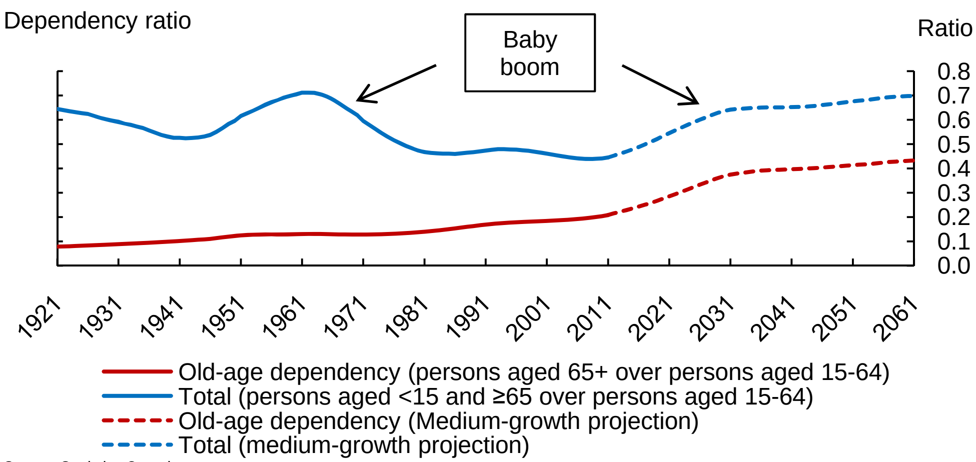


*pre-1921 entries are estimated from available Life tables for Canada published by Statistics Canada
Sources: Statistics Canada, United Nations, and "Canada Pension Plan Mortality Study," Office of the Superintendent of Financial Institutions Canada. (2009)

More people living longer swells the ranks of the non-working population and changes the ratio of older non-working people relative to working-age people. This ratio is commonly referred to as the “old-age dependency ratio.”

Looking at the expected evolution of this ratio, an important conclusion is that the aging of the population has begun and it will soon accelerate. The crunch will be unprecedented in history, both in scope and size (Chart 5). In Canada, by 2031 about one in four people will be over 65.[3] As for those over 80, they are the fastest-growing segment of the older population, a group that, relative to 2000, will have nearly doubled by 2026 and quadrupled by 2051.[4]

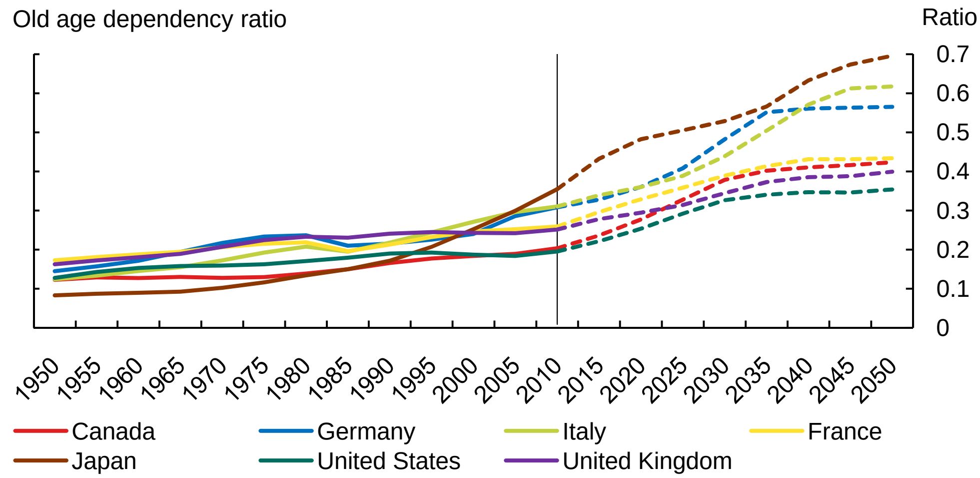
Chart 5: Towards unprecedented rates of old-age dependency



Source: Statistics Canada
Note: The old-age dependency ratio is defined as persons aged 65+ divided by persons aged 15-64; the total dependency ratio is defined as the sum of persons aged 65+ and less than 15, divided by persons aged 15-64.

Canada is not the only nation getting older (Chart 6). Population aging is common across advanced economies. All G-7 countries have seen a drop in the Total Fertility Rate and an increase in life expectancy. Canada's situation is more favourable than that of other G-7 countries such as Japan. We are not aging as early or as fast. Two reasons for this difference are that more Canadian women are in the labour force and we have much higher rates of immigration.[5]

Chart 6: Aging common to G-7 countries



Note: The old-age dependency ratio is defined as the number of people aged 65+ divided by the number of people between the ages of 15-64.
Source: United Nations

The fact that aging is a phenomenon shared by advanced economies is no coincidence. Historically, increased life expectancy and low fertility rates are common to societies with higher standards of living. With a higher standard of living we are more likely to get old. Babies don’t die at birth; they may grow to become octogenarians. This is a cause for celebration, not dismay.

Population aging is in large part the result of positive forces as economies develop. The task ahead is to figure out how to make the right adjustments.

Ignoring Reality

So what are the economic consequences of aging?

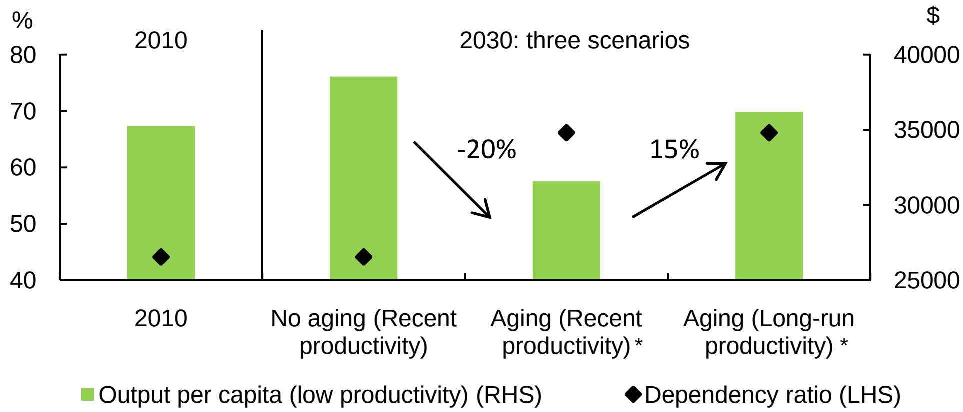
Ultimately, if we ignore the reality of aging and make no adjustments, the consequence will be a lower standard of living. An aging population implies a smaller proportion of working people relative to people not working. That means a pie growing more slowly than the number of eaters—less for everyone.

The stakes are high: Bank of Canada calculations show that in the absence of any adjustments, the average incomes of Canadians could be as much as 20 per cent lower in 20 years than they would otherwise be without aging (Chart 7). Such numbers need to be interpreted carefully and let me be clear: this is not a forecast of what is likely to happen. Although they are hard to predict, there will be adjustments that will mitigate the impact of aging. But this number does show that the implications of aging, by itself, are major and the size of the needed adjustments is considerable.

As Canadians age, several pressure points will emerge, singly or in conjunction. The consequences will affect the labour market, private and public bottom lines, the structure of the economy, and income inequality.

Chart 7: The stakes are high: a lower standard of living

Output per person will decline unless productivity growth increases



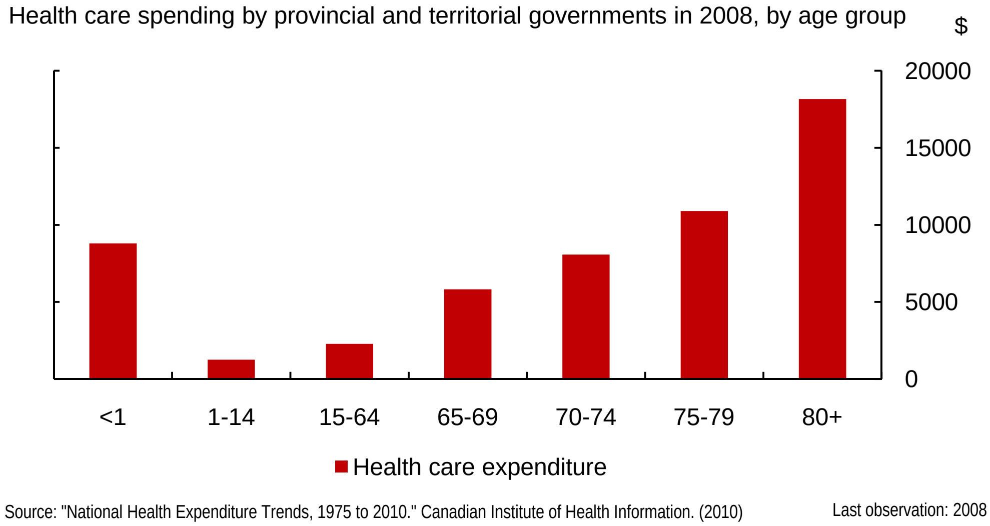
* Medium-growth projection is used from Statistics Canada.
Note: Recent annual productivity growth, from 2001-2011, was 0.65%; long-run productivity growth, from 1960-2011, was 1.13%.
Source: Statistics Canada and Bank of Canada calculations

Let me say a few words about these various pressure points.

Aging will put pressure on the labour market. As workers retire and there are fewer people to replace them, there will be upward pressure on wages and adjustments on the composition and the nature of the labour force. For firms, attracting talent, while retaining relevant expertise and institutional knowledge, will be more challenging. The Bank of Canada is no exception, and we compete with many of you to recruit the brightest and the best talent.

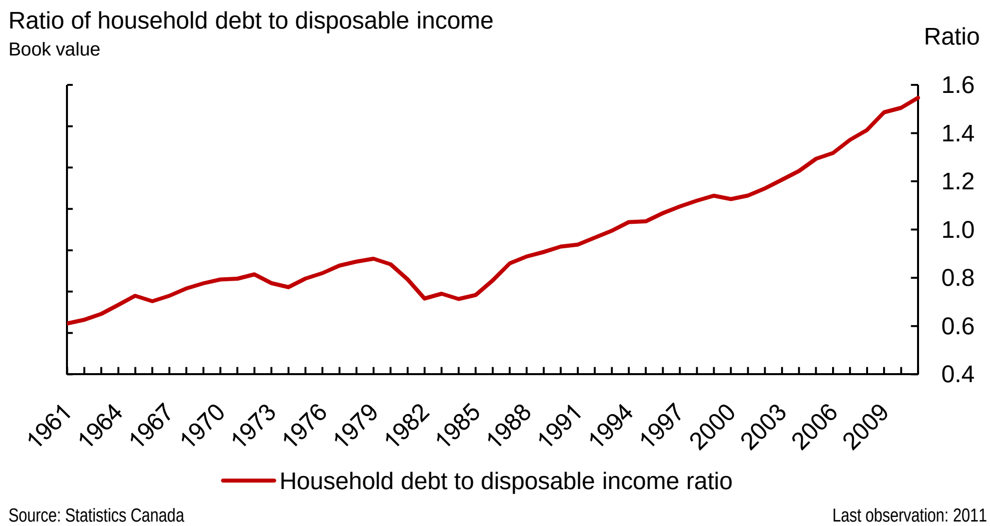
Aging will put pressure on public finances. A smaller fraction of the population will be working and contributing to public revenues, and more people will be depending on their pensions, either public or private, to maintain their standard of living. Further, citizens require increased health care as they grow older, which will also place pressure on the public purse—fewer resources, more demand (Chart 8).

Chart 8: Aging pressure on health care spending



Aging will put pressure on private savings. As the proportion of prime-age savers—age 35 to retirement—declines, this will act as a drag on aggregate savings. Moreover, at the individual level, as Canadians live longer in retirement, they will need to change their savings behaviour and to plan over a longer horizon. The high levels of household debt in Canada make the need for such adjustment even more crucial (Chart 9).

Chart 9: High levels of household debt



Aging will also put pressure on the redistribution of wealth across generations. The less we adjust, the larger the burden the next generations will inherit.

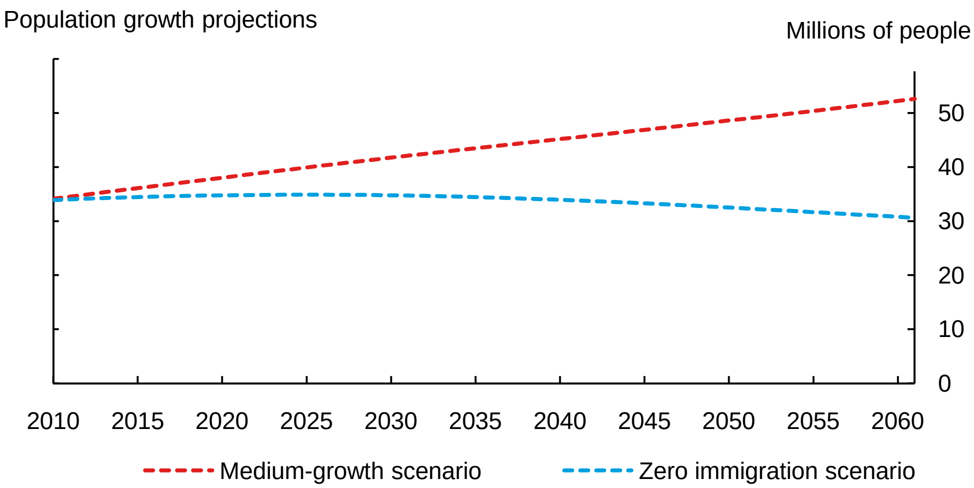
Accepting Reality

These pressure points show that change is upon us no matter what we do. To avoid drastic declines in our living standards or shifting too great a burden on the next generations, there are only three options: more work, greater productivity and higher savings. These options will require action from all Canadians. Policy measures can help foster the needed adjustments and this is the objective of some of the measures put forward, for instance, in last week's federal budget.

Since the problem starts with shrinking labour input, a natural place to look is for ways to counteract this decline. There are various options to contemplate. Individuals might decide to stay longer in the work force. This can be facilitated by the fact that Canadians are, on average, healthier than previous generations and today more jobs are knowledge-based. Businesses could offer more flexible working arrangements. Technological change and corporate policies can provide more flexibility for workers, such as teleworking, part-time work, job-sharing, off-site consulting, and other innovations.

Another option is immigration, and it is very important to Canada: without it, the population would be expected to shrink over the next 50 years (Chart 10). A key challenge with immigration is to remove the various barriers that keep educated and skilled immigrants from contributing to their full potential.

Chart 10: Without immigration, population expected to shrink



Source: Statistics Canada

But making the best of the aging process is not only a question of fighting labour shortages, it is also a question of finding ways to do more with fewer workers.

Investing in capital is one way to do it: with more machinery and equipment, workers can produce more. Strategic investments can lead to innovation and technological progress that make machines and processes more efficient. Better organization can also play an important role. Firms can use the pool of workers more effectively, and workers and managers can improve their performance through education and training.

With populations aging in advanced economies, the relative importance of various economies will change and so will the tastes and needs of an aging population. This will require structural adjustments. Successful businesses will look ahead and see where new markets are developing—both at home and abroad—and where gaps are in terms of products and services.[6] Workers will need to adapt to the changing demands for their skills and gain the qualifications necessary to thrive in a new economy.

Ultimately, this is about being more productive—also a recurring theme for the Bank of Canada and others.[7] Finding the elusive cure for Canada's lagging productivity remains a pressing concern, and the demographic challenge makes it even more imperative. To put things in perspective, as much as two-thirds of the average income loss due to the absence of adjustment to aging—the 20 per cent figure I mentioned earlier—could be regained if productivity grew at a rate close to its average over the past 50 years, instead of at the anaemic rate experienced over the past decade.

But investing more, to increase capital or to boost productivity, will require other adjustments as well. More resources will need to be put aside to finance these investments. As individuals and families understand the challenges of aging, they may realize how much more savings they will need to maintain their standard of living throughout retirement. In this regard, improving financial literacy can help promote these adjustments, through a better understanding of financial products and the important role of private savings. It will also be crucial to ensure that pension funds, and the financial system more generally, channel these savings into long-term productive investments.

Some of the adjustments will happen naturally. For instance, shrinking labour input will put upward pressure on wages. Higher wages might provide greater incentives for workers to acquire more education and training. Scarcity of labour and lower costs of capital might offer greater incentives for firms to invest and increase productivity.

But none of these challenges will be resolved magically by themselves and something will definitely have to give.

Implications for Monetary Policy

It is not the Bank of Canada's role to determine the extent of adjustments needed from each of us—government or private sector, households or businesses, current or future generations. This depends on our values and goals as a society and this is something that Canadians will have to decide on collectively.

So what is the Bank's role here?

Monetary policy cannot, of course, directly influence the aging process or its impact on the Canadian economy. But monetary policy can facilitate the necessary adjustments to aging by contributing to a stable and predictable economic and financial environment.

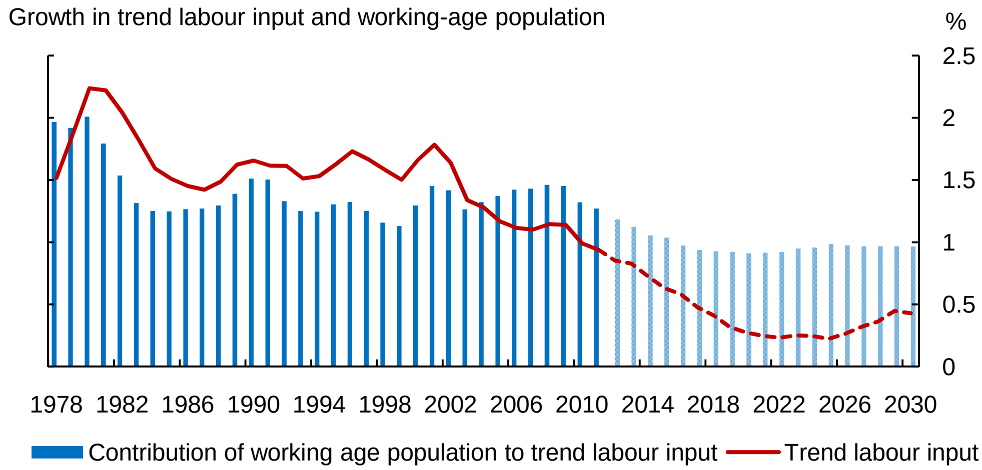
In this regard, one of the Bank of Canada's main contributions is to deliver low, stable and predictable inflation. This promotes growth, mitigates economic cycles and protects the purchasing power of money. It makes it easier for consumers and businesses to manage their finances and to plan ahead.

The stability of the financial system is also essential. As the painful lessons of other countries have demonstrated in recent years, price stability is no guarantee of financial stability, and a financial crisis can significantly hamper a country's ability to deal with challenges such as an aging population. This is why the Bank is contributing to and supporting the G-20 agenda for financial reform. This is also why Canadian authorities, including the Bank, will need to remain as vigilant as they have been in the past to the possibility of financial imbalances developing.

To maintain price stability and support the adjustments to aging across the economy over time, the Bank itself will also have to adjust. That is because demographics affect the way in which we seek to achieve our objectives, most directly in influencing the potential of the economy—the level of activity at which the economy can operate without creating inflationary pressures. Monetary policy cannot influence this long-run speed limit. It must obey it.

This is why the Bank needs to assess, through analysis and research, the implication of aging on potential output.[8] This task is complicated by the fact that it depends not only on the evolution of labour input, but also on how the economy adjusts to the demographic changes, for instance through productivity. Our assessment on the evolution of potential output is reflected in our outlook for the Canadian economy.[9] According to our latest estimate, from the October 2011 Monetary Policy Report, the growth of potential output in 2014 is expected to be 2.2 per cent. Without the decline in the working age population it would be 0.2 percentage points higher. Aging is projected to continue to subtract from potential output growth until the end of the current decade (Chart 11).

Chart 11: Aging reduces speed limit of economy



Source: Bank of Canada calculations based on R. Barnett, "Trend Labour Supply in Canada: Implications of Demographic Shifts and the Increasing Labour Force Attachment of Women," Bank of Canada Review (2007)

Aging is thus already one of many factors influencing the setting of monetary policy. As Governor Carney said this week, taking all relevant factors into account, including recent developments, the Bank will take whatever action is appropriate to achieve the 2 per cent CPI inflation target over the medium term. This is our contribution to ensuring that Canadians can save and invest with confidence.

But the implications of aging for monetary policy go beyond the horizon that is relevant for the current setting of monetary policy. As I hope I have made clear today, the most important demographic changes are yet to come and these will bring about sweeping adjustments. Eventually, the landscape in which monetary policy is operating will be altered.

For instance, the aging population in advanced economies may in time have implications for the level of global interest rates. Taken in isolation, the scarcity of labour relative to capital would lead to higher wages and lower returns on capital, which could eventually contribute to persistently lower interest rates. If that materialized, it would lead to a higher risk of approaching the zero lower bound on nominal interest rates with all of its implications.[10] But many forces affect global interest rates and adjustments to aging, such as improved productivity, would offset these downward pressures on global interest rates.

Also, household saving and consumption behaviours will change and so will expenditure patterns. This could alter the way in which monetary policy affects the economy.

Conclusion

Let me conclude. Canada made it through the financial crisis better than most G-7 countries. It was a shock from outside our borders that was sudden and unexpected. The future can deliver surprises. But the challenges of demographic change will not be a surprise. We've known about them for a long time. They are coming our way.

As our society ages, we can either accept a lower standard of living or we can be proactive and adjust. The stakes are high and we cannot afford to ignore them. There is no free lunch; somebody will have to pick up the tab. The least we can do is accept this fact and ensure that the bill remains small and that the burden is shared fairly.

The decisions we all make are largely influenced by what we think the future will bring, if we are aware and pay attention to it. Acceptance of the demographic challenges before us should lead the way to proper planning.

Part of aging gracefully is accepting the inevitable and making the best of it. Getting older should be about getting better—it's about being wiser and more thoughtful about the future and what lies ahead. There are various options available to individuals and families, businesses, and policy-makers to ensure that we continue to improve our standard of living.

Whatever we decide, our reality will change. That is why we, at the Bank of Canada, will continue to pay close attention to how this situation evolves.

Thank you very much.

[1] The topic of population aging in developed countries was brought to the attention of a broad audience by the first of many UN studies in 1956 in "The Aging of Populations and its Economic and Social Implications, Population Studies, No. 26 (United Nations publication, Sales No. 1956. XIII.6). By 1982, the global relevance of the topic was acknowledged in the First World Assembly on Aging in Vienna, and a call for action was put forward.

[2] See David Dodge, "Past Adjustments and Future Trends in the Canadian Economy," (remarks to the London Chamber of Commerce, London, Ontario, 8 December 2003); "Canada's Competitiveness: The Importance of Investing in Skills" (remarks to the Humber College Institute of Technology & Advanced Learning, Toronto, Ontario, 30 March 2005); "Demographics, Labour Input, and Economic Potential: Implications for Monetary Policy" (remarks to the St. John's Board of Trade, St. John's, Newfoundland and Labrador, 13 June 2007). See also Mark Carney, "The Coming Thaw" (remarks to the Winnipeg Chamber of Commerce, Winnipeg, Manitoba, 4 February 2010); "The Virtue of Productivity in a Wicked World" (remarks to the Ottawa Economics Association, Ottawa, Ontario, 24 March 2010); "Growth in the Age of Deleveraging" (remarks to the Empire Club of Canada, Toronto, Ontario, 12 December 2011).

[3] F.T. Denton, C.H. Feaver, and B.G. Spencer 2005 as cited by Charles M. Beach in "Canada's Aging Workforce: Participation, Productivity, and Living Standards," in *A Festschrift in Honour of David Dodge*, Bank of Canada, November 2008.

[4] "The Demographic Time Bomb: Mitigating the Effects of Demographic Change in Canada." Report of the Standing Senate Committee on Banking, Trade and Commerce, June 2006.

[5] Charles M. Beach, "Canada's Aging Workforce: Participation, Productivity, and Living Standards," in *A Festschrift in Honour of David Dodge,* Bank of Canada, November 2008.

[6] Mark Carney, "Exporting in a Post-Crisis World" (speech to the Greater Kitchener-Waterloo Chamber of Commerce, Waterloo, Ontario, 2 April 2012).

[7] For a literature review, see B. Fay and R. Dion, "Understanding Productivity: A Review of Recent Technical Research," Discussion Paper No. 2008-3, Bank of Canada, 2008.See also M. Carney, "The Virtue of Productivity in a Wicked World" (speech to the Ottawa Economics Association, Ottawa, Ontario, 24 March 2010). See also T. Macklem, "Canada's Competitive Imperative: Investing in Productivity Gains" (speech to Productivity Alberta, Edmonton, Alberta, 1 February 2011).

[8] See R. Barnett, "Trend Labour Supply in Canada: Implications of Demographic Shifts and the Increasing Labour Force Attachment of Women," *Bank of Canada Review* (Summer 2007). See also Alexander Ueberfeldt, "Canada's retirement system: Prepared for an aging population?" Bank of Canada, 2009.

[9] See the Bank of Canada's October 2011 *Monetary Policy Report*, page 19.

[10] Mark Carney, "Living with Low for Long" (speech to the Economic Club of Canada, Toronto, Ontario,13 December 2010) and Alexander Ueberfeldt, "Canada's retirement system: Prepared for an aging population?" Bank of Canada, 2009.